



# Paving a path in PANDEMIC TIMES



— **MYRBETRIQ®** is the —  
**#1** dispensed  
OAB  
medication  
across Canada<sup>1\*</sup>

NOW AVAILABLE FOR PATIENTS ON MYRBETRIQ®!

## MyMyrbetriq Coach—A new support program for patients with overactive bladder (OAB)

MyMyrbetriq Coach is a **free online support program** designed to help patients on MYRBETRIQ®:



**Learn** more about their condition



**Get started** with MYRBETRIQ®



**Access** lifestyle goal-setting guidance



**Track** their symptoms



**Stay motivated** throughout their treatment journey

**...and more!**

Encourage your patients on MYRBETRIQ® to...

**VISIT MyMyrbetriq.ca TODAY!**

MYRBETRIQ® (mirabegron) is indicated for the treatment of OAB with symptoms of urgency, urgency incontinence, and urinary frequency.<sup>2</sup>

A **MYRBETRIQ® DIN** must be entered on the MyMyrbetriq.ca website to create a user profile and access all its features. The MYRBETRIQ® DIN can be found printed on the outside of the MYRBETRIQ® box.

Consult the Product Monograph at <https://health-products.canada.ca/dpd-bdpp/index-eng.jsp> for more information relating to contraindications, warnings and precautions, conditions of clinical use, adverse reactions, drug interactions, and dosing information which have not been discussed in this advertisement.

The Product Monograph is also available by calling us at 1-888-338-1824.

\* Comparative clinical significance unknown.

**References:**

1. IQVIA. Canadian CompuScript Data. July 2019.
2. MYRBETRIQ® Product Monograph. Astellas Pharma Canada, Inc. June 2, 2016.

# CONTENTS

- 4 Paving a path during pandemic times
- 10 Chart: provincial changes related to COVID-19
- 13 Research rewards
- 17 Virtual connections
- 18 Chart: provincial services
- 25 75 strong!
- 29 Injection affection
- 33 Research proves value of PGx testing



Cover Illustration:  
Shingo Shimizu /  
www.shingo.ca



Canadian Foundation  
for Pharmacy

SUPPORTING PHARMACY FOR A HEALTHIER CANADA

## 2020 BOARD OF DIRECTORS

### Executive Committee

**Past President** Bill Wilson

**President** Linda Prytula

**Vice-President** Margaret Wing

**Secretary/Treasurer** Deb Saltmarche

**Executive Director** Dayle Acorn

### Directors

**Academia** Lori MacCallum,  
Kerry Mansell

**Association** Jean Bourcier, Justin Bates

**Pharmacy** Sherif Guorgui,  
Iris Krawchenko, Helen Marin

**Industry** Kimberly Schroeder,  
Max Bearsto, Al Moghaddam,  
David Windross, Rita Egan

The 2020 edition of *Changing Face of Pharmacy* was published in November 2020 by the Canadian Foundation for Pharmacy (CFP), 5809 Fieldon Rd., Mississauga, ON L5M 5K1. Tel: 905-997-3238. Please contact CFP for permission prior to reproducing content.

**Executive Editor** Dayle Acorn

**Managing Editors**  
Rosalind Stefanac, Karen Welds

**Contributors** Sonya Felix,  
Alexander Handziuk

**Art Director** Tanya Brockley

Find us on



## Is pharmacy ready for the next wave?

It's been a strange 2020 to say the least. As we prepare this report, it's still unclear when 'normal times' will return and what the future will look like in light of COVID-19. What has become clearer during these pandemic times, however, is the fact that pharmacists are a more integral part of our healthcare system than any of us even imagined.

During the height of the outbreak, when clinics shut down and physicians became inaccessible, it was pharmacists whose pharmacy doors and phone lines remained open. They made themselves accessible on the frontlines at great risk to their own health. They stepped up to alleviate patients' anxieties, find medication options during shortages and ensure Canadians could continue their treatment regimens whenever possible. You'll read more about the commendable and innovative efforts of pharmacists during COVID-19 in the pages ahead.

Now that we have entered the flu season, the demand for pharmacy services is intensified further. Provincial governments have substantially increased their orders of flu vaccines and are urging Canadians to get their flu shot in light of COVID-19. For the first time, high-dose vaccines for seniors will be more readily available at select pharmacies. And amidst the substantial increase in pharmacy resources needed for administering flu shots, are those pharmacies simultaneously doing on-site asymptomatic COVID-19 testing too—all within the constraints of a global pandemic. It could be the makings of a perfect storm....

As the profession rises to meet the challenges to patient care in these unprecedented times, it's the support of pharmacy business owners, government and other stakeholders that will make pharmacists' efforts sustainable.

In the meantime, here at the Canadian Foundation for Pharmacy, we will continue to support the profession in the way we do best—by funding innovative ideas and supporting leaders who are helping advance the profession by proving the value of pharmacy.

As we celebrate our 75th anniversary this year, we owe our longevity to an ability to evolve to meet the changing needs of the profession, be it in post-war times or during a pandemic. (Read more about the Foundation's evolution on pg. 25.)

We thank all of you for your ongoing support and look forward to supporting pharmacy and pharmacists for many more decades.

Dayle Acorn,  
Executive Director,  
Canadian Foundation for Pharmacy



# Paving a path in **PANDEMIC TIMES**

Pharmacy steps up during  
COVID-19 *by Sonya Felix*



When the novel coronavirus pandemic was declared in early March, Christine Cheng's husband asked her to consider resigning from her job as pharmacist and manager of integrated services at Cloverdale Pharmasave in Surrey, B.C. "The beginning of the pandemic was surreal and very scary," recalls Cheng, who has small children at home and worried about spreading the virus. "But I couldn't resign. My patients need me."

Pharmacists and pharmacy staff all across the country faced similar concerns as COVID-19 spread steadily, infecting more than 150,000 Canadians and killing more than 9,200 as of late September. Yet, while many retailers and healthcare providers closed shop or switched to virtual services, pharmacists like Cheng continued to work on the frontline day after day to manage unprecedented challenges and care for patients.

"In a dynamic and accessible pharmacy environment, you never know what challenges may land on your doorstep," says Shelita Dattani, Director, Practice Development and Knowledge Translation for the Canadian Pharmacists' Association (CPhA). "But pharmacists have stepped up and done an amazing job to serve their patients and communities."

The profession has proven itself to be a 'go-to' resource for primary care, public health, disease management and continuity of care, adds Sandra Hanna, CEO, Neighbourhood Pharmacy Association of Canada (Neighbourhood Pharmacies). "Pharmacy's response to COVID-19 demonstrates that pharmacy belongs at decision-making tables."

Indeed, Neighbourhood Pharmacies, CPhA and provincial pharmacy associations are finding themselves at governments' tables more often, as decision-makers become open to new approaches to manage the rate of infection and foster economic recovery. While the challenges are far from over, the pandemic may come to represent an unheralded opportunity for pharmacies and pharmacists to be recognized—and reimbursed—for more of the services they provide outside of dispensing.

### Staying safe in an unsafe world

Managing safety for themselves and patients is an ongoing priority for pharmacists and their staff. At the beginning of the pandemic, pharmacies set up a range of safety measures: screening customers and patients at the door for symptoms, setting up a system for physical distancing, installing plexiglass at counters, offering home delivery

and/or curbside pickups, loading up on sanitizers and acquiring personal protective equipment (PPE) to protect frontline staff.

At first, access to PPE was a struggle country-wide, and pharmacies were largely left on their own to source—and pay for—PPE. Although Alberta recognized pharmacy as an essential service early on, access to the government's PPE stockpile was slow to follow. Eventually pharmacies received gloves for free, but most had to find their own PPE suppliers.

Pharmacies in the Atlantic provinces have had better luck. All have gained access to government supply at no charge, although some more so than others (see chart, pg. 10).

In Ontario, the Ontario Pharmacists Association (OPA) partnered with a manufacturer and distributor to give pharmacists preferential pricing for masks, gloves and gowns. In recent months, PPE supply has ramped up and prices have stabilized. But it remains an extra financial burden for pharmacies. And flu season means higher costs for PPE and sanitization, adds OPA CEO Justin Bates.

A higher fee for administering influenza injections is among the items on the table during current discussions with the provincial government. In early October, government agreed to give pharmacies access to its supply of masks at no charge, for use during flu vaccinations.

Throughout the discussions, OPA stressed the benefits for government. "While capacity for vaccinations may be limited in other parts of the health system, this is an opportunity for pharmacy to add capacity with better access and convenience for patients," explains Bates. "Valuable lessons were learned in how to manage patients and how pharmacy professionals can be leveraged when a potential second wave of COVID-19 arrives, and flu season starts."

### Supply limits add to frustration

In the early days, concerns about drug shortages posed a major challenge for pharmacies when provinces recommended or mandated limiting prescription refills to 30-day supplies. Pharmacy took a lot of heat in the press as some patients complained about the added dispensing fees. Although pharmacy regulators made the decision to limit refills to 30 days in most jurisdictions, drug supply issues are reviewed bi-weekly by a cross-functional working group including CPhA, Neighbourhood Pharmacies, Innovative Medicines Canada and the Canadian Generic Pharmaceutical Association.

"A number of patients were not happy

and accused us of a cash grab," says Sean Simpson, pharmacist/owner of Simpson's Pharmacies in the Niagara Region of Ontario. "The last thing we wanted to do was argue with patients and we were glad the Ontario government stepped up to cover co-pays." Several other provinces similarly covered the extra costs for patients on their public plans.

For some, the lifting of the 30-day limit created a new problem. "The sudden switch back to the 90-day supply, with no messaging or time to react, created a crush in demand that doubled our workload," explains Simpson. "In June we did 180% of the average number of prescriptions pre-COVID. This was far worse than anything else we've dealt with during the pandemic. As well as the insane volume, we faced two- to three-day waits for inventory."

Hanna agrees that managing the drug supply is a heavy burden for pharmacy and Neighbourhood Pharmacies is working with provincial associations on challenges related to drug management policies. "Medications are part of a complicated global supply chain. Although pharmacists can't fully manage pharmaceutical supplies at the front end of the supply chain, pharmacists are often relied upon to implement and communicate measures required to safeguard the supply chain on behalf of supply chain stakeholders, while continuing to manage patients' health concerns effectively."

### New authorities open doors

At the beginning of the pandemic, Health Canada issued temporary exemptions for prescriptions of controlled substances to allow pharmacists to extend, transfer and accept verbal orders, and permit pharmacy employees to deliver prescriptions.

Various provinces also granted temporary expanded scope to allow virtual services (by phone and/or videoconference) such as medication reviews, minor ailment prescribing, smoking cessation and deprescribing consultations. Depending on the jurisdiction, pharmacists may temporarily provide early refills, extend prescriptions and make therapeutic substitutions. To help pharmacists understand these changes, CFP created a chart with further details (pg. 10).

"The care we've been able to provide to our patients has helped to bridge many of the healthcare gaps caused by the pandemic while also showcasing our ability to help patients through expanded scopes and services," says Dattani. "We hope that the temporary expanded scope measures are made permanent."

# PHARMACISTS TO THE RESCUE DURING COVID-19

## NOW IS THE TIME TO SUPPORT PHARMACY FOR THE FUTURE

With the onset of COVID-19 in mid-March 2020, health care as we know it changed dramatically. As it became harder and harder for people to make appointments with their family physicians and specialists, pharmacists were forced to quickly adapt their services to fill in the gaps and ensure continuity of patient care.

In Halifax, one pharmacy owner recounts using expanded scope to prescribe in emergencies on a daily basis. "Every day a new situation presented itself, and at the same time, regulations and special bulletins were changing daily, so we needed to adapt with all the new information coming in," he says. "We adapted our model to serve our patients in the best way possible, in the safest way possible, to meet their health needs."

As part of this expanded scope, his pharmacy began doing more injections for patients who couldn't access their physicians, including those for osteoporosis. "Having the additional scope of practice has increased awareness for our patients to the value of the pharmacist," he says. "It has also been very fulfilling and rewarding to hear patients say "thank you" for being there when they needed us the most."

### TIME TO INVEST IN PHARMACY

In the meantime, biopharmaceutical companies like Amgen are doing their part to ensure community healthcare teams in Canada continue to function optimally



during these unprecedented times. "When COVID-19 hit, we recognized the need to further support the link between patient, physician and pharmacist to ensure continuity of care for osteoporosis patients at risk of fracture," says Dr. Suna Avcil, Executive Medical Director at Amgen Canada. "There are many examples of when the pharmacist was accessible—either by phone or in person—to provide much-needed counselling to patients."

Amgen Canada's Vice President and General Manager, Brian Heath, says in order to assist patients who are struggling to access their physicians during this time, the company has prioritized efforts to increase patient education and awareness of the important role that their pharmacists can play in

terms of counselling and ensuring timely, safe continuation of their care. "In Ontario, through the use of medical directives, physicians and pharmacists worked together to help patients with their care, such as injections," he says.

Now going forward, it's imperative that all healthcare stakeholders continue to support pharmacy for the long haul. "COVID-19 had exposed the fragility in Canada's healthcare system," says Geoff Sprang, Executive Director, Value Access and Policy at Amgen Canada. "We need to consider what policies need to be in place to support a resilient, dynamic and adaptive system going forward," he says. "This is the time to invest in health care through innovation and system strengthening measures."

