

2022



Advancing  
digitally enabled  
Patient-centric systems



# Introduction

From all across Canada, decision makers who represent the organizations that make up the backbone of Canada's healthcare system reflected upon the challenges and opportunities before them. Through a series of keynotes, panels and breakouts, industry leaders expressed the need for transformative change to usher in a new era of delivering patient-centric care.

In this new and ever-changing public health reality, the Public Sector Network spring 2022 healthcare roadshow, in collaboration with CGI, provided a forum for thought leaders in Vancouver, Edmonton, Toronto and Ottawa to consider the possibilities for the future and the best pathways for achieving true digital transformation.

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# Top regional priorities for healthcare organizations

## British Columbia

- Addressing the shift from single actors or silos to a holistic approach - healthcare providers need a better way to share patient data
- Reimagining how and when telemedicine is used as the early returns are showing increases of recommendations to visit the emergency room

## Alberta

- Focusing on consolidating and maturing health data frameworks to better support interoperability of patient data across the healthcare system

## Ontario

- Redesigning the health system, while reconciling the digital divide in parallel with efforts to digitize patient care to enable everyone to get the same access to services
- Focusing on standards and policies around interoperability, especially when it comes to patient portals



Ultimately, technology will play a vital role in achieving patient-centric care, but more importantly, choosing the right partner to help navigate the transformative digital journey will enable public health actors to address these challenges.

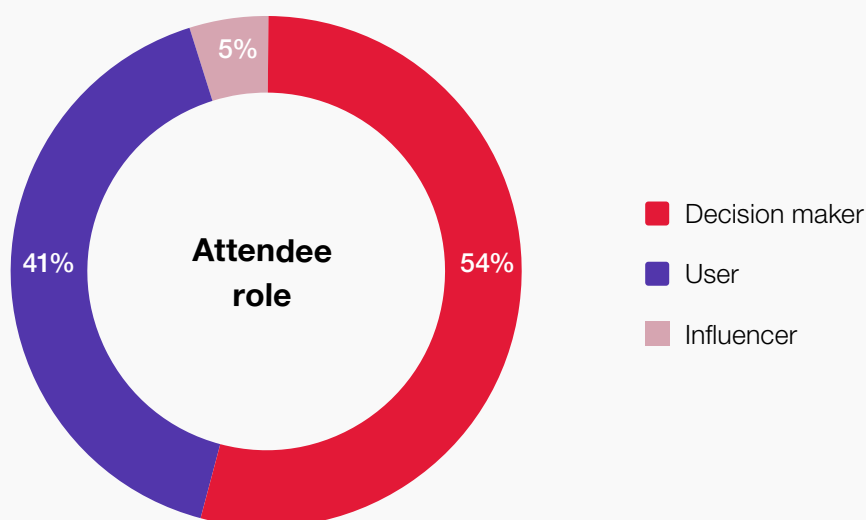
# The Healthcare Roadshow 2022 at a glance

## Organizations per city

Date	City	Organizations
May 9	Toronto	41
May 10	Ottawa	21
May 12	Vancouver	23
May 13	Edmonton	20
<b>Total</b>		<b>104</b>

## Topics of conversation

City	Discussion focus
Toronto	Patient experience and journey
Ottawa	Continuum of care, standardized framework for sharing patient information
Vancouver	Collaboration
Edmonton	Futures opportunities and investment





## Accelerating the journey

The time is ripe for transformative change throughout the healthcare sector by using technology and digitization as the driving force for patients, at the center of care and to tackle the core challenges identified at PSN were: health system redesign, IT enablement and interoperability, security and privacy, and data. The following takes a closer look at these key issues.

The healthcare industry has never been in a better position to accelerate their digital transformation journeys. SARS put us on a journey of discovery back in 2003, with many hard-learned lessons along the way, but there were struggles institutionalizing them. The most recent health crisis is a somber reminder which should serve as catalyst for change.

## Need for change

### **Patients are the driver for change.**

The public sector is open and willing to adapt to digitally enabled healthcare because they understand the benefits that have already been delivered, and its potential. At the same time, the technology and digital supports needed are mature and fully capable of supporting such large-scale change.

Fully integrating digital technologies into the healthcare field can help us in a myriad of ways. Doing so promotes clear understanding, reduces errors and supports more efficient use of health resources. It results in better overall health outcomes and an improved patient journey. It also gives us robust and crucial tools to use in the face of global concerns such as aging, child illness and mortality, pandemics, high costs and ensuring equitable access to healthcare.

