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BCPhA leads rollout of pharmacy DNA testing across Canada

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What if physicians, pharmacists and patients could be certain, when a drug is prescribed, that the patient is getting exactly the optimal dosage and form of the right medicine—the one that will work most effectively, with the fewest problems, based on the patient’s personal genetic make up?

That scenario is becoming much closer to reality, after the February 9 announcement of a groundbreaking new partnership designed to make pharmacogenomics testing more accessible to Canadians.

Making the announcement was Geraldine Vance, CEO of the B.C. Pharmacy Association (BCPhA). The BCPhA has been charting the waters of pharmacogenomics testing (PGx) since 2015. This past fall saw the conclusion of a year-long research project in partnership with Genome B.C. and the University of B.C. to see if PGx testing in pharmacies was possible. In that project, 29 trained pharmacists from a variety of community practice locations collected DNA samples from 200 patients across the province. The study resulted in a positive affirmation from Genome BC (as well as from the participating pharmacists) that pharmacy-led genome testing was indeed viable. A second phase of the research is set to begin later in 2017.

Commercializing PGx testing as a new practice and revenue option for community pharmacies was always the goal of the research, says Vance. Once all parties involved in the research pilot agreed that it was a simple process that benefited patients, the goal was to expand the project to other provinces as quickly as possible. To do so, however, would require the participation of a commercial partner who could provide the patient test kits, sequence, analyze and securely store the DNA data and provide reports that can be used by healthcare providers to optimize prescribing.

In a serendipitous meeting in Vancouver, Vance was introduced to the former CEO of an Australian company, myDNA, which has been providing a “genetic interpretation service” via more than 300 pharmacies and conducted 9 similar research projects in Australia over the past several years. She quickly contacted the firm about partnering on the Canadian project.

Low-cost, simple test provides specific reports



The myDNA pharmacy program is a low-cost, very simple PGx testing program in which patients submit cheek swab for testing that covers up to 30% of the most commonly prescribed medications for pain, mental health, cardiovascular health and GI (proton pump inhibitors). It also tests for 8 genetic indicators/predictors. Patients receive a link to a password-protected website where they can download their own report and send or bring it to their healthcare provider for interpretation and action.

One of the benefits of the myDNA report, said executive director, Dr. Lior Rauchberger, is that “It takes raw DNA data and produces useful, specific reports, right down to the exact drug, format and dosages that would be optimal for the

patient.” In the case of many drugs, such as antidepressants and antipsychotics, avoiding the often-discouraging trial and error phase of prescribing could make a huge difference in terms of adherence and patient outcomes.

The new partnership between BCPhA and myDNA will enable the rapid rollout of phase 2 of the pharmacist PGx project in pharmacies across Canada, said Vance.

Details are still to be finalized, but it's expected that the initial set-up cost for a pharmacy to participate in the testing is about \$500. The kits are sold to consumers at \$269 (including a \$125 pharmacist consult fee) for the multi-gene PGX test and \$199 (including a \$100 consult fee) for a mini test. Rauchberger said the time involvement for pharmacists is typically two 20-minute counselling sessions to explain the process, interpret the report and communicate with the patient's physician as needed.

In an innovative and forward-thinking twist, the BCPhA has also arranged that for each test conducted in their province, \$3 is allocated to the provincial pharmacy association towards raising awareness of the pharmacy testing capabilities.

With the next phase of the PGx project yet to launch, Vance and her colleagues have already begun talks with major pharmacy banners, health insurance providers and pharmaceutical manufacturers to explain the new service. At the announcement several industry leaders expressed confidence that employers would welcome the opportunity to have drug plan members undergo the testing in order to reduce spending on inappropriate medications.

Why the rush to commercialize this new service? Vance explains that the strategy is to roll out the concept of PGx testing to as many community pharmacies as possible, as fast as possible, while the technology is still in its early stages. “We want to be first out of the gate, so that the pharmacy is immediately seen as the logical best place to get your DNA testing done.”