Brought to you by



*This content made possible in collaboration with Amgen Canada Inc.*

*The Canadian Foundation for Pharmacy thanks Amgen Canada Inc. for its sponsorship of this article.*

As well, uptake of authorities already in place prior to COVID have likely increased as physicians lean more on pharmacies to help manage patients.

“We do a lot more adaptations these days,” says Cheng, adding that the pharmacy’s relationship with local doctors is better than ever. “The added scope for controlled substances has also helped us provide continuity of care, especially for our chronic pain patients.”

In Ontario, authorities for pharmacists to assess and treat for minor ailment services and conduct point-of-care testing were already underway before the pandemic and implementation is expected soon. OPA has also long advocated that further expansion of scope—including therapeutic substitution, pediatric vaccinations and a greater role in immunization—would add much-needed capacity to the healthcare system.

Specific to COVID-19, in late September the Ontario government announced the gradual rollout of testing of asymptomatic persons in higher-risk priority groups in participating pharmacies. Discussions with the OPA had begun in the spring.

Meanwhile, on July 30, Alberta became the first jurisdiction to launch a province-

wide program enabling pharmacists to collect specimens for COVID-19 testing in pharmacies that meet safety requirements. Prior to implementation, a month-long pilot saw 20 community pharmacies across the province work through many of the logistical challenges—and successfully test more than 10,300 asymptomatic individuals. By late September, more than 400 pharmacies had joined the voluntary program.

“The public has been very appreciative of this service,” says Margaret Wing, CEO of the Alberta Pharmacists’ Association (RxA). “When pharmacists respond to a public health crisis such as this, the value they provide is immediate and obvious. This is where the profession shines.”

The testing service complements a service implemented in March, when pharmacies became able to bill the province \$20 for the provision of information related to COVID-19 (up to five a day). Effective July 30, the testing service enables pharmacies to bill \$20 for a screening (with no limit on the number of screenings per day). If the screening finds the patient has symptoms or known exposure, the pharmacist refers the patient to Alberta Health Services for testing. If the patient is asymptomatic and has no

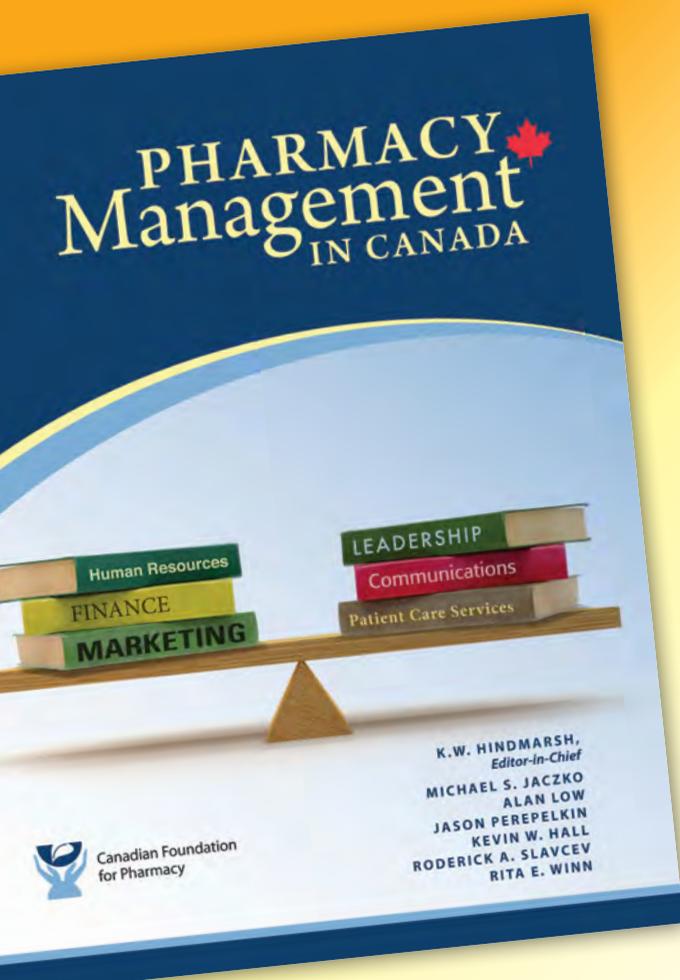
known exposure, the pharmacist can test for infection by taking a throat swab sample. The fee for testing is \$22, which includes follow-up with the patient to share the test result and provide additional education if required. Details on Alberta’s services related to COVID-19 are summarized on pg. 10.

Outside of Alberta and Ontario, just one other province has implemented and funded a pharmacy service as a direct result of COVID-19: in Newfoundland and Labrador, pharmacies can bill \$50 for the delivery of opioid agonist maintenance treatment for patients in self-isolation.

### Growing financial pressures

Pharmacies remaining open during the pandemic face a number of obvious costs such as PPE, plexiglass barriers, hiring delivery staff and stocking up on sanitizers. There are also layers of hidden costs. “We had to upgrade our phone lines because of the huge increase in calls,” says Simpson. “We had to install mobile debit terminals and had extra fees because of higher credit card transactions. It all adds up. But on the flip side, we are lucky to be working when so many other businesses have had to close.”

While Cheng is proud of her pharmacy’s



## Combining business acumen and pharmacy practice

At the Canadian Foundation for Pharmacy, we know the business of pharmacy is as key to the survival of the profession as good clinical practice. That’s why we launched the *Pharmacy Management in Canada* textbook and its accompanying accredited continuing education (CE) program: *Managing Your Pharmacy: The Business Essentials*.

Both textbook and seven-part CE program provide pharmacy owners and staff with a comprehensive guide to navigating the new world of pharmacy—from tips on financial management and business plans to human resources and marketing. Pharmacists and pharmacy students can take the self-directed CE program via individual modules too.

Don’t miss out on these all-Canadian resources dedicated to pharmacy management, brought to you by CFP.

For more information go to <https://cfpnet.ca/publications/details/id/3>



Canadian Foundation  
for Pharmacy

SUPPORTING PHARMACY FOR A HEALTHIER CANADA



# ONE VISIT, TWO SHOTS:

WHEN YOU DISCUSS FLU,  
RECOMMEND VACCINATING  
AGAINST SHINGLES TOO

## DID YOU KNOW?

SHINGRIX can be co-administered with unadjuvanted seasonal influenza vaccine. The vaccines should be administered at different injection sites.<sup>1</sup>



**SHINGRIX**

HERPES ZOSTER VACCINE (NON-LIVE  
RECOMBINANT, AS01, ADJUVANTED)



## THIS FLU SEASON

RECOMMEND SHINGRIX FOR YOUR PATIENTS 50 YEARS OF AGE AND OLDER,  
AND HELP PROTECT THEM AGAINST SHINGLES.

### Indications and clinical use:<sup>1</sup>

- Indicated for prevention of herpes zoster (HZ, or shingles) in adults 50 years of age or older

### Contraindications:<sup>1</sup>

- Patients with a known hypersensitivity to the active substance or to any component of the vaccine

### Most serious warnings and precautions:<sup>1</sup>

- Administration:** Do not administer the vaccine intravascularly, intradermally, or subcutaneously

### Other relevant warnings and precautions:<sup>1</sup>

- A protective immune response may not be elicited in all vaccinees
- Not for prevention of primary varicella infection or treatment of HZ or postherpetic neuralgia
- Postpone in those with acute severe febrile illness
- Use with caution in those with thrombocytopenia or any coagulation disorder
- Syncope following or before any vaccination as a psychogenic response
- Use in special populations, such as pregnant or nursing women or pediatrics (<18 years of age), has not been established

**Reference:** 1. SHINGRIX Product Monograph. November 21, 2019.

Trademarks are owned by or licensed to the GSK group of companies.  
©2020 GSK group of companies or its licensor.

- Limited data in immunocompromised adults 50 years of age or older

### Adverse events:<sup>1</sup>

- Solicited local and general adverse reactions that occurred in clinical trials within 7 days of vaccination in subjects aged 50–69 and ≥70 years respectively were: pain (85.6%, 69.2%), redness (38.5%, 37.7%), swelling at the injection site (28.5%, 23.0%), myalgia (53.0%, 35.1%), fatigue (51.3%, 36.6%), headache (45.2%, 29.0%), shivering (33.1%, 19.5%), fever (25.9%, 14.3%), gastrointestinal symptoms (20.5%, 13.5%)
- Unsolicited adverse reactions that occurred in clinical trials within 30 days of vaccination in ≥1% of subjects and ≥2-fold higher than placebo recipients included chills (3.5%), injection site pruritus (2.2%), and malaise (1.7%)
- Post-market adverse reactions are: hypersensitivity reactions (rare), including rash, urticaria, angioedema

### For more information:

Please consult the product monograph at [gsk.ca/SHINGRIX/PM](http://gsk.ca/SHINGRIX/PM) for important information relating to dosing and administration, adverse reactions, contraindications, and drug interactions which have not been discussed in this piece. To request a product monograph, or to report an adverse event, please call 1-800-387-7374.



**SHINGRIX**

HERPES ZOSTER VACCINE (NON-LIVE  
RECOMBINANT, AS01, ADJUVANTED)

ability to continue to meet the needs of patients, the pandemic's economic repercussions have taken a toll. "We definitely have had a lot less traffic since the pandemic began and our frontshop business has gone down considerably," says Cheng, who has had to reduce her hours. "We tried to keep staff on but had to let some go."

She hopes that pharmacy associations keep the profession's viability at the forefront

as they discuss possible new services for pharmacists going forward. "For some, recognition from the government is important, but that doesn't matter to me... I'd prefer funding to a thank-you."

Neighbourhood Pharmacies' Hanna agrees, though she adds that recognition and reimbursement go hand-in-hand. Federal and provincial governments are slowly

becoming more likely to seek out pharmacy's insights, feedback and advice as events continue to unfold, and associations are highlighting all the critical ways pharmacy supports patient care and improved access to care. Neighbourhood Pharmacies is also raising awareness on the costs absorbed by pharmacies in order to be available as frontline healthcare providers (see sidebar).

"By expanding pharmacists' scope in the areas of immunization and prescribing we can do even more to serve patients in virtually every community across Canada," she says. "Greater recognition and funding for pharmacy's work would strengthen and enhance pharmacy's ability to provide essential services in times of crisis."

As the pandemic endures for the foreseeable future, provincial and national associations will continue to advocate for increased recognition and reimbursement of what pharmacists and pharmacies can do.

"Our role is still under-recognized," says Dattani. "The pandemic has showcased our abilities and we need to continue creating awareness." ●



## THE COSTS OF PREVENTION

To help communicate to governments and other decision-makers the efforts of pharmacies to safely remain open, Neighbourhood Pharmacies worked with its members and provincial pharmacy associations to quantify the added costs. Their research revealed:

- In March, pharmacy spent approximately \$17 million for physical barriers (\$8.2 million), guides and sanitizers (\$4.7 million) and technology to enable virtual care (\$4.1 million).
- Ongoing weekly costs of \$71.5 million for increased deliveries (\$19.7 million), PPE and additional cleaning (\$14 million), increased wages (\$11.4 million), staff training (\$3.1 million), and relief labour (\$23.3 million).
- For the 10 weeks from March 16 to May 17, total estimated costs of \$740.1 million due to the pandemic.

*The Medicine  
Shoppe*  
PHARMACY

To our Medicine Shoppe personal pharmacists  
and all frontline workers,

**THANK YOU**

for your continued service to patients  
and the community.

