

Supporting Plan Member Health

Through Artificial Intelligence and Innovation

by | **Marie-Chantal Côté**





Through the use of pharmacogenomics and artificial intelligence—including new solutions like digital coaching and virtual health care services—benefits providers can help members improve their mental and physical health outcomes.

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Service expectations have risen dramatically in our day-to-day lives. Search engines answer our questions in seconds. Our cars have sensors that keep us in our lane. We pay for purchases by waving our phones at a scanner. Our watches not only tell us our steps and heart rate—They can detect heart irregularities and save lives.

Not surprisingly, expectations in the Canadian group benefits industry have grown too. How claims are paid is one example. Systems have evolved to complete this process quickly, easily and accurately—No paper required. But there’s a more important evolution occurring.

Today, providers are focused as much on helping plan members live healthier lives as they are on paying claims. It’s no longer a value-add. It’s an expectation. And they are providing this support in innovative ways, leveraging advancements in areas like artificial intelligence and genomic testing. These innovations are making a difference and will continue to evolve. And they couldn’t come at a better time.

Why Health Supports Matter More Than Ever

There have been many advances to support good health, from new therapies to fitness trackers. But people continue to face many health battles.

In Canada, 44% of adults age 20 or older have at least one of ten common chronic conditions.¹ These include conditions like hypertension, osteoarthritis, diabetes and cancer. Experts expect the rate of diabetes alone to increase 44% from 2015 to 2025.²

But nowhere is the growing health crisis more apparent than around mental health. In 2019, nearly 60% of working Canadians reported experiencing a mental health issue—up from 52% in 2017.³ And one in five Canadians will suffer a mental health issue in any given year.⁴ The COVID-19 pandemic is exacerbating the issue. During the pandemic’s first wave, 56% of Canadians said that COVID-19 was having a negative impact on their mental health.⁵

Benefit plans are seeing this impact clearly in workplace long-term disability claims. Mental health claims increased 27% from 2014 to 2019. This is far more than any other disability claim type, and it is being seen across the industry. Mental health disability claims are not just the fastest growing. They are also the leading disability claim type, representing nearly one out of three disability claims.⁶

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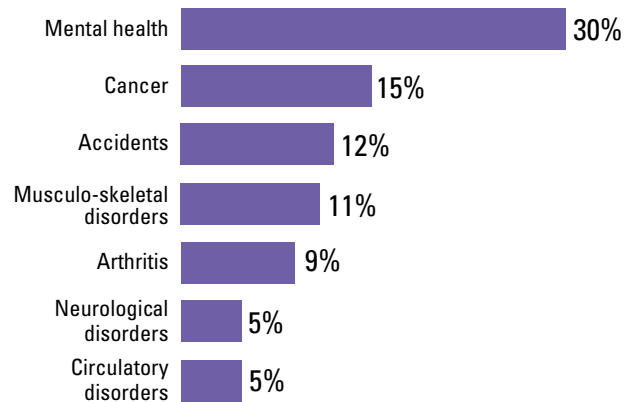
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FIGURE

LTD claim incidence by diagnosis



Source: Sun Life data. 2019.

There is good news and bad in these statistics. The good news is that 86% of mental health disability claims relate to highly treatable mental health problems. These are depression, adjustment/stress and anxiety/panic disorders. We’re also seeing a decrease in the stigma surrounding mental health, especially for younger generations. For example, more than three-quarters of Millennials with a mental health issue have spoken to a loved one about their problem.⁷

The bad news? Many employees (61%) with a mental health concern aren’t making use of their workplace benefits to get help. In fact, many—including 76% of Millennials—aren’t even accessing free therapy and e-therapies funded by governments.⁸

Many employers have mental health resources in place. These include psychological counselling benefits, e-therapy options, and employee and family assistance programs. But use of these resources is often far lower than it should be

based on the high rate of mental health problems experienced by Canadians. There can be many reasons for this low usage. These include:

- Benefits coverage that's too low for a full course of psychological counselling—with high out-of-pocket costs for employees
- The time and effort needed to find a therapist—in addition to the time needed to attend appointments
- Stigma. Although it's decreasing, it still exists. This makes it hard for those who need support to come forward to get help.

The impact on employers is significant. If employees don't get needed treatment, employers face an increased use of sick days, lower productivity (known as presenteeism) and increased disability. The employees still in the workplace face the stress of greater workloads while filling in for absent colleagues.

The benefits industry is responding by encouraging employees to seek help, and artificial intelligence (AI) can play a key role in providing the personalized support that is urgently needed.

How AI Supports Better Health

AI may sound futuristic, but it's been around since the 1950s. We've now integrated it into many aspects of our lives. At its heart, AI is the simulation of intelligent behaviour by computers. AI can adapt as it receives inputs to deliver even better results.

The use of AI by the streaming service Netflix is a good example of this. Netflix uses AI to make personalized viewing recommendations based in part on viewing patterns. A staggering 80% of viewings come

from a recommendation.⁹ The AI system appears to help with customer satisfaction—Netflix is considered the most essential streaming service by consumers.¹⁰

So, how can plans and employers leverage AI to help people with mental health concerns through their workplace benefits?

AI and Digital Coaching

One way is to have AI identify when an employee may need mental health support. An example already being used in the benefits industry is a personalized digital coach.

A digital coach can use AI to reach out to plan members, with a gentle nudge, and offer mental health support. In addition, a digital coach can ask whether the plan member is interested in support options. The plan member then can decline, defer until later or choose one of the support options.