### **Insights:**

Most attendees felt that patients will drive the future of healthcare.

# Event insights

## Health system redesign

Q1

**When conceiving a healthcare system redesign, is virtual and digital always the best way to go?**

Q2

**Should you always start with technology or process first?**

For many people, the idea of health system redesign is to replace an in-person doctor visit with a virtual one, but the scope should be much greater. Instead of simply expanding virtual care, perhaps shifting our focus to the problems that need to be solved (without immediately looking at the technology) and then redesigning the service model to effectively respond.

For instance, the need to upgrade information access, facilitate better communication between healthcare providers and improve medication safety led to the adoption of health information systems. Clinicians were some of the chief drivers of these implementations and, now that we can look further, we know that involving both patients and medical professionals, even before project inception, leads to the development and adoption of patient-centric solutions.

But we must be wary of uncontrolled advancement. With the influx of healthcare provider apps (booking, registration, patient portal, lab results, patient engagement, etc.), the number of notifications, and alert fatigue, is rising fast, meaning adoption rates are impacted and the potential benefits of an integrated system are unrealized. **What we need to do is rethink the patient-facing ecosystem and strategize solutions that will ensure a seamless patient experience, relying on such aspects as interoperability and ease of use.**

Patients need, and want, to be active participants in their own care. Looking at the paradigm of self-reporting in a healthcare process, imagine if we could leverage other portals to collect patient information, such as Fitbits reporting heart rates or smart fridges logging what you're eating instead of relying on subjective patient input. Dynamic and integrated portals could even be used to channel information back to the patient on lifestyle choices, allowing citizens to be more proactive and engaged in their own health.

We must look beyond medical care, with the recognition that the social determinants of health must be considered when providing equitable care. Physicians and healthcare organizations can provide better support to their patients facing social challenges by connecting them with local government and community resources, which is easily done with consistent information and digital supports. This transforms the idea of delivering a holistic healthcare model, making it accessible to all.

### Insights:

Some of the biggest challenges to achieving digitally enabled patient-centric care includes the allocation of resources, patient flow and bottlenecks in the system as well as pressure on IT / digital infrastructure.



# IT enablement and interoperability

Q1

**Why IT enablement and interoperability are the greatest barriers to achieving patient-centric care?**

Q2

**What is the true value of creating larger IT ecosystems?**

Q3

**Why invest in industry standards and national direction?**

Many hospitals and health systems have started their journey toward digitization, but between multiple platforms with their own offerings, different outside portals and portal vendors, and a lack of interoperability with their peers, their efforts to improve overall care are being hampered by inefficiencies, errors and a lack of cohesive focus.

Instead, what if a key goal of all of their transformation efforts was to implement a shared electronic health record (EHR) for each patient, fully accessible and usable across all levels of care? And then what if that EHR could be shared across the region, the province or even the country?

Healthcare is just one area where data must be able to be shared seamlessly between and among organizations.

It's no longer about locking up and hiding data, but the goal should be about enabling access to the right people across multiple platforms.

To achieve this, a lot of pieces need to fall into place, but the first must be ensuring interoperability between and across all available health channels (medical, mental, social, etc.). The pivotal first step is designating and agreeing on a set of standards.

Unfortunately, without such standards in place, the number of solutions being introduced that don't talk to each other is proliferating. Setting standards and implementing strong policies for digital health information exchange will lay the foundation for developing solutions and tools that share information between different systems.

The lack of interoperability is also contributing to a reduced opportunity to conduct early screening and detection campaigns. We have the data analytics, the portals and the system. What's missing is the political will and industry investment to enable cross-system communication.

Our objective should be enabling a consumer-centric digital patient experience that's built with solutions that are viable, sustainable and safe. And one key point not to forget is the digital divide in Canada. There's still a significant portion of Canada's population, many in rural communities, who don't have access to quality broadband communication infrastructure. Is an investment in digital health really worth it, if those who need it most can't access it? **Any effort to ensure equitable access to care must include consideration for this portion of the population.**

Finally, we cannot finish our discussion on IT enablement without touching on budgets. Unfortunately, the traditional norm for IT operational budgets is 2-3%, rather than the recommended 10%. Hospitals and healthcare providers should be looking at IT as an enabling technology that will help them in achieving improved patient outcomes and lower costs of care. **Technology should be viewed as both a cost of doing business and the opportunity to do more.**





## Security and privacy

Q1

**When is it appropriate for an organization to share patient data?**

As we continue to transform healthcare from paper-based records and disparate clinical applications to an all-encompassing electronic health record, one of the chief questions being asked is, “are we secure?”