# Provincial changes in provision of services and dispensing practices related to COVID-19

As of October 9, 2020; these changes are considered temporary unless otherwise specified (see QC, NS, PE)

	Controlled substances	New authority or funded service	Days supply	Prescribing*
BC	<p>Effective March 19, Health Canada issued temporary exemptions regarding prescriptions of controlled substances under Section 56 of the Controlled Drugs and Substances Act (CDSA). For controlled substances, pharmacists are temporarily authorized to:</p> <ul style="list-style-type: none"> <li>- accept verbal orders;</li> <li>- transfer prescriptions;</li> <li>- refill prescriptions if more than one year has elapsed since date written;</li> <li>- renew prescriptions;</li> <li>- adapt prescriptions, including part-filling or deprescribing.</li> </ul> <p>Pharmacy employees are also authorized to deliver prescriptions of controlled substances.</p> <p>These exemptions expire on September 30, 2021, or on the date they are revoked or replaced by other exemptions.</p> <p>All provinces except B.C. and Manitoba adopted most of these temporary exemptions to the CDSA. In B.C., pharmacists cannot adapt prescriptions due to limits in the pre-existing PPP-58 policy. In Manitoba, an exemption to the Prescribing Practices Program (M3P) for controlled substances allows prescribers to fax prescriptions directly to pharmacies until the COVID-19 situation resolves.</p>	No change	<b>March 26:</b> Government announcement to continue usual policy for maximum days supply; if this conflicts with on-hand supply, pharmacist may fill less than the maximum without penalty	Permission for early refills; emergency supply for 30 days; and to adapt transfers
AB		<ul style="list-style-type: none"> <li>• \$20 for Assessment to Screen and/or Test for Infectious Disease related to COVID-19 and provision of information, max. 5/pharmacy/day</li> <li>• Assessment for the Intention to Test for COVID-19, a 2-step process: \$20 for Assessment to Screen for Asymptomatic Testing, followed by \$22 for Administration of COVID-19 Testing</li> </ul>	<p><b>March 19:</b> Implementation of recommended 30-day maximums; pharmacists to use judgment if greater supply required. Government modified copays to ensure seniors do not pay more over 3-month period</p> <p><b>June 15:</b> Return to higher quantities unless stock unavailable</p>	Waived requirement to notify other professionals when renewing for
SK		No change	<p><b>March 18:</b> Implementation of mandatory 30-day maximums</p> <p><b>May 20:</b> Discontinuation of mandatory 30-day maximums; pharmacists may use judgment to dispense appropriate quantities</p>	<ul style="list-style-type: none"> <li>• Permission to prescribe more than 30 days previous prescription issued by pharmacist to give refills as needed and a verbal order</li> <li>• Verbal orders and transfers authorized under Prescription Review Program</li> <li>• Waived requirement to notify other professionals when prescribing for minor ailments (excl. PRP drugs)</li> </ul>
MB		No change	<p><b>March 19:</b> Implementation of mandatory 30-day maximums</p> <p><b>May 11:</b> Discontinuation of mandatory 30-day maximums; however, limits remain for certain drugs (eg, salbutamol)</p>	No change
ON		\$20 per assessment for testing; \$22 per specimen collection from asymptomatic persons in higher-risk prioritized groups	<p><b>March 20:</b> Implementation of recommended 30-day maximums; government covered the costs of extra copays for ODB recipients</p> <p><b>June 15:</b> Return to 100-day supply; pharmacists to use professional judgment to limit dispensing quantities based on availability</p>	No change; discussions to explore implementation of minor ailments
QC		No change	<p><b>March 12:</b> Implementation of directive to dispense 30-day supplies unless clinically justifiable</p> <p><b>June 12:</b> Discontinuation and return to usual supplies (note: in Quebec most chronic prescriptions are routinely filled for 30 days, as the public plan is designed for monthly patient contributions)</p>	<ul style="list-style-type: none"> <li>• Permission to extend prescription beyond typical maximums</li> <li>• For minor ailments, changed from 30 days to 90 days previous diagnosis (increased from 30 days)</li> <li>• Effective March 18, early adoption of new authorities to obtain through pharmacist to prescribe all nonprescription drugs and administer vaccines; and to administer salbutamol and nebulizers in an emergency (fee \$18.59)</li> </ul>
NB		No change	<p><b>March 16:</b> Implementation of mandatory 30-day maximums; government covered the costs of extra copays for public drug plan members</p> <p><b>April 24:</b> Discontinuation of mandatory 30-day maximums; return to 90-day supplies unless stock unavailable; limits may be put in place for certain drugs due to shortage</p>	No change
NS		No change	<p><b>March 20:</b> Implementation of recommended 30-day maximums; pharmacists use judgment if greater supply required</p> <p><b>May 22:</b> Discontinuation of recommended 30-day maximums</p>	Early adoption of permanent emergency supply authority and permanent fee for 4 up to 3 prescriptions; \$20 for 4
PE		No change	<p><b>March 21:</b> Implementation of recommended 30-day maximums; extra copays covered by government for pharmacare recipients</p> <p><b>May 22:</b> Return to maximum days supply unless stock unavailable</p>	<b>Permanent</b> new authority to refill without the originating prescriber at pharmacy
NL	<ul style="list-style-type: none"> <li>• \$50 fee for delivery of opioid agonist maintenance treatment for patients in self-isolation</li> <li>• \$3 fee for methadone carries</li> </ul>	<p><b>March 18:</b> Implementation of recommended 30-day maximums; extra copays covered by government for pharmacare recipients</p> <p><b>May 4:</b> Return to maximum days supply; however, some restrictions may still apply for certain drugs</p>	No change	

\*Authorized prescribing activities vary by province, including renewals, adaptations, emergency fills, minor ailments and collaborative agreements, as applicable  
Sources: Provincial pharmacy associations, websites for provincial ministries of health and pharmacy regulatory bodies.

	Therapeutic substitution	Virtual care	Personal protective equipment (PPE)
Emergency fills for up to 30 days of prescriptions	Removal of limitation on drug categories where there is a shortage	No change (counselling and adaptations/renewals could already be provided by phone)	Pharmacies source own PPE
Continuity of care	No change (already enabled)	Ability to provide Comprehensive Annual Care Plans, Standard Medication Management Assessments and other patient assessments by phone or video	In April, the Provincial Emergency Services Program shipped an initial supply of masks at no cost; pharmacies pay for subsequent orders or source own PPE
More than once when prescribed by a pharmacist and appropriate for (PRP) drugs	Emergency therapeutic substitution options under development; check College website for updates	Ability to conduct and bill for medication reviews, prescribing and other services (e.g., smoking cessation) by phone and/or using Pexip or other pre-authorized video system	Pharmacies source own PPE; no access to government supply at this time
Primary prescriber consent or extending	No change (currently no authority for therapeutic substitution)	Ability to conduct patient assessments by phone or video	Pharmacies source own PPE; no access to government supply at this time
Emergency services program	No change (currently no authority for therapeutic substitution)	Ability to conduct and bill for medication reviews or other services by phone or video using secure or other platforms (e.g., FaceTime) with explicit patient consent and appropriate security/privacy in place	Access to government supply of masks at no charge for flu vaccinations; access to gowns at no charge for COVID-19 testing
Substitutions beyond 30 days (up to 4 years) of permanent substitution; that specimen; drugs; prescribe and nonprescription drugs	<ul style="list-style-type: none"> <li>• Waived requirement to check product availability in two other pharmacies for therapeutic substitution due to shortage</li> <li>• Substitution to another therapeutic sub-class allowed</li> </ul>	No change	Pharmacies source own PPE; no access to government supply at this time
	No change (already enabled)	New "Guidance for Providing Virtual Care During an Emergency"	Access to government supply at no charge during flu vaccination program
Expanded injection or renewals (\$12 for or more at one time)	No change	Ability to prescribe remotely by phone or video; medication reviews must continue to be in person (in order to bill)	Access to government supply at no charge from June until October; efforts to extend until end of flu vaccination program
Renew prescriptions when being at that	No change	Ability to conduct and bill for government-funded medication reviews and follow-ups by phone; request to expand to assessment/prescribing has been put forward, but not enabled as yet	Access to government supply at no charge; however, the expectation is that pharmacies source own PPE and use government supply as last resort
	No change	Ability to conduct and bill for medication reviews and initial SaferMedsNL consults by phone or video	Access to government supply at no charge during flu vaccination program

Made possible with financial support from:



# BRENZYS®

## The #1 dispensed etanercept biosimilar in Canada<sup>1\*†</sup>

### Trust in our demonstrated Canadian experience:

- 4 years on the Canadian market
- Over 4,800 patients enrolled in the MERCK HARMONY® Patient Support Program across indications since 2016<sup>2\*</sup>

Backed by the  **Harmony**  
PATIENT SUPPORT PROGRAM

Dedicated to patients since 2016



Full team supporting each patient



Reimbursement support



Self-injection training options



Starter kit with travel pack



Snowbird traveler's program



**MERCKHARMONY.CA**

### BRENZYS® (etanercept injection) is indicated for:<sup>3</sup>

#### RA

- treatment of moderately to severely active rheumatoid arthritis (RA) in adults. Treatment is effective in reducing the signs and symptoms of RA, inducing major clinical response, inhibiting the progression of structural damage, and improving physical function. BRENZYS® can be initiated in combination with methotrexate (MTX) in adult patients or used alone.

#### AS

- reducing signs and symptoms of active ankylosing spondylitis (AS).

\* Clinical significance is unknown.

† Based on IQVIA CompuScript data (Jan 2019- May 2020).

#### References:

1. IQVIA. Data. January 2020. 2. Patient Support Program Data on File. July 20, 2020. 3. BRENZYS® Product Monograph, Samsung Bioepis, June 18, 2018. Distributed by Merck Canada Inc.



MERCK HARMONY® is a registered trademark of Merck Sharp & Dohme Corp. Used under license.  
BRENZYS® is a registered trademark of Merck Sharp & Dohme Corp. Used under license.  
© 2020 Merck Canada Inc. All rights reserved.

CA-ETA-00191



 **MERCK**  
 **BRENZYS®**  
etanercept injection

# Research rewards

## CFP grants help researchers in pushing profession forward

By Alexander Handziuk

Every year the Canadian Foundation for Pharmacy awards grants through its Innovation Fund to help finance research initiatives in pharmacy across Canada. Here's an update on some of the exciting projects now underway.

### Nova Scotia and Canada-wide: Prescription to Thrive

Originally funded in 2018, the Prescription to Thrive (Rx to Thrive) project's goal was to establish a model for practice-centred change in community pharmacy. Spearheaded by the Pharmacy Association of Nova Scotia (PANS), Rx to Thrive was funded by multiple stakeholders, including CFP, the Nova Scotia government, Neighbourhood Pharmacy Association of Canada and the

Canadian Pharmacists Association. In June 2020, PANS released the final evaluation of results from pharmacies in "Wave 1" of the project—and the news is good.

The results showed that participating pharmacies significantly increased the non-dispensing pharmacy services they provide. Revenue from non-dispensing services also climbed.

Organization, efficiency and confidence improved among members of the pharmacy team, and a cultural shift occurred that led to

more of an openness to change. Importantly, team members reported that they felt that they could keep implementing these changes over time.

"The outcomes of Rx to Thrive have demonstrated that with the support of a practice change facilitator, pharmacies can be successful in implementing the non-dispensing pharmacy services, and that this is a viable and sustainable business and practice model for pharmacies in Nova Scotia," stated the report.

Moving forward into Wave 2, PANS is using the findings from Wave 1 to inform the structure of Rx to Thrive for the future. The plan is to build on the successes so far and expand the model to more pharmacies across Nova Scotia—and eventually put forward a model that can be adopted by pharmacies in other provinces.

## What Science Can Do

AstraZeneca 

At AstraZeneca, we believe in the power of what science can do to transform serious diseases like cancer, heart disease, diabetes, COPD and asthma.

Each and every one of us is bold in the belief that science should be at the centre of everything we do. It compels us to push the boundaries of what is possible. To trust in the potential of ideas and pursue them, alone and with others, until we have transformed the treatment of disease.

Together we can develop creative solutions to help tackle the challenges of effectively preventing and treating disease. AstraZeneca Canada Inc. is proud of our commitment to support Canada's healthcare community.



**Ontario:**  
**Cannabis Care**



Laura Murphy



Olavo Fernandes

Laura Murphy and Olavo Fernandes, along with the University Health Network, are developing Canada's first structured program, CannabisCareRx, aimed to help pharmacists screen patients on the potential use of medical cannabis. "It's important to have a structured process that pharmacists can easily follow for assessment," says Murphy.

They're also looking to provide a template for documentation and referrals to other healthcare professionals. This way, the community pharmacists will be able to gather all of the relevant information and either provide a brief intervention or refer patients to other healthcare professionals, so that those within their circle of care are aware of their cannabis use.

"We have anecdotal experience that patients want to talk about cannabis use with their healthcare providers, and we know that pharmacists feel that it's challenging to include it as part of their assessment. We want to hear from pharmacists and make sure that it fits their needs," says Murphy.

The project began in September, but COVID-19 has caused some protocol changes, including the possibility of conducting virtual screenings. Regardless, Murphy and her team believe that pharmacists are well situated and capable of making a real impact in cannabis care.

"Community pharmacists are easily accessible healthcare professionals who are highly skilled. They deal heavily with people with chronic pain, which is around 20% of the population," she says.

"Some people have very little access to specialty services and need primary care access, which makes matching them with their community pharmacist and having these discussions so important."

**Alberta:**  
**Mental Health Assessment and Prescribing**



Dan Burton

"Pharmacists are very good at diabetes, hypertension, all these chronic diseases that don't have to deal with feelings. But what I wasn't seeing addressed was patients' mental health," says Dan Burton, who together with his research team at the

University of Alberta is exploring community pharmacist-based mental health monitoring.

Log in **NOW** to experience the  
**APOTEX 360™**  
**PLATFORM**



Your complete digital source for all Apotex value added programs, services, resources & information.



Talk to your Apotex representative or visit  
[www.apotex360.ca](http://www.apotex360.ca) to learn more

Apotex, Ac, Apotex 360, the Apotex 360 logo, iPharmacist, the iPharmacist logo, iPharmacist 360 and the iPharmacist 360 logo are trademarks owned by Apotex Inc. Apple logo and App Store are registered trademarks of Apple, Inc. | Google Play and the Google Play logo are trademarks of Google LLC. | Copyright 2020, Apotex Inc.

**A prescription for business success**

Become a Pharmasave owner and benefit from our industry-leading programs and services, while maintaining your independence as part of a 100% member owned and governed organization.

**Interested?**  
Visit [Pharmasave.com](http://Pharmasave.com) for more information about becoming a Pharmasave owner.

**PHARMASAVE**

The project involves a randomized control trial with two patient groups. The first involves regular pharmacist care while the second group gets further counselling and titration of the prescribed medication. Pharmacists involved in the study will go through a couple of learning modules with a specialized focus on depression and anxiety management. Burton says that getting pharmacists comfortable and proving that mental health treatment can be effective is key to ongoing success.

The original plan was to start the program in the summer of 2020, but COVID-19 has delayed the launch until January 2021. This delay has led Burton and his team to consider innovations, including emailing patients beforehand and making the process paperless. They are also considering whether virtual consultations are viable.

