# THE INSIDE STORY®

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# DIGITAL HEALTH IS A LOT MORE THAN JUST COOL TOOLS

With 2019 in our rear-view mirror and 2020 upon us, it's time to reflect on the past and ponder the future. A past that includes 50 years since the "birth" of the internet.<sup>1</sup> Back in the day, if someone had told us we'd be walking around with mobile phones and suffering from no-internet-connection-anxiety, we'd think it's science fiction or just futuristic fantasy like "Beam me up, Scotty" and *The Jetsons*. (Too young to recall? Give 'em a Google.) But here we are in a majorly digital world; one that increasingly includes digital health technologies. Not fiction, not fantasy, and definitely not a fad, technological advances in health care mean a future filled with cool tools that add real value.

#### Cool stuff is hot

Globally, digital health is hot (as in take-the-world-by-storm hot), but Canada has been falling behind (more on that to come).<sup>2</sup> However, crystal balling it, the good news is that Canada is set to not only catch up, but also significantly contribute to health care innovation in the future.<sup>3</sup> Simply put, digital health is the use of digital technologies for health such as:

- Virtual care: Uses information and communications technology (known as ICT, yes, another abbreviation) like smart phones and laptops to enable interactions virtually. For example, telemedicine uses ICT so that health care providers can consult remotely with patients and other providers. Similarly, offshoots like telerehabilitation provide rehabilitation remotely. Plus, there is virtual mental health care and all kinds of virtual health coaches that offer health professionals online (as in, real humans), avatars, or other software applications.
- Consumer health: Uses ICT to help patients access information about health and improve decision-making. For example, thanks to the internet and especially Dr. Google, patients have access to more information than any generation in history (not to mention misinformation; alas, that's a whole other story).<sup>4</sup> Health information can also be targeted—like appointment and medication reminders as well as relevant prevention and behaviour-change tips.
- Internet of things (IoT): Refers to physical devices—embedded with any combination of software, sensors, transmitters, and actuators (devices that enable the main device to operate)—that make it possible to exchange data in real time. For example, everything from mobile medical equipment and remote health monitoring to wearables and implanted devices.
- Cloud computing: Known as "the cloud"—a shared pool of resources like networks, servers, storage, applications, and services that enables a wide range of innovations.
  For example, electronic recordkeeping gives patients confidential access to their health records and allows health care providers to see patients' complete health information. And e-prescribing allows doctors to write prescriptions and send them online to the pharmacy.

The cool factor for sure. But now let's put digital health technologies to the value acid test.



## **ICBT IS ONE ASPECT OF VIRTUAL MENTAL HEALTH CARE**

A range of mental health support is available using technology, including:

- Online therapy like iCBT (internet-based cognitive behavioural therapy)
- Online self-help like awareness and educational information
- Crisis support like phone help lines, text support, and online chat
- **Medical intervention** like telemedicine videoconferences, clinical referrals, and follow up
- **Peer-led support** like peer-support apps, social media, instant messaging, and gaming

#### Raising the bar on value in health care

To quote our own ranting, in the June 2017 edition of *The Inside Story* we discussed the issue of low value in health care: "Not only is value often not there, but also it seems that we don't even expect it, let alone demand it." But technology is changing all that; increasingly we are expecting the same advantages in health care that technology has made the norm in other sectors.

However, as Harvard Medical School cautions, "Excitement and investment in digital health technologies is rapidly increasing. At the same time, the adoption and value proposition of technology for health care remains complex and multifaceted. Which innovations will provide more cost-effective, patient-centered, quality care? How do you differentiate value-producing technologies from hype?"<sup>5</sup> How indeed?

The World Health Organization (WHO)'s take on assessing value is: "If digital technologies are to be sustained and integrated into health systems, they must be able to demonstrate long-term improvements over the traditional ways of delivering health services."<sup>6</sup> Closer to home, the question for plan sponsors becomes: Is a digital health technology simply the latest nifty thing or does it provide value?

And what is value? Our take is that providing an enhanced plan member experience is certainly important; without it, plan members may not even adopt new health technologies in the first place, let alone continue using them. Accordingly, value includes advantages like improving access to care, saving time, and adding convenience. And then there's the value kicker: at the heart of delivering value is the idea that every investment in health care—like investing in a digital health technology—should produce high-quality outcomes relative to its costs.