Throughout the process of accessing, using and updating patient information, we must always make sure we protect the data’s availability (data can be reliably accessed by authorized users), integrity (data is accurate and trustworthy) and confidentiality (data cannot be accessed by unauthorized users).

However, the privacy and security of EHRs is under increasing attack from malicious outsiders. In the US, ransomware attacks are occurring more frequently, and patient data is more sought after than credit card information. Bad actors are using details such as diagnoses or drug prescriptions to come up with further

targeted ways to fraudulently obtain people’s money. As with any application development, security must be baked in from the beginning, not bolted on afterward.

Next, as we start to include IoT devices (e.g., smart pumps used to dispense medication, at-home monitors), we must be prepared for gaps in how they, and the data they are collecting and sharing, are secured. While there are some products out there that inventory medical IoT devices, healthcare organizations making use of them must be aware of the risks due to such issues as mismanaged device configurations, unpatched firmware flaws, unauthorized access, tampering, etc. The responsibility remains on the hospital to make sure their third party providers ensure the same or better levels of security as their own.

Another area to be looked at is when smaller health teams, who don’t necessarily have the funding to implement EHR systems on their own, piggyback on larger hospitals. This can lead to issues of whether those additional users could create additional points of exposure due to their own lack of cyber protection and/or program maturity.

# Data

Q1

**What is the key to unlocking the data we are collecting?**

One of the most important aspects of the future of healthcare is moving away from the historical silo of data maintained with the four walls of a healthcare provider and to instead focus on sharing data across organizations and regions.

**In one particular example reported from the roadshow, a big obstacle to achieving patient-centric care is the inability to obtain data from the patient's primary care physician.**

When we consider the entire patient journey, we already have data initiatives issuing from emergency rooms, acute care and walk-in clinics. We have pockets of excellent data, but the vital thread that's missing in following the patient's journey is their GP's clinical notes, which contain crucial data needed to get a holistic picture of an individual's care.

With more data being collected than ever before by different providers, all participants will need a strong data management strategy backed up by centralized processes around the collection, classification, use, storage and dissemination of data. Unfortunately, anecdotal evidence from the roadshow showed that data sharing agreements between members of health teams are taking months to resolve, but improved governance structures within the teams could help alleviate these issues.

Another challenge is converting this vast amount of data into something meaningful for supporting clinical and administrative decisions. We must have the right data at the right time in the right format and yet avoid



data overload. With so many personal devices able to produce health-related data, there is a desire to use as much of it as possible. However, we haven't yet figured out what is valuable and should be retained versus what isn't needed. Quality has to be identified and supported by standards and technology.

Data de-identification will be of primary concern. Breaking the link between data and the individual with whom the data was originally associated will allow for effective data storage as well as encouraging medical research.

And we cannot forget the human cost. Resourcing in the future will be challenging, particularly when dealing with support, administrative and virtual care roles. Currently, near retired or retired nurses are being assigned these duties, but this is only a short-term fix for a major issue which requires a long-term strategy.

## The road ahead

From coast to coast, the roadshow highlighted the collaborative environment taking shape across the public sector of healthcare. It's clear we have the technology needed to take us forward, transforming the future, but there are serious issues which must be resolved.

New public policy around digital healthcare is part of the solution. For example, the federal government could put forward a standardized framework that would encourage provincial participation through an incentive-based program.

Digital identity is another key component to unlocking the potential for patient-centric care in Canada. We've already talked about the concept of an electronic health record that contains all health data from all providers. What if that EHR were to become part of the identity of each patient, allowing them to own their data and consent to the sharing of it? This would put the health and wellness of patients back in their own hands, allowing them to be more involved and proactive.

Digital identity is an unrecognized value proposition that enables everything in healthcare. It's the top of the pyramid while also providing several pillars underneath.

### Digital identity benefits



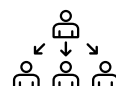
Data consistency across all usages and organizations



The ability to aggregate all medical data into one dashboard and make localized changes to the data record



Fewer medication errors



Easier referrals to other physicians and specialists



Greatly reduced fraud

#### Insights:

When asked about one idea from the roadshow that they would want to implement immediately, attendees suggested centralized healthcare records accessible by patients and providers, clinician co-design leading the transformation from the get-go and removing barriers to working collaboratively across stakeholder streams.