Burton believes that the accessibility of pharmacists gives them high potential for improving community health practices. "With mental health, it's not just about whether the medication is taken properly. There needs to be that human follow-up," says Burton. "Pharmacists are in a great position to help with mental health."

## Quebec: Self-rating App for Depression

Patients often need more than a monthly visit to the pharmacist in between doctor's visits when it comes to dealing with depression, says Philippe Vincent. It's this gap in care that has inspired Vincent and his research team at the University of Montreal to develop a smartphone app called SAD-APP (Self-rating App for Depression Aided by Proactive Pharmacists) to help pharmacists support patients with depression.

To test this app, the research team is partnering with PharmaPrix and Shoppers Drug Mart, which are providing study patients and pharmacies.

The study will include three groups of 100 patients and involve the use of the PHQ-9 scale, a validated screening tool that uses a nine-question format to assess the presence and severity of depression. The first group will take the test at the beginning and end of the project. The second group will use the app, which features push notifications so that the patient can complete the PHQ-9 survey



Philippe Vincent

more frequently on their own.

The final group will receive calls from a pharmacist every week, who has received training based on best practices in clinical psychiatry. The pharmacist will conduct a five-minute semi-structured interview that seeks to create

rapport and agreement on treatment goals and tasks. Pharmacists will also ask about side effects, which will be addressed as required through separate interventions.

"The hypothesis is that the group with the human follow-up will have more interventions faster, which will make the evolution of the depression more favourable for them," says Vincent. While recruiting patients has been challenging due to the pandemic, Vincent says the project is moving forward again and is scheduled to begin this fall. ●

The Canadian Foundation for Pharmacy has been encouraging pharmacy leadership and innovation for **75 years!** To date we've provided:

**28** Innovation Fund grants totalling more than **\$1.5 million** to researchers and pharmacy innovators for projects that seek to advance the profession

**29** grants to pharmacists for personal leadership development through the **Wellspring Pharmacy Leadership Awards**

**7**

awards to pharmacy graduates through our **CFP/AFPC Graduate Student Award**

**9** Lifetime Achievement Awards to individuals with **20 or more** years of service to the profession.

**116** awards to past pharmacy association presidents through the **Past President's Award**

Find out more about what we do at  
**www.cfpnet.ca**

Find us on  
  



Canadian Foundation  
for Pharmacy



**75** YEARS  
SUPPORTING INNOVATION  
IN PHARMACY

# RxTx

Canada's authoritative source for prescribing and managing drug therapy at the point of care

## Essential drug and evidence-based therapeutic information in one convenient resource.

- Contains CPS content including drug monographs, vaccines, natural health and medical device information
- Unbiased, evidence-based, practical information on hundreds of medical conditions including non-prescription therapy

Find important information directly within the drug monograph!



Important manufacturer-developed and clinically relevant product information



Drug shortage alerts through Drug Shortages Canada



Automatically receive new clinically relevant information on drug products through CPS Notifications

Available online and through our mobile app!  
Find out more at [www.pharmacists.ca/RxTx](http://www.pharmacists.ca/RxTx)



CANADIAN  
PHARMACISTS  
ASSOCIATION

ASSOCIATION DES  
PHARMACIENS  
DU CANADA

## Virtual connections

### Community pharmacy primed to make inroads in virtual care and other digital health tools *By Karen Welds*

**S**uhas Thaleshvar is all about one-on-one, expanded services. Before COVID-19 hit, the owner of The Medicine Shoppe in Sherwood Park, Alta., and his pharmacy team were busy with a weight-loss program, injections, point-of-care testing and comprehensive annual care plans.

After the pandemic began, they hardly broke stride. With the exception of travel vaccines, by summer they were pretty much back to pre-COVID service levels. In fact, the pharmacy added COVID asymptomatic testing to its offerings.

Technology, including virtual care, makes it possible.

“We had to pivot really quickly. We had been seeing people every week for Ideal Protein [the weight loss program] and that’s not something that can easily be replaced with phone calls. The conversations can be emotional and you need to see the body language,” says Thaleshvar.

The pharmacy was already using a Canadian platform ([www.medmehealth.com](http://www.medmehealth.com)) to schedule, document and track its services. Thaleshvar increased his subscription to include virtual care (by phone or video), and most of his Ideal Protein patients made the switch. While he has begun to transition people back into the pharmacy, the virtual option is here to stay; in fact, it delivers added benefits.

“Patients are doing the pre-appointment measurements in advance and using the option of the video link when we cannot meet in person. This increases their adherence to the protocol and saves time at our end,” says Thaleshvar.

Canada Health Infoway, which works with provincial/territorial governments and healthcare providers to facilitate digital health, confirms that the pandemic pushed people to at least try virtual services. In April, about 60% of surveyed Canadians with healthcare appointments received their care virtually, compared to 10% to 20% before the pandemic, reports Simon Hagens, Senior Director, Performance Analytics at Canada Health Infoway.<sup>1</sup>

While the number is going back down, Hagens predicts virtual visits will eventually settle solidly ahead of pre-COVID-19

levels as providers and vendors iron out the wrinkles. “COVID-19 gave us a taste of the possibilities, but a lot of work still has to be done around security, change management and evaluation.”

Having said that, he singles pharmacy out as a likely early adopter, in part because it can act independently outside the public system. “Pharmacists have always been ahead of the curve in terms of the use of technology.”

#### The possibilities of virtual

The pandemic prompted governments across Canada to permit patient counselling virtually, by phone and/or video (see chart, pg. 10). Pharmacy associations are lobbying for these temporary measures to become permanent. While no one will argue that face-to-face interactions are best, recent months show they are not always necessary. As well, virtual care is better than none at all.

“We proactively reached out to seniors who we hadn’t seen for a while. They were so happy to hear from us,” says Linda Prytula, a pharmacist at a Shoppers Drug Mart in Oakville, Ont., and President of the Canadian Foundation for Pharmacy. “It would start as a call to see how they are doing, and if they were due for a MedsCheck annual or a follow-up we would offer to do that over the phone.”

For those who took her up on the offer, “they had no issues with the phone at all,” says Prytula. “I hope we can continue to do it this way and would love to bring in video so we can see each other. Face-to-face is best, but this should remain an option.”

“We have a professional duty to analyze every situation to determine if leaving the home to be seen in person would cause more risk than benefit,” stresses Thaleshvar. “Just the other day I spoke with a mother about her child’s pink eye. In an instant I turned our phone call into a secure video link from her smart phone and saw what she was describing. I was able to provide her with the same advice and treatment that I would have provided had she come all the way into the pharmacy with her child.”

A video consult is sometimes better than in the pharmacy, he adds. “You pick up clues from the home environment. People can check their medicine drawer rather than guess at what they’re taking.”

It’s important to keep in mind that virtual care is more than phone or video calls. A recent pilot with Ontario physicians found that 99% of participating patients would use virtual services again, and they preferred secure

*Continued on page 23*



Pharmacist/owner Suhas Thaleshvar with a patient during a video appointment (note the “green-screen” wall, which enables high-quality background visuals; e.g., for diagrams).

Photo by Karey Wood

# PROFESSIONAL SERVICE FEES AND CLAIMS DATA FOR GOVERNMENT-SPONSORED PHARMACIST SERVICES, BY PROVINCE

NOTE: All content in **RED** indicates that public funding is available only to eligible beneficiaries of the provincial drug plan.

	BRITISH COLUMBIA	ALBERTA	SASKATCHEWAN	MANITOBA	ONTARIO
<b>Patient care plans</b>		\$100 per Comprehensive Annual Care Plan (CACP) (287,062 claims); \$60 per Standard Medication Management Assessment (SMMA) (42,418 claims); \$20 per follow-up (1,233,495 claims for CACPs; 137,641 for SMMA); \$60 per SMMA for Diabetes and \$20 per follow-up (18,807 claims combined).	<div style="border: 1px solid black; padding: 5px;">                     NOTES: Information current as of September 30, 2020, collected from provinces and B.C., where the data is for year ending March 31, 2019 (since the latest assessment. In <b>Manitoba</b>, claims data for pneumonia immunizations include professional service fees as the public plan, except for refusals to fill and Pharmacy deductibles and co-pays. In <b>all provinces</b>, pharmacists also have authority to                 </div>		
<b>Medication reviews/management</b>	\$60 per Medication Review - Standard, max. 2 annually, 6 mths apart (194,828 claims); \$70 per Medication Review - Pharmacist Consultation, max. 2 annually, 6 mths apart (17,940 claims); \$15 per Medication Review Follow-Up, max. 4 annually (18,901 claims)	Medication reviews a component of CACPs and SMMA (see Patient care plans above)	\$60 per Medication Assessment (seniors) (9,812 claims); \$20 per follow-up, max. 2 annually (2,622 claims) \$60 per Medication Assessment and Compliance Packaging (1,523 claims)		\$60 per Medication Review - Standard, max. 2 annually, 6 mths apart (194,828 claims); \$70 per Medication Review - Pharmacist Consultation, max. 2 annually, 6 mths apart (17,940 claims); \$15 per Medication Review Follow-Up, max. 4 annually (18,901 claims)
<b>Immunization</b>	\$12.10 effective Sept. 2020, up from \$10 (708,640 claims for flu, 19,630 claims for pneumonia, 35,485 claims for pertussis, HPV and other immunizations)	\$13 (879,115 claims for flu, 23,379 claims for pneumonia, 9,316 claims for Tdap); authority for other immunizations, inc. travel vaccines	\$13 for flu (190,583 claims); authority for other vaccinations, inc. travel vaccines	\$7 (144,933 claims for flu; 3,625 for pneumonia; 1,140 for HPV; 1,864 for Tdap; 129 for Td) SEE NOTES	\$7.50 per other immunizations
<b>Administration of drugs by injection</b>		\$20 per assessment and administration of drugs by injection (249,882 claims)	\$13 for medroxyprogesterone (4,531 claims)	Authority to administer drugs by injection	Authority to administer drugs by injection
<b>Prescribing authority: adaptation/altering of prescriptions; refusal to fill</b>	\$10 to renew/adapt/change dosage or formulation (259,099 claims); \$20 per refusal to fill (claims data n/a)	\$20 per assessment for renewal/adaptation/discontinuation (901,847 claims for renewals; 191,545 claims for adaptations); \$20 per assessment for refusal to fill (5,416 claims)	\$6 to renew, alter dosage form or alter missing information (total of 334,407 claims for all Rx authority, i.e., renewals/adaptations, emergency prescribing and medication reconciliations with prescribing [see "Prescribing authority: initial access" for details]); 1.5X dispensing fee max. \$17.40 per refusal to fill (27 claims)	Authority for continuity of care prescribing and prescription adaptations	Authority for continuity of care prescribing and prescription adaptations
<b>Prescribing authority: common or minor ailments</b>		As part of CACPs, SMMA by those with additional prescribing authority (APA)	\$18 per Minor Ailment Assessment for 25 conditions (38,824 claims)	Authority to assess and prescribe for 12 self-limiting conditions ("minor ailments")	Authority to assess and prescribe for 12 self-limiting conditions ("minor ailments")
<b>Prescribing authority: initial access or to manage ongoing therapy (exc. minor ailment)</b>		\$25 per assessment for initiating medication therapy with APA (444,662 claims); \$20 per assessment for emergency prescriptions (27,342 claims); \$20 per assessment for continuity of care during declared "state of emergency" (173 claims) SEE NOTES	Collaborative Practice Agreements with physicians enable pharmacists to select, initiate, monitor and modify drug therapies; \$25 for medication reconciliations with prescribing (claims inc. under all Rx authority, see "Prescribing authority: adaptation"); authority to assess and prescribe for preventable diseases (eg, HPV, varicella)	Authority for prescribing by Extended Practice pharmacists within the scope of their specialty; authority to prescribe in "state of emergency"	Authority for prescribing by Extended Practice pharmacists within the scope of their specialty; authority to prescribe in "state of emergency"
<b>Therapeutic substitution</b>	\$17.20 (19,992 claims)	\$20 per assessment (claims included under adaptations)			
<b>Pharmaceutical opinions</b>					\$15 per other pharmaceutical opinions
<b>Smoking cessation</b>	\$10 per dispensing of nicotine replacement therapy, max. 3 annually (claims data n/a)	\$60 for SMMA for Tobacco Cessation; \$20 per follow-up, max. 4 follow-ups (51,890 claims combined)	Up to \$300 annually (\$2 per minute) for Partnership to Assist with the Cessation of Tobacco (PACT) (3,570 claims)	Authority to prescribe for smoking cessation. Compensation under a social impact bond expected to begin in April 2021.	Authority to prescribe for smoking cessation. Compensation under a social impact bond expected to begin in April 2021.
<b>Opioid harm reduction</b>	Provincially funded naloxone available through pharmacies; \$17.70 per witnessed methadone ingestion	\$12.15 (usual dispensing fee) for dispensing of provincially funded naloxone	Provincially funded naloxone available at selected pharmacies; \$3.50/day for Methadone Managed Care (65,358 claims); \$3.50 per witnessed dose for Suboxone Managed Care, max. \$24.50/week (10,834 claims)		\$35 for other opioid harm reduction
<b>Other services</b>	\$10 for trial prescriptions (claims data n/a); \$15 for biosimilar counselling (6-month transition period)	\$20 per assessment of appropriateness of new prescription medications (trial prescriptions, claims data n/a); \$20 per Assessment to Screen and/or Test for Infectious Disease, max. 5/day/pharmacy (implemented March 2020; 2,605 claims)	1.5X dispensing fee, max. \$17.40 for seamless care (384 claims); \$7.50 for trial prescriptions (4 claims); \$3.50/day for Direct Observed Therapy for Hepatitis C drugs (153 claims);		Authority for other services