When the plan member visits the site again, a digital coach can prepare some resources that they can access. These can take the form of:

- Information on mental health
- A contact link to find out their benefits coverage for mental health supports
- A provider search link to find and book a therapist appointment.

AI and Virtual Health Care

Another area where AI can play an important role is in virtual health care, a key resource during the COVID-19 pandemic. AI can help employees connect to the right virtual care practitioner faster.

For example, a virtual health care service can leverage AI as part of the triage process for group benefits plan members. When a plan member logs in to virtual care for an appointment, a

Takeaways

- Rates of mental health issues and chronic physical health conditions are rising among Canadian adults of all ages. In turn, many benefits providers are no longer simply paying claims; they also are working to find innovative solutions—including artificial intelligence (AI) and pharmacogenomics—to help plan members improve their overall health.
- Many employers offer mental health resources, but usage rates remain too low due to stigma, the time and effort needed to find appropriate help, and high out-of-pocket costs.
- Digital coaching can make use of AI to help identify when a plan member may need mental health support, offer nudges to seek help and prepare resources for members to access.
- Virtual health care services also leverage AI as part of the triage process for plan members. Through a series of short questions, this type of service can help patients connect to the right practitioner for their physical or mental health needs. This information can also be sent to the medical provider so that doctors and nurses spend more time with the patient and less time triaging the issues.
- *Pharmacogenomics*, which analyzes a person's genetic makeup to determine how they will respond to a given drug, can help doctors find the best treatment options more quickly, potentially reducing plan costs and saving members from going through a trial-and-error process.

screen might show two paths—one for physical health concerns, the other for mental health.

When a plan member chooses the mental health path, the system connects them with a mental health specialist. No further triage is required. The plan member gets immediate support, and the specialist works with them to determine next steps.

If a plan member chooses physical health, an AI system can initiate a short series of questions. The AI system uses the plan member's answers to zero in on the health concern area and its severity. The entire process can take less than five minutes and quickly connect a plan member to a nurse, nurse practitioner or doctor, depending on the health issue.

AI conversations can connect plan members to the right practitioner right away, saving the plan member time. The conversation also becomes part of their medical records. This lets the health practitioner see the health issue before beginning the appointment. It's an efficient use of health resources. And it reserves the health practitioner's time for treating the plan member, not triaging the issue.

Pharmacogenomics— A Key Tool for Mental Health

Another new health support tool is pharmacogenomic testing. This isn't AI, but it leverages innovation in science to help plan members get the right medication faster. This is especially important for mental health problems.

Doctors often prescribe a medication for a mental health problem. The issue is that many patients try three or four medications before finding one that works. Only about one-third of patients respond optimally to the first antidepressant that they're prescribed.¹¹ The trial-and-error process of finding the right drug can take six months or more. This extends the patient's suffering and, if they are employed, can lead to increased absence and lower productivity.

That's where pharmacogenomic testing comes in. How people respond to a given drug can vary a great deal based on their genetic makeup. Pharmacogenomic testing analyzes a person's genetic makeup to determine how they will respond to a drug. It's a simple test performed through a quick cheek swab.

The lab sends the test kit to the patient to provide the swab sample. The patient then sends it back to the lab for processing. The lab sends a summary report to the patient and a detailed report to the doctor. The lab technician contacts the doctor to help interpret the report results.

BIO

Marie-Chantal Côté is vice president market development, group benefits for Sun Life in Montreal, Quebec. With experience leading both IT and business teams, she has played key roles in a variety of strategic initiatives and portfolios including digital marketing, big data and analytics, and mobile applications. Côté is accountable for leading the teams that deliver product and solutions development, pharmaceutical benefits and innovation, integrated health solutions, marketing and communication, and client experience functions. She is passionate about improving the dynamics of workplace equity and visibility for women and members of the LGBTQ+ community. Côté was the co-chair for the Sun Life EmpoweredX-Changes network, empowering women to reach their professional ambitions, and is an executive leader for the Sun Life pride network. She holds a bachelor of arts degree with a major in journalism from Concordia University and a dual M.B.A. degree from the Université du Québec à Montréal and Université Dauphine in Paris.



The results on the report indicate prescription options based on red, yellow or green results. Green is the most compatible drug based on the patient's DNA. The doctor can then base the treatment option on those results.

Group Benefits and Pharmacogenomic Testing

A recent pilot program featuring pharmacogenomic testing in a disability context took place with the Centre for Addiction and Mental Health (CAMH). The pilot yielded impressive results. More than 90% of plan members approached for the pilot agreed to participate. This was an important finding since it meant there wasn't a barrier to strong adoption rates. And, on average, participants experienced a 31% reduction in symptoms. This meant:¹²

- Faster recovery for plan members and fewer negative side effects

- Reduction of overall costs related to absence and disability
- Cost savings for benefits plans.

The pilot results were consistent with a growing body of peer-reviewed scientific research. This research supports pharmacogenomics testing as a valuable tool to help treat people experiencing depression and anxiety.

Based on the results of the pilot, plans may want to consider adding pharmacogenomic testing as part of their disability management tool kit. And employers can also add it to their extended health plans, supporting plan members no matter where they are on their health journey.

Future Innovations— There's More to Come

Advancements in technology and AI will continue to benefit us in our daily lives. They will also continue to expand the health support that employers can provide to plan members.

The use of pharmacogenomic testing is expanding to many other health conditions, not just mental health. This includes common chronic conditions such as diabetes, cancer and arthritis.

The benefits industry will continue to innovate through evidence-based advancements in health care. The new resources and solutions put in place can continue to improve outcomes for both plan members and employers—and fulfill the industry's purpose of helping Canadians live healthier lives. ☺

Endnotes

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