#### Enhancing the user, or plan member, experience...

In a Canada Health Infoway study, 76% of Canadians said digital health can make accessing health care services easier and more convenient.<sup>7</sup> And Infoway estimates that telemedicine helped avoid 218 million kilometres of travel in 2016—that's a lot of added convenience while saving time and money.<sup>8</sup> And it's fascinating that in many cases, the new innovation is often just a simple change that seems obvious, but not previously harnessed, yet it provides concrete experience-enhancing advantages. For example:

- Medimap is a free website and app that allows the user to see all the wait times for nearby walk-in clinics (or via search), so it's easier and faster to access care.<sup>9</sup>
- **PocketPills** is a virtual pharmacy that allows users to fill and easily renew prescriptions online with free delivery and medications sorted by dose into easy-to-open packages.<sup>10</sup>
- LiveWith Arthritis is an app that aims to help patients take control of their arthritis by enhanced self-management through tracking, monitoring, and measuring their treatments, activities, and diet.<sup>11</sup>

Also, the technologies are not necessarily rocket science; take patient portals for example. Infoway reports that they enable more patients to quickly and conveniently access their personal health information online, and a 2016 study showed that 94% of portal users valued this option.<sup>12</sup> It's clear that leveraging technology in health care is passing the value test in terms of enhancing the user experience. But what about in terms of improving health outcomes?



#### Value = Delivering high-quality health outcomes relative to cost

Advances in technology have a long and successful history as the impetus for improving health outcomes in leaps and bounds—everything from developing penicillin, anesthesia, and vaccines to technologies like MRIs and pace makers. Similarly, both Infoway and the WHO report a number of ways that digital health technologies are contributing to improving health outcomes.<sup>13</sup>

- Enhances decision-making: Easy and immediate access to patient information can result in more informed and timely decision-making by health care providers. And when patients are better informed, it can be empowering and motivating, and can enable shared decision-making.
- Improves the patient/health care provider relationship: More ways for patients to clearly communicate with their doctors—like apps that track symptoms and/or record behaviours— can facilitate better conversations for more of a partnership approach to care.
- **Decreases stress and increases patient engagement:** Direct access to health information can lead to more engaged and empowered patients who are less stressed.
- Enables more focused care: Health technologies that decrease administrative and repetitive tasks allow health providers to focus more fully on their patients.
- **Promotes prevention:** Self-management—like tracking heart rate and blood sugar—can boost patients' motivation to manage health with an emphasis on prevention.
- Improves health delivery: Moving beyond traditional in-person care models allows patients immediate access to care—rather than long waiting lists—and helps keep patients out of hospital emergency rooms by providing more appropriate alternative care options.

# "79% of patients who had a virtual visit said the quality of care was the same as an in-person visit."

These benefits certainly have a part to play in achieving better health outcomes. And regarding quality of care, although Infoway reports that in-person visits are essential in some cases, a study found that 79% of patients who had a virtual visit said the quality of care was the same as an in-person visit. In addition, 91% found that it helped them with their health issue.<sup>14</sup>

Regarding validating clinical outcomes, evidence is building in some areas more than others. For instance, studies assessing self-management of diabetes via mobile phone apps are showing promising results.<sup>15</sup> And many findings reveal iCBT (internet-based cognitive behavioural therapy) is an effective and cost-effective alternative and/or complement to face-to-face CBT. However, iCBT has only been around a relatively short time and is still developing—plus, some research quality is low—so the more future research, the better.<sup>16</sup>

Overall, with digital health technologies gaining momentum, research validating their effectiveness needs to catch up! However, technologies are always evolving; they are constantly being updated making validation of outcomes an ongoing challenge. As this researcher sums it up, "There is no doubt that health information technologies will ultimately transform health-care delivery, self-management education, and behavior change interventions."<sup>17</sup> But...

"At the same time, consumer brands are entering the digital health arena and making big bets on direct-to-consumer approaches *without proof of important or long-term impacts* (think health monitoring devices for wellness and gamification with health focus). This leads to the proliferation of well-designed experiences that promise to improve health but may have minimal effect."<sup>18</sup> It's a classic case of buyer beware; if considering adopting new digital health technology, plan sponsors need to assess it in relation to the entire bundle of benefits that make up the value equation: What is its cost/benefit in terms of improving access to care, saving time, and/or adding convenience, while enhancing health outcomes?

# AND WHAT ABOUT GSC'S EVIDENCE?

In 2019, GSC conducted a survey of 1,000 plan members that provides insight not only into health and well-being, but also regarding information gathering and digital health.

Health and well-being:

- Plan members want to become healthier; over 50% had tried to improve diet, fitness, and weight.
- All age groups are concerned about healthy eating with concern about weight increasing with age.
- Stress is the biggest concern for 18-24 year olds, whereas managing specific medical conditions is a growing concern into the 30s and 40s.
- Attempts to make big health changes often fail, and although they are 1.8 times more likely to attempt to make a "bigger" change than a "smaller" one, the majority aspire to make a change that is "in the middle"—not too big, but not too small.
- The most common reason for failure is not being able to maintain a new healthy habit.