ALBERTA	QUEBEC	NOVA SCOTIA	NEW BRUNSWICK	PRINCE EDWARD ISLAND	NEWFOUNDLAND/LABRADOR
<p>cial pharmacy associations and ministries of health. Claims data are for fiscal year ending March 31, 2020, with the exceptions of <b>Quebec</b>, where the data is for year ending June 30, 2020, data was not available at the time of printing). In <b>Alberta</b>, pharmacists with additional prescribing authority (APA) are authorized to prescribe any Schedule 1 drug based on their patient or non-publicly funded injections. In <b>Ontario</b>, MedsCheck for Long-Term Care was discontinued on Dec. 31, 2019. In <b>Quebec</b>, legislation requires private insurance plans to pay the same pharmaceutical Opinions. This chart gives claims data for both public and private plans. Funding for professional fees kicks in after patients meet the universal drug plan's requirements for to prescribe emergency refills.</p>					
<p>er MedsCheck (442,928 claims); or MedsCheck for Diabetes (103,171 claims); \$90 for MedsCheck for Long-Term Care Annual (54,792 claims); \$150 for MedsCheck at Home (18,055 claims); \$25 per follow-up (102,067 claims for MedsCheck; 14 claims for MedsCheck for Diabetes Medication); \$50 per quarterly follow-up for MedsCheck for Long-Term Care Quarterly (312 claims) SEE NOTES</p>		<p>\$52.50 per Basic Medication Review (3,638 claims); \$150 per Medication Review Service (seniors) (1,631 claims); \$20 per follow-up, max. 2 annually (236 claims)</p>	<p>\$52.50 per PharmaCheck (low-income) (12,969 claims)</p>	<p>\$52.50 per Basic Medication Review (2,769 claims); \$65 per Diabetic Medication Review (1,235 claims); \$20 per follow-up for Basic Medication Review, max. 4 annually (2,145 claims); \$25 per follow-up for Diabetic Medication Reviews (797 claims), max. 4 annually</p>	<p>\$52.50 per Medication Review; \$52.50 per Medication Review for Diabetes; max. 72 claims annually (794 claims in total)</p>
<p>for flu (1,353,551 claims); authority for immunizations, notably travel vaccines</p>	<p>\$11.40 for publicly funded vaccinations (claims data n/a)</p>	<p>\$12.40 for flu effective Apr. 2020, up from \$12 (159,984 claims); authority for other vaccinations, inc. travel vaccines</p>	<p>\$12 for flu (98,920 claims); authority for other vaccinations, inc. travel vaccines</p>	<p>\$12.36 for flu (37,100 claims); authority for other vaccinations, inc. travel vaccines</p>	<p>\$13 for flu (9,756 claims)</p>
<p>Authority to administer drugs by injection and demonstration for education and demonstration (to be expanded pending regulation)</p>	<p>\$18.59 per administration of drugs to demonstrate appropriate use (900 claims) SEE NOTES</p>	<p>Authority to administer drugs by injection</p>	<p>Authority to administer drugs by injection</p>	<p>Authority to administer drugs by injection</p>	<p>Authority to administer drugs by injection</p>
<p>Authority to adapt or renew (regulation pending to allow renewals for up to 6 months). \$15 per refusal to fill as part of Pharmaceutical Opinions</p>	<p>\$12.90 per renewal (30+ days), max. 1 per person annually (328,000 claims); \$20.42 per dosage adjustment to ensure patient safety (16,000 claims); \$9.24 per refusal to fill (50,000 claims)</p>	<p>\$14 per Prescription Adaptation (614 claims); \$20 per Renewal for 4+ Rx (765 claims); \$12 per Renewal for up to 3 Rx (8,714 claims) \$14 per refusal to fill (97 claims)</p>	<p>Authority to adapt or renew</p>	<p>\$14.83 per adaptation (270 claims); \$14.83 per refusal to fill (6 claims)</p>	<p>\$11.96-\$12 per Medication Management adaptation (47,844 claims); \$23.92-\$24 per refusal to fill (0 claims)</p>
<p>Authority pending to assess and prescribe common ailments; implementation completed in early 2021</p>	<p>\$16.51 per assessment for 9 conditions where no diagnosis is required and for 12 where diagnosis and treatment are known (364,000 claims)</p>	<p>Authority to assess and prescribe for 34 conditions</p>	<p>Authority to assess and prescribe for 32 conditions</p>	<p>Authority to assess and prescribe for 30 conditions (expansion pending to include UTIs and contraception)</p>	<p>Authority to assess and prescribe for 29 conditions</p>
<p>Authority to initiate Schedule 1 smoking cessation therapy; see below for funding details for smoking cessation services</p>	<p>To reach therapeutic target: \$15.99-\$20.12 for initial evaluation (based on condition); \$41.27 annually for min. 2 follow-ups for certain conditions; \$51.59 annually for min. 3 follow-ups for insulin-dependent diabetes; \$16.51 per month for anticoagulation (235,000 claims for all). \$18.59 for emergency contraception prescribing (121,000 claims); \$18.59 to prescribe and administer salbutamol and nonprescription drugs in an emergency</p>	<p>\$20 for Contraception Management (1,124 claims); \$20 to assess and prescribe for UTIs (2,442 claims) and herpes zoster (209 claims). Authority to assess and prescribe in emergencies; for preventable diseases (eg, HPV, varicella); for diagnosis provided by primary care provider</p>	<p>Authority to assess and prescribe in emergencies; for preventable diseases (eg, HPV, varicella)</p>	<p>Authority to assess and prescribe in emergencies</p>	<p>Authority to assess and prescribe for preventable diseases (eg, HPV, varicella)</p>
	<p>\$16.51 per substitution for out-of-stocks (66,000 claims)</p>	<p>\$26.25 (889 claims for eligible drug classes)</p>	<p>Authority to substitute</p>	<p>\$14.83 (20 claims for eligible drug classes)</p>	<p>\$11.96-\$12 (usual dispensing fee)</p>
<p>Professional opinion (215,973 claims for "Change description," 99,784 claims for "No change description," 21,798 claims for "Not filled as prescribed")</p>	<p>\$20.42 (268,000 claims)</p>				
<p>\$125 annually; \$40 for initial consult (2 claims); \$15 for each of up to 3 primary follow-ups (1,980 claims); \$10 for each of up to 2 secondary follow-ups (1,040 claims)</p>	<p>\$16.51 to prescribe for smoking cessation as part of minor ailments (58,000 claims)</p>	<p>Authority to prescribe for smoking cessation as part of minor ailments</p>	<p>Authority to prescribe for smoking cessation as part of minor ailments</p>	<p>Authority to prescribe for smoking cessation as part of minor ailments</p>	<p>Authority to prescribe for smoking cessation as part of minor ailments</p>
<p>Authority for dispensing and education for provincially funded injectable naloxone; or dispensing and education for provincially funded intranasal naloxone or cement injectable (claims data n/a)</p>	<p>\$18.59 for training for provincially funded naloxone (11,000 claims)</p>	<p>\$25 for dispensing and education for provincially funded naloxone (3,911 claims)</p>			
<p>Authority to perform a procedure below the threshold for education and demonstration</p>	<p>\$9.24 per transmission of patient medication profile (398,000 claims); \$18.88 per consultation for medication abortion (300 claims). Authority to obtain throat specimen.</p>	<p>\$50/month/patient for Anti-Coagulation Management Service for pilot participants (9,781 claims)</p>			<p>Authority for trial prescriptions. \$23 per SaferMedsNL for deprescribing of PPIs and sedatives (3,983 claims for PPIs, 244 for sedatives); \$10 per follow-up (235 claims for PPIs, 44 for sedatives)</p>

# ADVANCING PHARMACISTS' ROLE IN OPIOID HARM REDUCTION

Pharmacists can help turn the tide on opioid-related deaths in Canada—and now have professional guidelines and practical strategies to do so.

*The Canadian Pharmacists Journal* (CPJ) released the “Canadian National Consensus Guidelines for Naloxone Prescribing by Pharmacists” online in August 2020 and in print in November.

Ross Tsuyuki, Editor of *CPJ* and Professor of Medicine/Director of the EPICORE Centre at the University of Alberta, is the lead author of the Guidelines. Early in 2020 he convened a steering committee of eight pharmacists to share their expertise to develop the world's first guidelines for pharmacists on the use and distribution of naloxone.

“We are in the midst of an opioid epidemic which has actually worsened due to COVID-19. A significant number of those deaths involve people who are taking or have taken prescription opioids. As pharmacists, we definitely have a role to play in preventing opioid-related deaths,” says Tsuyuki.

Take-home naloxone (THN) is key for harm reduction. Research shows that when THN programs are in place a fatal outcome occurs in one out of every 123 overdose cases, compared to a fatal outcome for every 20 overdoses without naloxone intervention.<sup>1</sup>

The Guidelines' primary recommendation is for pharmacists to *proactively* dispense THN to *all* patients with an opioid prescription, and educate patients on its use.

While selection criteria could be applied to identify people at high risk, the steering committee felt strongly that naloxone education and distribution be universal and begin at the start of opioid use. This approach normalizes the practice and keeps things simple.

“Pharmacists shouldn't wait for patients to ask because most do not fully understand the risks to themselves and to those around them, including

children and teens. The recommendation to dispense naloxone to all patients using opioids is an easy way to be proactive,” says Tsuyuki.

**“All patients receiving an opioid should be dispensed take-home naloxone and counselled by a pharmacist.”**

*Canadian National Consensus Guidelines for Naloxone Prescribing by Pharmacists*

The Guidelines also offer practical tips, including scripted discussions with patients. “Some of our experts suggested wording along the lines of, ‘We give this to everyone, it's our policy.’ Or pharmacists can use the analogy of a naloxone kit being like an EpiPen®. These approaches help to normalize its acceptance,” notes Tsuyuki.

## CATALYST FOR IMPROVED ACCESS

While the Guidelines are straightforward, government-funded THN programs vary significantly across the country. Not all programs include distribution through pharmacies, and among those that do, not all compensate pharmacists to train and educate patients. To paint a clearer picture of the disparities, *CPJ* published a study of THN programs across Canada to supplement the Guidelines.

“With these two papers we have what we need to move forward,” says Tsuyuki. “The Guidelines set a national standard. If pharmacists can't meet that standard due to problems in the system, we hope that advocacy bodies can now use the study and the Guidelines as tools to work with government to fix those inequities in access.”



Harsit Patel,  
Hamilton Health  
Sciences

PHOTO BY CATHIE COWARD

As a pharmacist working in the emergency department at Hamilton Health Sciences in Ontario, Harsit Patel urges all community pharmacists to proactively dispense and educate on naloxone kits. “We really see the detrimental effects of people not having accessible naloxone during those crucial minutes before a first responder arrives.”

The co-author of the *Guidelines for Naloxone Prescribing by Pharmacists* emphasizes that naloxone needs to be associated with any and all opioid use, not just with addiction. He recalls two recent cases: a 62-year-old male with chronic pain who didn't take his prescription opioids for two days and had to be rushed to hospital after restarting his normal dose; and parents of a teen who began his opioid use by experimenting with his parents' prescribed medications.

“They were so grateful to get a naloxone kit at the hospital, but had no idea that they could have received one at their pharmacy. This is a tremendously important service for pharmacists to provide to their patients and community.”

<sup>1</sup> McDonald R, Strang J. Are take-home naloxone programmes effective? Systematic review utilizing application of the Bradford Hill criteria. *Addiction*. 2016;111(7):1177-87.

Brought to you by



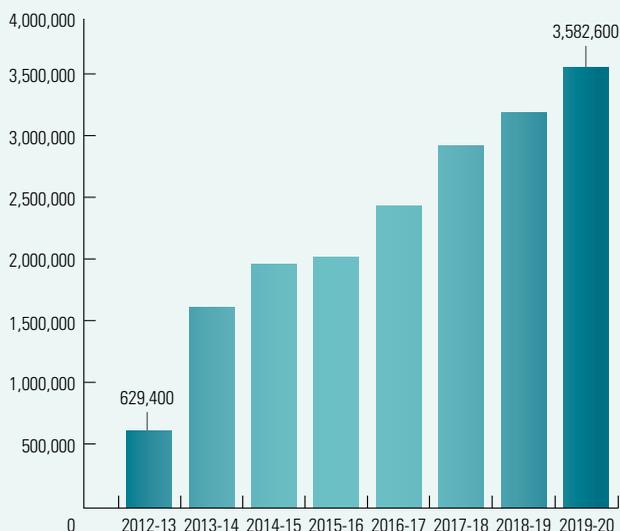
The Canadian Foundation for Pharmacy thanks Emergent BioSolutions for its sponsorship of this article

# Claims data trends, pharmacy services

Go to [www.cfpnet.ca](http://www.cfpnet.ca) for additional provincial claims data

## INFLUENZA VACCINATIONS

Claims data from all provinces except Quebec. Fiscal year ending March 31. Data for 2019-20 for B.C. not available at time of printing.