There are some concerns, including the ability of some patients (children, end-of-life, etc.) to manage their own identity, although perhaps caregivers or executors could fulfil that role. But the larger issue is around consent. Within the digital identity must be a strong mechanism to standardize and capture consent for the sharing of records. It must be easy to maintain and serve all demographics, while also being easy to use. Standardized nomenclature around identity capture is needed as well.

Consider a Canadian passport. No one questions the authenticity or the data it captures. The data itself is fairly consistent across all passports, and even among different countries. A digital identity should function in the same way, with the same level of security and trust, and key to the messaging will be ensuring that everyone has the same understanding of the language.

#### **Insights:**

Key takeaways include the fact that patients want to share their data while providers don't want to switch between platforms. Clear policies and strong leadership will be required to streamline processes, and the importance is clear of engaging clinical staff, leaders and physicians in the co-design of an electronic health record / system.



**But let's think about the proposal of a digital identity in relation to each of the challenges we identified earlier:**

- Health system redesign will be easier to achieve if data standardization is one of the pillars of development. A digital identity will only support this. Shifting away from the bureaucratic and political history of healthcare to the concept of everyone having a voice will bring down barriers and improve how we manage and govern care. Specific decisions about patient healthcare will be made with access to all information about the patient, including mental and social factors, not just the symptoms of a disease.
- When we consider IT enablement and interoperability, many advancements were made during the pandemic with leeway given around process and procedure. The need to implement a digital identity will ensure ongoing governance of such efforts and provide a method whereby multiple providers and portals can rely on one consistent method of data presentation. And as we move further into virtual care, it needs to be scalable and that relies on identity authentication.
- The security and privacy of patient data would be much easier to protect if the data was consolidated into one electronic record. Organizations are looking to put processes in place that manage the risks of new solutions and smooth the path to transformation. With the data cycle starting and ending at the patient's digital identity, protection for the healthcare systems and tools could be developed as part of one overall data security scheme. But we need to keep in mind that most citizens are more concerned with accessing health services than the protection of their data. Providers and vendors must do the legwork to make it easy for them to access services across the network, while keeping their data secure.
- An integrated approach to patient data will be easier if the data is contained within one authenticated record. The patient's consent to sharing their data would be an integral part of their digital identity, while the standard audit trails inherent in data management would improve accountability. A digital identity will also support the use of data analytics to do such things as research and predict disease, automate hospital administrative processes, discover new drugs, and much more.



No matter what the future looks like, we'll need strong leadership and decision-makers willing to come forward and make the bold call, even without full consensus. For example, during COVID, British Columbia had provincial leadership who were willing to listen to their stakeholders, but still make the final decision and move everyone forward. With so many people working together and collaborating, multiple barriers were brought down between health authorities, ministries and vendors. And now BC provides a shared Azure cloud for health data that all health authorities are making use of, assisting with interoperability and increasing collaborative capabilities.





# Conclusion

Creating a digitally enabled patient-centric health system and driving value from health data are some of the chief goals identified by this roadshow. We have the right mindset, a good set of objectives and have discussed the process. Fears exist that, with the passing of COVID, data protection walls may again be erected between health authorities, ministries and others, but being able to allay worries about the inappropriate use of health data with the use of a secure digital identity will provide much needed reassurance.

At CGI, our vision is to foster ways to provide human-centric services that drive healthcare transformation in Canada. Whether it's evaluating current operational processes to support the redesign of healthcare delivery, developing a sound strategy, selecting the right technologies, integrating systems or securing patient data, CGI supports public sector healthcare clients at all stages of their digital journey.

## About Public Sector Network (PSN)

Public Sector Network connects government organizations across the globe.

Our mission is to give public sector professionals a single place to come together, share ideas, and get free, unlimited access to the latest information about critical topics that are transforming the government landscape.

Our government-only network helps members find relevant international content and case studies that are critical to your work and can help you save time, and money. For those who are looking to network at a deeper level, we hold insightful online and in-person events, ranging from conferences and exhibitions, to intimate training courses and forums across major cities around the world.

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## Insights you can act on

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We are insights-driven and outcomes-based to help accelerate returns on your investments. Across hundreds of locations worldwide, we provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

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