Information gathering and digital health:

- Plan members most often look to their doctor for health information and consider medical professionals to be trustworthy sources of information.
- Although plan members use Google as their second most frequent source of health information, they don't necessarily trust the information they find.
- Healthy eating and exercise are the most common topics of interest.
- Females spend more time than males searching for health information (except regarding health insurance coverage and submission).
- Finding a health professional is the least common type of information sought.
- Only 31% of participants had used an app for health purposes with the two most popular apps being *My Fitness Pal* for exercise and diet and *Headspace* for meditation.

And since this time of year is all about predictions for the future, we asked Michael Bradie, leader of strategic innovation, to tell us what he thinks this feedback from plan members is telling us:

"In my mind, the results aren't earth-shattering, but rather they reaffirm some core beliefs about individuals and their health. They want to get better. They're open to making changes in their lives. They live in a digital world and are looking for their health care to catch up. The real challenge is figuring out what solution is going to move the needle for them. And engaging with them in a way that works for their schedule and for their goals in a highly personalized way that still safeguards their privacy."

#### It's full steam ahead... but not a straightforward road

Predictions like "digital health promises to revolutionize the way patients receive care" are well-founded.<sup>19</sup> A 2019 study by the Canadian Medical Association found that the majority of Canadians are interested in virtual care and believe it will add value. However, this optimism is not without some significant concerns regarding losing the human connection in health care (77%), privacy risks (75%), and paving the way for private health care (71%).<sup>20</sup>

The WHO mirrors these concerns, "digital health is not a silver bullet."<sup>21</sup> It shouldn't be viewed as being all things for all people. "It is a valuable complement to face-to-face-interactions, but it cannot replace them entirely. It is also important that consultations are conducted by qualified health workers and that the privacy of individuals' health information is maintained."<sup>22</sup>

Speaking of concerns, not to be a future fretter, *but...* the Canadian Information Technology Association heeds the warning that "Canada urgently needs a more strategic approach to accelerate and adopt emerging digital health technologies or it will continue to fall behind the progress of other countries in digital health innovation."<sup>23</sup>

So how will digital health technologies be coordinated among the public sector, private industry, and individuals? Who will pay and how? And what about universal accessibility and compatibility? And what about training? And confidentiality? And liability? And, and, and... fortunately, all this wet-blanket-talk is sure to sort itself out as digital health becomes the norm.

#### In a word: Revolutionary

The *Meriam-Webster Dictionary* defines revolutionary as "constituting or bringing about a major or fundamental change." Sounds bang on regarding digital health. But only time

will tell how technology and science will continue to mash-up, so as the future unfolds, so too will service delivery and payment models. What we know for sure is that digital health is evolving rapidly, so as per usual, we'll keep you informed as the evidence evolves. Keeping up with the evidence paves the way for smart investments in digital health; investments that deliver value.

# **EMBRACING DIGITAL HEALTH TO OFFER MORE VALUE**

GSC continues to introduce digital health technologies as a way for plan sponsors to engage more plan members to easily and effectively enhance their health. Here's a snapshot of some 2019 initiatives:

- **BEACON:** Digital mental health therapy program that provides unlimited access to a credentialed therapist for up to 12 weeks of iCBT, as well as access to online resources for a full year.
- **Change4Life:** Digital health portal that provides a centralized place filled with personalized tips, easy-to-use tools, and important information to support healthy lifestyle choices.
- **Coach Ivan (pilot project):** Virtual exercise coach that creates simple, customized plans to help increase activity levels in a gradual, sustainable way.
- Dot the Diabetes Carebot (pilot project): Chatbot that helps mitigate prediabetes risk and enhance type 2 diabetes management by providing daily support via navigating through GSC's offering and recommending programs, tools, and content.
- **Maple:** Telemedicine solution that allows access to more than 400 Canadian-licensed doctors nationwide and enables 24/7/365 care whenever and wherever needed.
- Manage My Pain (pilot project): App that helps enhance chronic pain management with features like tracking pain in just 30 seconds a day, analyzing pain with easy-to-understand visuals, and sharing pain data with health providers.
- **Phzio (pilot project):** Telerehabilitation services—specifically virtual physiotherapy—for plan members as an alternative to (or in conjunction with) traditional, face-to-face physiotherapy.