## PRESCRIPTION ADAPTATIONS, INCLUDING RENEWALS

Claims data from B.C., Alberta, Saskatchewan, Quebec, Nova Scotia, P.E.I. and Newfoundland & Labrador. Fiscal year ending March 31 except in Quebec (June 30). Data for 2019-20 for B.C. not available at time of printing.



## ALBERTA

Claims for assessments to initiate medication therapy by pharmacists with additional prescribing authority (APA)



Pr **DEXILANT**<sup>®</sup>  
dexlansoprazole

## PATIENTS COULD SAVE UP TO 75% ON THE DEXILANT<sup>®</sup> DRUG INGREDIENT COST\*

Direct patients to [dexilant.ca](http://dexilant.ca) for more information.

### DEXILANT<sup>®</sup> Patient Assistance Program (DPAP)

#### Financial support for patients taking DEXILANT<sup>®</sup>

- DPAP will cover up to 75% of the DEXILANT<sup>®</sup> drug ingredient costs\*\*
- Dependent upon the level of reimbursement provided by the patient's drug plan
- Combines with the patient's insurance coverage to ensure that every patient registered in the program receives coverage

DPAP will continue to provide financial assistance for DEXILANT<sup>®</sup> for as long as the patient remains on DEXILANT<sup>®</sup>, until coverage for DEXILANT<sup>®</sup> is attained, or until the program ends.‡

#### In patients 12 years of age and older, DEXILANT<sup>®</sup> is indicated for:

- Healing of all grades of erosive esophagitis (EE) for up to 8 weeks
- Maintenance of healed EE for up to 4 months in adolescents 12 to 17 years of age and up to 6 months in adults
- Treatment of heartburn associated with symptomatic non-erosive gastroesophageal reflux disease (GERD) for 4 weeks

Safety and effectiveness of DEXILANT<sup>®</sup> in children under 12 years of age have not been established.

For more information on Contraindications, Warnings, Precautions, Adverse Reactions, Interactions, Dosing and Conditions of Clinical Use, please consult the Product Monograph at [www.takeda.com/en-ca/dexilantpm](http://www.takeda.com/en-ca/dexilantpm). The Product Monograph is also available by calling us at 1-866-295-4636.

\*Regardless of patients' insurance coverage. Program does not cover pharmacy dispensing fees, which can vary from pharmacy to pharmacy.

†The DEXILANT<sup>®</sup> Patient Assistance Program is not available in Quebec, the Northwest Territories, Nunavut or Yukon. Quebec patients may qualify for provincial coverage.

‡ While it is not our intention to end the program, Takeda reserves the right to discontinue the program at any time.

Reference: DEXILANT<sup>®</sup> Product Monograph. Takeda Canada Inc., January 6, 2020.



DEXILANT is a registered trademark of Takeda Pharmaceuticals U.S.A., Inc. and used under licence by Takeda Canada Inc. Product Monograph available on request. Printed in Canada CAN/DEXI/0318/0006(2) PRMCD/CA/DEXI/0030 E © 2020 Takeda Canada Inc.



**DEXILANT**<sup>®</sup>  
dexlansoprazole  
[dexilant.ca](http://dexilant.ca)

# Caregivers are looking for you: is your pharmacy ready to support them?



## Tips for supporting caregivers

- Pharmacists can spend as little as 30 seconds in identifying or talking with a caregiver to provide a valuable service, which goes a long way in building a strong customer base.
- Encourage every pharmacist and pharmacy technician at your practice to complete the three-module CCCEP-accredited training course for 1.5 CE units. While completing the course, make a list of services that you think your pharmacy can offer to improve caregiver care.

Teva Canada has introduced a new, comprehensive set of resources to help pharmacy teams easily integrate their *Caregiver-Friendly Pharmacy Program* into the workflow. These resources are designed to complement the services currently being provided, so that pharmacists can target caregivers at every step of the care journey.

The new tools include downloadable resources such as:

- A five-step quick guide to becoming a caregiver-friendly pharmacy
- A caregiver screening tool to help quickly and easily identify caregivers in the pharmacy
- An Alzheimer's disease caregiver screening tool
- Alzheimer's disease educational resources to hand out to caregivers and patients
- In-store promotional materials, including posters, counter decals, caregiver-engagement tools and more.



## Supporting caregivers reaps many benefits

In creating this quick guide and accompanying resources, Teva is hoping to encourage more pharmacies to actively support caregivers by developing a simple, flexible program that can be adapted to fit the needs of patients. Not only can adding a caregiver program grow a pharmacy's patient base, it is an opportunity to provide a valuable new service in the community. Plus, those who complete the caregiver program can add their pharmacies to an interactive map displaying locations that specialize in this area, so caregivers can easily find them.

"I don't think pharmacists in general realize the level of stress being put on caregivers," says pharmacist Mike Boivin, who worked with Teva in developing the resources and tools for pharmacies to support caregivers. "They are the champions of our healthcare system and rarely get acknowledged for what they do."

The quick guide highlights how to tailor caregiver products and services to a pharmacy's already existing strengths, and how to get the whole pharmacy team on board. The resources include a caregiver screening tool, as well as one specifically for caregivers dealing with Alzheimer's, to help pharmacy staff easily identify caregivers and determine whether they're having issues in providing care. There are also posters and in-store materials so that caregivers feel comfortable reaching out for more information.

"People don't know what they don't know and the pharmacy can be a great source for caregivers for everything from medication management questions and care plans to OTC recommendations," says Boivin. "This is a natural extension of what pharmacists are already doing."

Brought to you by



The Canadian Foundation for Pharmacy thanks Teva Canada for its sponsorship of this article.

To get your pharmacy set up to fully support caregivers visit:  
[www.TevaCanada.com/CaregiverPharmacies](http://www.TevaCanada.com/CaregiverPharmacies)

*Virtual Connections continued from page 17*

messaging (i.e., texts or emails through an app that encrypts the data) over video calls.<sup>2</sup>

**Health app-ortunities**

Technology can factor into patient care in other important ways. Stéphane Villeneuve, owner of a Jean Coutu

pharmacy in Quebec City, Que., is a strong supporter of healthcare apps. He started by recommending mindfulness apps and has since expanded to include ones to help manage depression, anxiety, diabetes and other conditions. Whenever he sees a patient with a smartphone in hand, whatever the age, he doesn't hesitate.

"I prescribe an app to patients. When

we discuss their medication we also discuss possible apps and where to find them. They are often surprised at first, but 99% of the time they appreciate it," says Villeneuve.

How does he know which app to recommend, among thousands available? Villeneuve uses [www.Therappx.com](http://www.Therappx.com), a Canadian platform created by pharmacists that evaluates healthcare apps. Its quick questionnaire also narrows down recommendations based on patients' preferences and needs.

**Behind the scenes**

Villeneuve and Thaleshvar also emphasize the importance of technologies that indirectly improve patient care by freeing pharmacists' time. For example, both use apps that enable patients to book their own appointments.

"Pharmacy staff don't need to negotiate appointments or do phone reminders. Patients pick their time and get confirmations and reminders on their phones, which they love. We rarely have no-shows," says Thaleshvar.

For flu shots and COVID-19 testing, patients complete the pre-screening and consent forms online. "You can't be paper-based and hope to meet the demand, let alone be financially viable. Technology helps us serve more people safely," remarks Thaleshvar.

Villeneuve also swears by his staff scheduling app. "It saves the head pharmacist four to five hours a week. Everyone has access on their phone and it's simply a matter of filling in the blanks. It has really increased employee satisfaction."

Both stress the need to invest in technologies that are secure and ideally built by pharmacists for pharmacists. "There are options that are free but are not compliant with privacy laws and they don't understand the pharmacy workflow," cautions Thaleshvar.

Last but not least, don't let the technology intimidate. "Integrating technology is really not that different from learning about a new drug," says Villeneuve. Adds Thaleshvar: "If something doesn't work at first, don't be scared to try it again the exact same way. It can take time for staff and for patients to catch on, but once they do, they don't look back." ●

**E-prescribing gains momentum**

Electronic or e-prescribing will revolutionize medication management in Canada, and we are approaching the cusp of widespread implementation, reports Canada Health Infoway.

More than 6,500 of 11,000 community pharmacies have joined Infoway's PrescribeIT, a national e-prescribing service developed to work with all provincial and territorial healthcare systems. Infoway is systematically working with pharmacy management system vendors to ensure seamless integration, and upwards of 75% of physicians' offices nationally have the requisite electronic medical records (EMRs) integration in place.

Ten of the 13 provinces and territories have signed memorandums of understanding to implement PrescribeIT, of which five (Alberta, New Brunswick, Newfoundland and Labrador, Ontario and Saskatchewan) are already live.

"We have some communities now where all pharmacies and physicians are on board. It's very exciting," says Ian Lording, a pharmacist and Senior Director, Relationship Management at PrescribeIT.

If a province or system vendor is not yet ready, pharmacies can still sign up for PrescribeIT. "Having that pipeline is very important during our talks with governments," notes Lording. And pharmacies in jurisdictions that are live do not need to wait for a local physician to get started. "We light up pharmacies in communities where prescriptions start coming in from a wide geographical radius, then over time local physicians join as momentum builds."

Federal funding means PrescribeIT is currently available at no cost. Eventually, pharmacies will pay a nominal transaction fee per new or renewal prescription. Infoway is a non-profit corporation and the fees will cover fixed costs. Over time, as volumes climb, the fee is anticipated to decrease, says Lording.

Lording adds that the benefits are numerous. "First, pharmacies will see an increase in primary adherence, which drives prescription volume. Second, it generates labour efficiencies—no more transcribing or entering data. Third, the enhanced electronic communication with prescribers can generate revenue through ancillary scope of practice services. We are seeing both physicians and pharmacists request or recommend other services such as immunizations and medication reviews."

<sup>1</sup> Experiences of health care during COVID-19 reported by Canadians. Canada Health Infoway. 2020 Sep 22.

<sup>2</sup> Stamenova V, Agarwal P, Kelley L, et al. Uptake and patient and provider communication modality preferences of virtual visits in primary care: a retrospective cohort study in Canada. *BMJ Open*. 2020;10:e037064. Doi:10.1136/bmjopen-2020-037064.

Imagine a world  
without  
phone tag.



With PrescribelT<sup>®</sup>, collaboration with physicians and nurse practitioners just got easier. PrescribelT<sup>®</sup> is a secure e-prescribing service that seamlessly integrates with your existing pharmacy management system, modernizing how prescriptions are sent and received.

A new era for **prescribing.**

For more, visit [PrescribelT.ca](https://PrescribelT.ca)

**PrescribelT**<sup>®</sup>  
Canada Health **Infoway**

# 75 Strong!

## CFP evolves to meet the needs of the profession

By Rosalind Stefanac

Seventy-five years ago, in the aftermath of World War II, pharmacy was in a dire state. Unemployment was high, enrollment in pharmaceutical colleges was in decline and academic research was at a standstill. Even for those pharmacists who had managed to stay in practice, up-to-date training was practically non-existent.

But rather than see the profession continue to spiral downward, two influential voices in pharmacy at the time decided to help turn things around. The Dean of the University of Alberta's Faculty of Pharmacy, A.W. "Witt" Matthews, teamed up with the President of the United-Rexall Drug Company, John Kennedy, to start the not-for-profit Canadian Foundation for the Advancement of Pharmacy, open to anyone interested in the welfare of the profession. Its inaugural meeting was held on September 11, 1945.

Fast forward 75 years, and their enterprise—now named the Canadian Foundation for Pharmacy (CFP)—continues to thrive as a champion for the advancement of pharmacy.

### A start in education

In its first year, the Foundation raised \$67,000 (more than \$900,000 in today's dollars) from individual and corporate donations to promote pharmacy as a career and support students through interest-free loans and scholarships. By its second year, it had already supported "pharmacists-in-training" to the equivalent of more than \$244,000 in today's dollars. Recognizing the need for pharmacy research, CFP started funding pharmacy research projects in universities and eventually extended grants for research initiatives by practising community pharmacists.

Vancouver native Dr. Marion Pearson and husband Jim Orr were both recipients of CFP fellowship grants as young pharmacy graduates. Today Pearson is a Professor of Teaching at the University of British Columbia's (UBC) Faculty of Pharmaceutical Sciences and her husband is a retired UBC professor who taught in the area of pharmacokinetics and served as Associate Dean Academic. "I applied the grant to a community pharmacy residency



When the Foundation first started in 1945, it was comprised of 24 male officers, directors and committee members. Today's board has equal numbers of men and women.



CFP's current board of directors  
\*Not all members pictured



CFP's newsletter from 1996

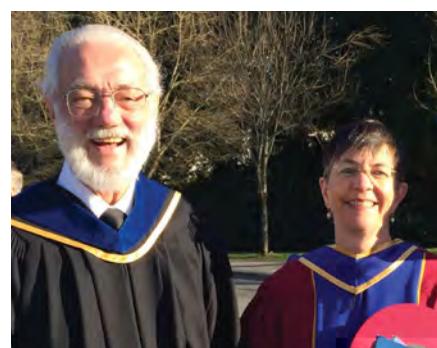


CFP's very first logo.

program I was accepted to and really appreciated the money at the time," says Pearson. "When I got a real job, I decided to pay that back and have been donating to CFP ever since."

