

Saliva testing helps with disability management

Pharmacogenetics primed to be 'next big thing'

BY MARCEL VANDER WIER

IN their latest attempt to reduce benefit plan costs, Canadian health insurance providers are starting to hone in on pharmacogenetics — studying how genetics affect an individual's reactions to medication.

Through saliva testing, mental health medications in particular can be tailored to specific genetics, helping employees get healthier faster and return to work sooner, according to Michael Prouse, director of operations at Personalized Prescribing in Toronto.

Employers and disability managers are now looking to pharmacogenetics as a solution to mental illness and disability cases, as well as cutting down on polypharmacy — multiple medications taken by one patient — and removing non-effective medications from overall drug costs, he said.

Individuals' genetic information can be gleaned from saliva or a simple buccal (cheek) swab, said Prouse.

Already popular in the United States, pharmacogenetics is a newer concept in Canada, he said.

"It's slowly coming to Canada but what I've noticed over the last four years is that it's really skyrocketed... because this is the most effective tool to basically combat mental illness in the workplace when it comes to the medication side of it... We're not the silver bullet, but we do provide that insight into the medication regimen to make sure that that's objective."

There are a lot of different insur-

ers that are targeting this platform, said Prouse.

"They're starting to understand the benefits of pharmacogenetics and they're ready to get in because of Bill S-201 (An Act to prohibit and prevent genetic discrimination). They're starting to develop some sound plans to get their foot in the door right now."

"I think it's going to be huge," he said. "It's going to be the next big thing. When it comes down to innovation in the market, there's nothing more innovative than personalized medicine entering the employer realm."

Embracing pharmacogenetics

In August, Sun Life Financial announced it would be partnering with the Centre for Addiction and Mental Health in Toronto (CAMH) and Assurex Health on a pharmacogenetics study of nearly 9,000 participants.

The study, known as IMPACT, has been using patients' saliva to determine individual response to mental health medications in a bid to pinpoint more effective treatment, said Marilee Mark, vice-president, product and integrated health solutions, group benefits at Sun Life in Waterloo, Ont.

"We're looking at it as a pilot," she said. "We've not added it as a standard benefit to our plans. At some point, we may."

Employers offer benefits to ensure necessary treatments or ser-

vices are available to employees and their families, said Mark.

"You want to make sure that you're giving the most relevant benefits to an employee that are going to have the best impact on their health. That's where pharmacogenetics comes in."

Sun Life clients on an approved mental health-related disability claim who are taking medication as part of their treatment are able to take part in the study on a voluntary basis, she said.

The ultimate goal is to have workers receive effective medication, so they can return to work sooner, while keeping benefit plan costs sustainable for employers.

"Pharmacogenetics is a groundbreaking approach to mental health treatment," said Mark, noting the earlier a person can get the appropriate treatment in place, the better the prognosis.

The study analyzes participants' saliva to identify genetic variants that can influence how they respond to common mental health medications. A report is then sent to the patient's physician with a green, yellow or red denotation. Green points to the medication expected to work best, yellow indicates dosage levels may need adjusting, and red denotes medications that should be used with caution.

"We'll begin to see how we can leverage personalized medicine in benefits plans overall. This is a good way to take that first step to ensure

we've protected confidentiality, privacy and that patient-physician relationship," said Mark.

Overcoming privacy issues

The recent interest in pharmacogenetics comes following extensive parliamentary debate on Canada's Bill S-201, which protects individuals' genetic information and received royal assent in May, said Prouse.

A variety of safeguards are in place to keep genetic information private through the testing process, including voluntary consent and the codification of personal information before saliva tests are shipped to the laboratory, he said.

For insurers looking at pharmacogenetics, "it all comes down to employer and employee education," said Prouse. "All these factors will contribute to a safer situation."

Testing is generally conducted through "spit kits" that have clients expel saliva into a vial, then add a DNA isolation buffer before sending it off to the lab. Clients undergoing the tests can choose the specific data they would like to receive from their test via consent forms, he said.

Following analysis, the lab will send the green-yellow-red light report to the client's physician, who makes the final decision on possible medical prescription alterations.

Throughout the process, it's important the employee has full transparency and remains in control, said Ann Cavoukian, distinguished

expert-in-residence leading the Privacy by Design Centre of Excellence at Ryerson University in Toronto.

“Privacy is all about control — personal control on the part of the individual relating to the uses of his or her personal information,” she said. “When you’re talking about mental health issues and medication, this is the most sensitive health medication you could ever have.”

“Like many physical samples, saliva could also reveal additional infor-

mation about an individual’s health, so you would have to be very clear that the only use that could be made of the saliva test was for this particular narrow purpose... which is to assist in finding the best medication for the mental health problem.”

All of this has to be done very privately through the physician, who will presumably explain to the patient why this is in her best interest to get the best possible medication, according to Cavoukian.

“You have to be extremely careful

whenever you’re dealing with sensitive health information.”

Sun Life, like all insurance companies, abides by rigorous protocols to ensure compliance with legislation and privacy requirements, said Mark. Client-physician confidentiality will remain in effect throughout the pharmacogenetics process.

“In doing so, then really there isn’t a privacy concern if we’re not receiving information that we should not have or would not require, and that informa-

tion is not used in any way for disability purposes — it really is strictly related to (best medication) and it’s always the physician’s choice.”

It’s really important to keep the relationship and the decisions between the physician and the patient or employee, said Mark.

“The employer would not know that they have an employee who’s participating in this study. There’s no need for them to know. It’s completely confidential.”