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# WHAT'S UP

#### Superbugs on the rise

#### Study cautions against unnecessary antibiotic use and misuse

A recent study by London Drugs, a long-established drug store chain throughout Western Canada, provides concerning insight about unnecessary antibiotic use and misuse, cautioning that it is contributing to a rise in drug-resistant bacteria—known as superbugs—that make infections harder to treat and in some cases, impossible to treat. The study cautions that this could lead to a future where antibiotics are no longer effective and urges all Canadians to help prevent the growth of resistant infections through correct and cautious use of antibiotics.

PRIVATE HEALTH

The study of 2,492 Canadian adults was conducted online from August 22 to 28, 2019, and found that most Canadians (90%) are aware that unnecessary antibiotic use and misuse directly contributes to the rise in resistant bacteria. However, incorrect use is common (especially among those aged 18-34) as study participants report:

- 21% have stopped using antibiotics when symptoms went away and did not finish the prescription.
- 15% have used leftover antibiotics.
- 10% have used someone else's antibiotics or have acquired antibiotics without a prescription from somewhere other than a pharmacy.

The study also highlights some misconceptions that may be contributing to antibiotic misuse. Participants reported not being aware that antibiotics are...

- Unnecessary for some common bacterial infections: 31%
- Ineffective for the flu virus: 24%
- Ineffective for the common cold: 18%
- Not "one size fits all" but that different antibiotics are prescribed for different infections or illnesses: (11%)

#### For more information, visit https://www.londondrugs.com/on/demandware.static/-/ Library-Sites-LondonDrugs-content-Library/default/dwcfbd66c4/pdf/news/2019-11-08\_ Antibiotics\_LD\_Press\_Release\_National\_Final.pdf.

#### Report heeds warning about overuse of antibiotics

A new report predicts a real possibility of a future where antibiotics against common infections no longer work if Canadians don't slow down antibiotic use. In response to a request by the Public Health Agency of Canada, a panel of experts from the Council of Canadian Academies produced the report called *When Antibiotics Fail*. According to the panel's estimates, 26% of bacterial infections in Canada are already resistant to firstline drugs prescribed to treat them. The panel warns that it's highly possible that the resistance rate will climb to 40% by 2050, causing 13,700 deaths each year, as compared to 5,400 deaths in 2018. Infections causing pneumonia, gastrointestinal illnesses, urinary tract infections, and gonorrhea are already becoming exceedingly difficult to treat as the drugs become less effective.

The panel warns that a future with increased resistance would eventually lead to longer and more severe illnesses with more expensive treatments and higher risk of death. In addition, routine procedures—like kidney dialysis, chemotherapy, organ transplants, surgery for joint replacements, and caesarean sections—that rely on giving antibiotics to prevent infection would become too risky to be made widely available.

This issue has been building for decades, explains the panel, urging that Canadians recognize that more extreme resistance is no longer 50, 80, or 100 years down the road. The World Health Organization has deemed drug resistant bacteria among the top 10 health threats on the planet.

For more information and to download the report, visit https://cca-reports.ca/reports/the-potential-socio-economic-impacts-of-antimicrobial-resistance-in-canada/.

#### New guide promotes understanding of private health insurance

A new guide—Supplementary Health Insurance Explained for Healthcare Providers—aims to help health care providers better understand how private health insurance works so that in turn, they can help patients more effectively understand their plans.

Developed by the Canadian Life and Health Insurance Association (CLHIA) in collaboration with the Extended Healthcare Professionals Coalition (EHPC), the guide describes the types of employer-sponsored health insurance plans and how the plans work. Health insurance terms and concepts are also explained.

Ideally, with this kind of knowledge, health care providers will be able to help their patients more clearly understand their plans and use them more easily, for example, helping patients determine what services their plans cover, what the coverage amounts are, and what portions are eligible for coverage. The guide will be updated as needed, and the CLHIA and EHPC plan to develop additional tools about insurance matters for health care providers.

For more information and download the guide, visit **https://www.clhia.ca/web/CLHIA\_** LP4W\_LND\_Webstation.nsf/resources/Consumer+Brochures/\$file/SUPPLEMENTARY+HE ALTH+INSURANCE+EXPLAINED.pdf.

# **December/January haiku**

Health inside your phone When will we skip the long waits And embrace new tech?

### **Fitbit Winner**

Congratulations to **W. SAINT**, of **KITCHENER, ON**, a recent winner of our monthly draw for a Fitbit. Through this contest, one name will be drawn each month from plan members who have registered for Plan Member Online Services for that month.

Windsor	1.800.265.5615	Vancouver 1.800.665.1494
London	1.800.265.4429	Montréal 1.855.789.9214
Toronto	1.800.268.6613	<b>Atlantic</b> 1.844.666.0667
Calgary	1.888.962.8533	Contact Centre 1.888.711.1119



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