### Commitment to research

She says the Foundation has been able to stay relevant year after year by staying "ahead of the curve" when it comes to supporting the advancement of pharmacy practice and research, through initiatives like the Innovation Fund. This Fund was introduced in 2007 to specifically support pharmacists involved in research or innovative models of pharmacy practice. "Many of my colleagues have benefited from these grants and CFP has certainly helped fund many good research projects over the years."



Jim Orr and Marion Pearson were both recipients of CFP fellowship grants as young graduates.

Pharmacist Dr. Ross Tsuyuki, Director of the EPICORE Centre at the University of Alberta, was among the first to receive an Innovation Fund grant for a series of studies on implementing chronic disease management services in community pharmacies. Since then, he and his team have gone on to receive a number of CFP grants, the latest being for the dissemination of the results of the RxOUTMAP study (pharmacist prescribing and care for patients with urinary tract infections). "With this funding, we have created two videos, one



*Congratulations to CFP on celebrating 75 years of service to pharmacy!*

Proud supporters of Pharmacy Innovation



\* R/TM 911979 Alberta Ltd.  
† Loblaws Inc. © 2017

patient-oriented and one health policymaker-oriented, to highlight the evidence for this approach,” he says. “We hope these can be used to change health policy and allow pharmacists to practise to their full scope.”

Tsuyuki says Canada’s healthcare system needs pharmacists who can practise to their full potential now more than ever, which includes prescribing, injections, laboratory testing and overall disease management. “This movement must be driven by evidence and the only way to get that evidence is to invest in pharmacy practice research,” he says. “CFP is the only organization to consistently invest in the kind of research that will shape our profession’s future.”

Wayne Hindmarsh, CEO of the Canadian Council for Accreditation of Pharmacy Programs and Dean Emeritus at the University of Toronto’s Leslie Dan Faculty of Pharmacy, says CFP has been a visionary in recognizing the gaps in pharmacy and finding ways to fill them. “I was quite impressed with what the organization did for graduate students and the funding they provided for small research projects, even when I was a young professor,” he says. “They were supporting pharmacy research when it was

difficult to get any support from other major funding agencies—and still do.”

### Leadership and innovation

Hindmarsh eventually joined CFP’s Board and served as President from 2006–2007. He also played a key part (as Editor-in-Chief) in the production of the Foundation’s *Pharmacy Management in Canada* textbook in 2015, which is used across the country by pharmacy faculties and pharmacy owners alike.

This textbook inspired CFP to launch a continuing education program geared to the business essentials of managing a pharmacy. The Foundation partnered with the Canadian Pharmacists Association and the Ontario Pharmacists Association to reach an even bigger audience of pharmacists who could benefit from the content. “There is a direct relationship between business practices and professional practice, and we saw the need for this type of program with so many business challenges being thrown at pharmacy, such as deflationary pressures from government pharmaceutical policies and other market factors that contribute to the erosion of margin in the pharmacy sector,” says Dayle Acorn, Executive Director of CFP.

Today, CFP also supports the advancement of pharmacy through initiatives like the Pharmacy Forum, an annual event that brings together industry leaders and innovators to discuss the future of pharmacy and how to overcome barriers to change. It is also investing in the future by supporting the development and recognition of pharmacy’s leaders through various awards, such as the Wellspring Pharmacy Leadership, Pillar of Pharmacy and Lifetime Achievement awards.

This year’s Pillar of Pharmacy winner, Rita Winn, Director of Lovell Drugs, recalls that her mentor, Fred Smith, was the first to win this CFP award back in 1997. “You see people like that and it’s inspiring to the rest of us,” she says. “In being recognized it shows value in the work we do.”

Winn believes the Foundation is just as necessary today, if not more so, as it was 75 years ago. “Pharmacy has changed a lot since I first started practising in terms of pharmacy scope, but as a profession we still have to keep fighting to prove our value, especially to government,” she says. “What CFP does with all these awards and research opportunities is help to keep promoting the profession and proving pharmacists’ value, and that’s so important.” ●

## Celebrating 75 years of CFP!

*Congratulations*  
on this great milestone  
from your friends  
at Auro Pharma



### Individualized patient care with InnomarPharmacy™

Our team of clinical specialty pharmacists offer experience in all specialty and rare disease medications, along with in-depth knowledge of specific therapeutic areas – a leader in the Canadian specialty pharmacy environment. These clinicians...

- provide assistance to pharmacists in the management of patients on drugs
- consult on difficult patient cases
- guide patients during their journey on specialized medication

To learn more, visit [www.innomar-strategies.com](http://www.innomar-strategies.com)

# THE NEXT EVOLUTION IN PHARMACY AND HEALTH BENEFITS

## with pharmacogenetic testing

In 2021, GSC will begin offering plan sponsors the opportunity to include pharmacogenetic testing as coverage in health benefit plans.



Look out for more details **coming soon**  
in a future Pharmacy Update.

# Injection affection

## Pandemic times spotlight pharmacists' key part in vaccinations *By Rosalind Stefanac*

For pharmacist/owner Kristen Watt, vaccinations are a key part of the services offered at Kirsten's Pharmacy in Southampton, Ont. "We know a vaccinated population is a healthier population, so we've made this a robust part of our business from the very beginning, even connecting with Public Health to do vaccinations," says Watt, who opened her pharmacy in March 2017. "There were times we had patients without physicians get their tetanus shots here too."

When the pandemic hit in March, Watt "saw the writing on the wall" and the potential threat that vaccinations during COVID-19 could have on public safety. As a result, for three months starting in late March, the pharmacy stopped offering most vaccine services. "It was disappointing we couldn't do them, although I did have people come through the back door for their regular allergy and birth control injections, as well as doing a prostate cancer shot," she says.

Kristen's Pharmacy was able to resume vaccine services in July. Watt and her team focussed on implementing new safety protocols and then called everyone with outstanding vaccinations to book an appointment. The day before, the pharmacist or technician calls the patient to go through the screening questions and arrange for payment up front. The day of, patients can cancel until up to 10 that morning; after that time, staff begin prepping the vaccines.

"Because it is already paid for and prepped, we can minimize the time the patient is in the store," says Watt, noting that she has gained customers since COVID-19 because people feel safer with the pharmacy's new procedures. She also expects this vaccine protocol to remain even after the pandemic subsides. "Doing it this way allows us to be more nimble, and prescreening and prepayment mean we can spend more time on counselling."

Watt's is a good example of how pharmacies are stepping up to become a vaccine destination for more patients, even in pandemic times. "When the doctor's offices weren't open, we were," she says. "Even when we weren't providing vaccinations, we were answering the phone and getting every health question under the sun from patients."

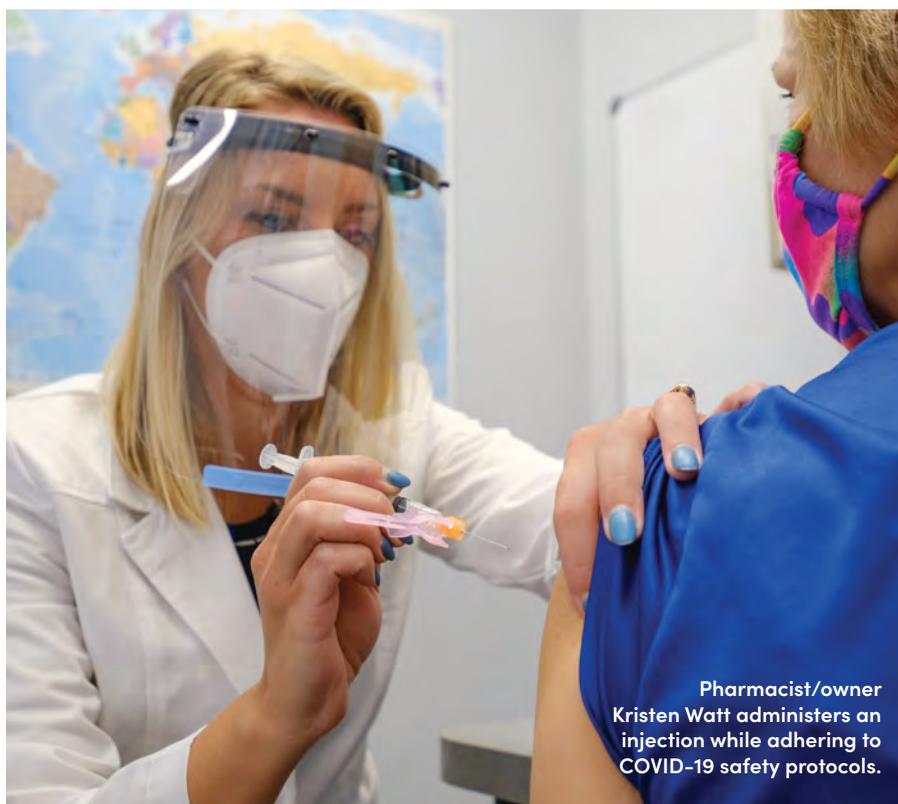
### Flu season frenzy

With the flu season underway, pharmacist/owner Carlene Oleksyn expects vaccinations to become an even bigger staple in community pharmacy's service offerings. "Now that we feel more comfortable in terms of personal protective equipment (PPE) and social distancing, the demand for vaccinations is even higher as we engage patients on the importance of vaccines," says the owner of Mint Health+Drugs Meridian Pharmacy in Stony Plain, Alta. "Yes, COVID is a big threat to public health, but so are other things like pneumonia and shingles that need to be looked after."

In addition to gearing up for flu season, Oleksyn has been offering asymptomatic COVID-19 testing in her pharmacy since August (a government-funded service in Alberta since late July). She conducted 100 tests within the first three days alone. "Last year we did 1,200 flu shots and we've been looking at strategies to manage the patient

load, especially since we'll be combining with COVID testing this year."

Some of these strategies include providing two different rooms for vaccinations to allow more time in between patients for sanitizing, as well as dedicating specific times to seniors and other vulnerable populations. "We have decided not to do only an appointment-based model as it's hard to change cultural expectations of those expecting to walk in for



Pharmacist/owner Kristen Watt administers an injection while adhering to COVID-19 safety protocols.

Photos by: Jamie Edwards

**THANK YOU** to frontline pharmacists for your support of all Canadians during this global pandemic.



**THANKS TO CFP'S CORPORATE PARTNERS**



*And congratulations to CFP for its 75 years of service to pharmacy!*



Canadian Foundation for Pharmacy



a flu shot,” says Oleksyn, noting that physical distancing protocols will be adhered to.

The pharmacy will also offer a COVID-19 test to some who get their flu shot, based on the program’s eligibility criteria. “And with the COVID test we’re assessing patients we may not have seen otherwise and can initiate conversations about what vaccines may be needed too.”

### More pharmacists as immunizers needed

Yet even with many pharmacists gearing up to provide more immunizations in the months ahead, provincial inconsistencies in community pharmacy access to vaccines is an ongoing issue. A 2019 review of pharmacists as immunizers (PAI) across Canadian jurisdictions showed that discrepancies in vaccines as well as remuneration create confusion not only for pharmacists and other vaccine providers, but also for the public.<sup>1</sup> The study’s authors recommend a uniform PAI scope of practice to “empower the profession and contribute to reductions in vaccine-preventable disease and complications through increased patient access and uptake of vaccines.”

For more on pharmacist’s injection

authority province to province, see pg. 18.

A 2020 white paper by the International Pharmaceutical Federation (FIP), *Give it a shot: Expanding immunisation coverage through pharmacists*, reported that pharmacists involved in immunizations are more likely to be involved in vaccine advocacy. The report also concluded there is ample evidence proving the benefits of pharmacists as immunizers in terms of improved accessibility and vaccination rates, public acceptance and trust in vaccines.

Preliminary results from the National Adherence Research Study, led by Ontario pharmacist/owner John Papastergiou and supported by the Canadian Foundation for Pharmacy, show that pharmacists have a more positive influence on adherence rates to multi-dose vaccinations (Engerix-B, Gardasil 9, Shingrix and Twinrix) in provinces where they have vaccination authority the longest and have the most advanced scope. For example, in Alberta where pharmacists have had the authority to administer injections since 2007 (the longest of any province), adherence rates for patients receiving their shots from a community pharmacist were significantly higher than those getting immunizations from their primary care provider.

“Our study shows that pharmacists can have a significant impact on multi-dose adult vaccine adherence rates when they become actively involved in immunization programs,” says Papastergiou, adding that pharmacists’ “unique relationship with their patients” is likely a contributing factor to improved immunization rates.

Pharmacists also provide the convenience and accessibility that patients demand, which he says is a key driver to improving vaccination rates. “I hope our work continues to encourage pharmacists to implement vaccinations programs into their practice as this is an area where we can have a significant impact on overall health.”

Pharmacists should also not wait for more government support to seize opportunities to be educators and immunizers, adds Oleksyn. “Every patient needs to be told about the benefits of vaccines and what is recommended for them, whether funded or not,” she says. “Historically, we’ve waited for patients to come to us, but it’s time to be proactive.” ●

<sup>1</sup> Time for harmonization: Pharmacists as immunizers across Canadian Jurisdictions; Fonseca J. Pearson Sharpe J. Houle S. et al. CPJ, 2019.



## Wixela<sup>®</sup> Inhub<sup>®</sup>

(fluticasone propionate and salmeterol inhalation powder, USP)



100 mcg/50 mcg 250 mcg/50 mcg 500 mcg/50 mcg

Generic alternative to  
ADVAIR<sup>®</sup> DISKUS<sup>®</sup>



Wixela Inhub (fluticasone propionate and salmeterol inhalation powder, USP)

100 mcg/50 mcg

Large dose counter window



Wixela Inhub (fluticasone propionate and salmeterol inhalation powder, USP)

250 mcg/50 mcg

Device lockout after final dose



Wixela Inhub (fluticasone propionate and salmeterol inhalation powder, USP)

500 mcg/50 mcg

Similar steps as ADVAIR DISKUS

View the instructional How-To-Use video at [WIXELA.CA](http://WIXELA.CA)

Wixela Inhub (fluticasone propionate/salmeterol) is a combination of an inhaled corticosteroid (ICS) and a long-acting beta<sub>2</sub>-adrenergic agonist (LABA) indicated for the maintenance treatment of asthma, in patients with reversible obstructive airways disease. Wixela Inhub should be prescribed for patients not adequately controlled on a long-term asthma control medication, such as an ICS, or whose disease severity clearly warrants treatment with both an ICS and a LABA.

Wixela Inhub 250 mcg/50 mcg and Wixela Inhub 500 mcg/50 mcg are indicated for the maintenance treatment of COPD, including emphysema and chronic bronchitis, in patients where the use of a combination product is considered appropriate.

Consult the Product Monograph at [https://health-products.canada.ca/dpd-bdpp/index\\_eng.jsp](https://health-products.canada.ca/dpd-bdpp/index_eng.jsp) for more information about:

- Contraindications regarding IgE mediated allergic reactions to lactose or milk, patients with cardiac tachyarrhythmias, patients with untreated fungal, bacterial or tuberculous infections of the respiratory tract and in the primary treatment of status asthmaticus or other acute episodes of asthma
- Other relevant warnings and precautions regarding serious asthma-related events (hospitalizations, intubations, death), treating acute symptoms of asthma or COPD, excessive use and use with other LABA products, abrupt stop of treatment, caution in patients with cardiovascular disorders, central nervous system effects, symptoms of laryngeal spasm, irritation, or swelling, caution in patients who are transferred from systemically active corticosteroids to inhaled corticosteroids, systemic endocrine effects, reversible metabolic changes, eosinophilic conditions, enhanced effect of corticosteroids on patients with cirrhosis, immediate hypersensitivity reactions, candidiasis, masking some signs of infection and new infections, serious course of chickenpox and measles, glaucoma, cataracts, central serous chorioretinopathy, paradoxical bronchospasm, pneumonia (COPD Patients) and active monitoring during long term therapy
- Conditions of clinical use, adverse reactions, drug interactions and dosing instructions

The Product Monograph is also available by calling 1-844-596-9526.

WIXELA and INHUB are registered trademarks of Mylan Pharmaceuticals ULC. ADVAIR and DISKUS are registered trademarks of Glaxo Group Limited.

The Mylan logo is a registered trademark of Mylan Inc. License use by Mylan Pharmaceuticals ULC.

© 2020 Mylan Pharmaceuticals ULC. All rights reserved.

WIX-2020-0078B - AU2020



Better Health  
for a Better World<sup>™</sup>



abbvie

Innovating for  
tomorrow.

Impacting  
millions today.

Allergan is now  
part of AbbVie

[abbvie.com](http://abbvie.com)

CA-ABBV-200089

# Research proves value of PGx testing

Working with patients and prescribers, pharmacists can use this tool to optimize therapy *By Sonya Felix*

Many patients with depression and/or anxiety have trouble finding an effective medication with the fewest possible side effects. Pharmacogenomic (PGx) testing offers a way to optimize therapy sooner by pinpointing which drug works best with an individual's genetic makeup. And new research shows that PGx testing combined with pharmacists' interventions can significantly improve health outcomes.

When PGx testing became available several years ago, the question was whether pharmacists could successfully incorporate the service into daily practice. A 2017 study, "The Innovative Canadian Pharmacogenomic Screening Initiative in Community Pharmacy (ICANPIC)," found that pharmacists are indeed well-suited to implement PGx testing.<sup>1</sup>

But the research needed to go further. "We really needed to go to the next level because evidence was lacking when it came to outcomes data," says John Papastergiou, lead researcher of the ICANPIC study and associate owner of four Shoppers Drug Mart pharmacies in downtown Toronto, all of which offer PGx testing. He is also an assistant professor at the University of Toronto's Leslie Dan Faculty of Pharmacy and an adjunct assistant professor at the University of Waterloo's School of Pharmacy.

To take his research further, Papastergiou teamed up with Green Shield Canada (GSC) to conduct the first single-blinded randomized controlled study to determine whether PGx testing and pharmacist intervention make a difference in patient outcomes. The study wrapped up in December 2019 and the research paper is near publication.

"We used real patients and saw exciting results almost instantly," says Papastergiou. The study recruited about 200 adults from two of his pharmacies who had been diagnosed with a major depressive disorder and/or generalized anxiety disorder and who had been prescribed antidepressant therapy. The participants were randomly divided into the control arm, which received pharmacist standard of care, and the intervention arm, which used PGx to guide decision making by the pharmacist when optimizing antidepressant drug therapy. Over the six months of the study, pharmacists in

both groups assessed patients' satisfaction with drug therapy and used validated screening tools (the Patient Health Questionnaire [PHQ-9], the General Anxiety Disorder [GAD-7] scale and the Sheehan Disability Scale [SDS]) to measure their level of depression and/or anxiety and the impact of their condition on functionality.

"We saw great outcomes with the intervention arm," says Papastergiou, adding that the standard of care group did well too, just not as well. "By the end of the study, patients with moderate to severe depression measured at the mild end of the scale."

While baseline PHQ-9, GAD-7 and SDS scores were similar for both the intervention and control groups, over the six-month period the intervention group's scores showed greater improvement:

- The average score for the intervention group dropped from 13.9 to 8.9, and by the end of the study there was a 2.1 point difference between the two groups.
- After only one month, the intervention group's GAD-7 score fell dramatically and by six months, the average score had fallen from 11.7 to 6.8. The control group's score, which started at 11.2, fell to 8.6.
- Both groups showed improved SDS scores after one month, but the control group

levelled off at three months (from 16.2 to 13.3) while the intervention group continued to improve with the score dropping from 18.2 to 10.2 after six months.

The researchers concluded that when treatment was guided by a pharmacogenomics profile rather than purely by clinician judgement, patients' mental health conditions improved significantly. For patients in the intervention group, pharmacists could share insights revealed by the pharmacogenomics testing with the prescribing physicians and the vast majority of physicians accepted pharmacists' recommendations.

"This was a rigorous study and we're satisfied that PGx with pharmacist intervention clearly has a positive impact,"



Pharmacist John Papastergiou led a study to determine whether PGx testing and pharmacist intervention really do make a difference in outcomes.

Photos by: Julian Klimczyk

notes Ned Pojskic, Leader, Pharmacy and Health Provider Relations for GSC. As a result, GSC will roll out a national PGx testing program in 2021.

Although the insurance industry has funded other pilot projects on PGx testing, they usually focused on the impact on disability leaves and were not at the level required to understand patient outcomes. “Our focus is on the pharmacy angle, with pharmacists as a conduit to interpret results and collaborate with physicians,” says Pojskic.

Meanwhile, another significant PGx study, a partnership between the British Columbia Pharmacy Association (BCPhA), GSC and Pfizer Canada, is expected to be published next year.

The “Pharmacogenomic Services in Community Pharmacy” study follows up on phase one of a project conducted in 2014 and 2015 by Genome BC and BCPhA. Results of that study led BCPhA to launch myDNA, a PGx testing service for community pharmacy that is now available in 250 pharmacies across Canada.

While phase one of the project developed standard operating procedures for pharmacists to conduct PGx testing in

community pharmacies, it didn’t provide clinically actionable results back to patients or prescribers. The second study, or phase two, took that next step by providing a detailed report that pharmacists and prescribers used to change drug therapy where appropriate.

The phase-two study involved 150 patients. Among the results:

- A total of 81 changes to drug therapy were made, for 33 patients.
- The most common changes were: drugs discontinued (22 patients), drugs added to therapy (20 patients), dose increases (11 patients), dose decreases (five patients).
- The net economic effect of all changes was a \$797 increase in drug therapy costs, or \$24.15 per patient per year excluding the cost of the PGx testing.

The positive results from PGx studies help build the case for the genetic test to become a more common service in community pharmacies. Already the market for PGx testing products is becoming increasingly competitive due to more affordable pricing and a greater number of sequencing panels.

However, consumers have yet to catch on. “I don’t think we’ve done a good job of socializing the service to the population,” says

Derek Desrosiers, pharmacist and President of Desson Consulting Ltd., who was BCPhA’s consultant on the research project. “Although more mainstream, it still requires a pharmacist to suggest it to patients.”

Papastergiou agrees that pharmacists need to sell the benefit of PGx testing to patients since most don’t understand what it is about. “The multitude of PGx products in Canada can be confusing and training is needed to understand the differences,” he says. “It takes courage to invest hours in PGx testing and it requires a shift in mindset of pharmacy operators to overcome barriers like time and workflow issues.”

Yet, with positive evidence showing the value of PGx testing, acceptance among insurers and physicians is growing. “When we first started offering PGx testing, we got a lot of pushback from physicians,” Papastergiou says. “But now physicians send patients to us because they see the value and we’re starting to see insurance coverage, too.” ●

<sup>1</sup> Papastergiou J, Tolios P, Li W, et al. The Innovative Canadian Pharmacogenomic Screening Initiative in Community Pharmacy (ICANPIC) study. *J Am Pharm Assoc.* 2017;57(5):624-9.



Find it at **Rexall**<sup>™</sup>

**Health.  
Wellness.  
Rewards.**<sup>™</sup>  
Now in one  
program.

Get the card in-store or download the app.

Visit [rexall.ca/bewell](http://rexall.ca/bewell)



*Congratulations to CFP for  
Celebrating 75 Years &  
for Supporting Research &  
Innovation in Pharmacy!*



### *It takes innovation...*

Pfizer Canada strives to profoundly impact the health of Canadians through the discovery, development and delivery of medicines and vaccines.

Research and development is at the heart of fulfilling Pfizer's purpose as we work to translate advanced science and technologies into the therapies that matter most.



[pfizer.ca](http://pfizer.ca)



©Pfizer Inc., used under license by Pfizer Canada.

PR **Dymista**<sup>®</sup>

(Azelastine Hydrochloride/Fluticasone Propionate) 137 mcg/50 mcg per metered spray



**ONSET OF ACTION  
WITHIN 5-10 MINUTES<sup>1</sup>**



## The Dymista<sup>®</sup> Difference

- Demonstrated onset of action within **5-10 minutes**<sup>1</sup>
- **Superior control** of both nasal and ocular symptoms compared to corticosteroid alone<sup>2</sup>
- The **only** nasal spray for seasonal allergic rhinitis that combines a corticosteroid with an antihistamine<sup>3</sup>

References:

1. Bousquet J 2018, Onset of Action of the Fixed Combination JACI.
2. Dymista<sup>®</sup> Product Monograph, October 3, 2019.
3. Treatment Class with WHO Code ATC R01AD58.

### Indications and clinical use:

DYMISTA<sup>®</sup> (azelastine hydrochloride and fluticasone propionate) is indicated for the symptomatic treatment of moderate to severe seasonal allergic rhinitis (SAR) and associated ocular symptoms in adults, adolescents, and children aged 6 years and older for whom monotherapy with either antihistamines or intranasal corticosteroids is not considered sufficient.

DYMISTA<sup>®</sup> is not recommended for use in children less than 6 years of age as safety and efficacy have not been established in this age group.

### Contraindications:

- Patients who are hypersensitive to this drug or to any ingredient in the formulation or component of the container
- Patients who have untreated fungal, bacterial, or tuberculosis infections of the respiratory tract

### For more information

Consult the Product Monograph at [www.Mylan.ca](http://www.Mylan.ca) for more information about conditions of clinical use, contraindications, warnings, precautions, adverse reactions, interactions and dosing. The Product Monograph is also available by calling 1-844-596-9526.

### Other relevant warnings and precautions

- Systemic adverse effects
- Somnolence
- Local nasal adverse effects, inhibitory nasal wound healing, Candida infections, nasal ulceration and nasal septal perforation
- HPA axis adverse effects and effects on growth
- Suppression of immune system; avoid use in infections
- Ophthalmologic adverse effects
- Dysgeusia, epistaxis and headache
- Replacement of a systemic steroid
- Patients with hepatic dysfunction
- Concomitant use with strong CYP3A4 inhibitors and cobicistat-containing products
- Avoid use with alcohol or other central nervous system depressants
- Psychological and behavioural effects
- Avoid use in patients with recent nasal ulcers, nasal surgery, or nasal trauma
- Pregnancy and nursing and risk of hypoadrenalism in newborns

**For more information on The Dymista<sup>®</sup> Difference, visit [www.dymista.ca](http://www.dymista.ca)**

Dymista<sup>®</sup> is a registered trademark of Meda AB, license use by BGP Pharma ULC, a Mylan company. DYM-2019-1121E - NO2019

Copyright © 2019 Mylan N.V. All Rights Reserved.

 **Mylan**  
Better Health  
for a Better World<sup>®</sup>