THE Tablet

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Pharmacists Zahid and Nafisa Merali at their Surrey-based Naz's Pharmacy.

PHOTO BY: TIFFANY COOPER

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Chris Waller

Making an impact in patients' lives

It is with great honour and enthusiasm that I take on the role of president of the Board of Directors of the BC Pharmacy Association for the 2018/19 fiscal year. The year 2018 marks an important milestone in my pharmacy career; I have had the privilege of practicing pharmacy and making a daily impact in the lives of my patients for 20 years now. And while the technology, regulations and pharmaceutical options have certainly changed, I believe one thing remains unaffected by an ever-evolving health-care industry — a pharmacist's ability to make positive, and often immediate, changes in the lives of their patients.

This fact especially rang true earlier this fall, as pharmacists worked diligently to provide alternative therapy solutions for patients in the face of the recall of several drugs containing an impure strain of the ingredient valsartan, an important component in drugs used to treat patients with high blood pressure or heart failure. Pharmacists called upon not only their extensive knowledge, but also their valued scope of practice to mitigate this potential crisis for patients who rely on these drugs as a life-saving measure.

Our expertise was also put into practice over the summer months, as pharmacists responded to the ongoing shortage of EpiPen auto-injectors used by patients and caregivers to administer epinephrine during an anaphylactic shock. In support of community pharmacists, the BC Pharmacy Association worked with the College of Pharmacists of BC to come up with an intermediate solution, working within a pharmacist's current scope to safely manage supply and meet patients' needs.

As a patient's most direct provider of health care within the community, we are often called upon to abate impending crises, dispensing alternatives and assuaging fears. We enact this role every day in our pharmacies for the betterment of our patients. It's time for pharmacists to be recognized for this role we so naturally play.

That's why the BCPhA continues to put pharmacists at the forefront of B.C.'s current opioid epidemic, and why I spoke at the recent International Overdose Awareness Day event in Kelowna, as Board president. While Kelowna-area pharmacists helped train people on how to use naloxone kits, I highlighted the intimate role that pharmacists play in the healthy outcomes of patients. As we press on for further opportunities and an expanded scope of practice, we as pharmacists must continue to show our health-care colleagues, politicians and most importantly, our patients, that we are an integral and life-saving member of the greater health-care team.

I look forward to the road ahead, as both your Board president and valued pharmacist. T

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Geraldine Vance

Legalized cannabis an historical shift

Each decade seems to be marked by some event that is written into the history books – Expo 86, Y2K, the Vancouver 2010 Winter Olympics. There is little doubt that for Canadians this decade will be marked by Oct. 17, 2018. In addition to being my birthday, it is the date Canada turns a page in public policy that can't be turned back: The legalization of recreational cannabis.

While community pharmacists have been on the sidelines as recreational cannabis is made available legally, it is an issue of importance for the profession. I am sure I am not alone in my outrage at the term dispensary being associated with an illegal pot shop, or when these so-called "dispensaries" display signs that claim they cure everything from migraines to cancer.

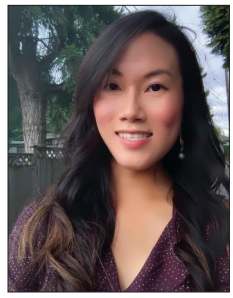
The BC Pharmacy Association has worked hard to ensure our lawmakers understand the importance of eliminating the use of this term by those who have no clinical expertise or training in the dispensing of drugs. We were very pleased B.C.'s Public Safety Minister Mike Farnworth agreed with our concerns and that B.C.'s regulations of the sale of recreational cannabis will prohibit retailers from using terminology associated with a medicinal product. We will remain vigilant on this issue and will work with the province's community safety unit to ensure recreational cannabis retailers do not make medical claims about their places of business.

The next issue to be addressed by Canada's federal and provincial governments relates to a review of the sale of medicinal cannabis. The Canadian Pharmacists Association (and other provincial pharmacy associations) have long held the view that medicinal cannabis must be made available through pharmacies, allowing patients access to the expertise of a pharmacist. One could argue there is an urgency in making this happen. There are scores of people who have purchased cannabis through illegal retailers on the belief they were buying "medicine." What happens to those people after Oct. 17? Their need for treatment of their medical issues certainly won't go away. Who will those patients turn to for advice? It can and should be pharmacists, who have the skills and knowledge to safely dispense legal, medicinal cannabis products. Pharmacists need to work in partnership with prescribers who are experienced in integrating medicinal cannabis into a patient's overall care. They need to be able to counsel patients on drug interactions. And they need to be able to track a medicinal cannabis prescription to that patient's PharmaNet profile and medical record.

The issue around broad accessibility of medicinal cannabis should not be side-tracked by discussions about who will pay for the product. It should be centred on stewardship of the patient's well-being. And there is no doubt that community pharmacists are the right people to provide that stewardship.

The Tablet asks our contributors:

"As 2018 comes to an end, what do you see as pharmacy's biggest accomplishment in B.C. this year?"



Sandy Lu has been a pharmacist at Downtown Community Health Centre with Lower Mainland Pharmacy Services since 2012. "I am amazed to see how prompt the pharmacy profession has been responding to the opioid crisis: amendments to PPP-66 to include buprenorphine and SROM, the introduction of microdosing of buprenorphine/naloxone and injectable hydromorphone, as well as making take-home naloxone kits more accessible. We are taking a step in the right direction."

A recent graduate from UBC, **Jerry Mejia** is a Pharmacy Practice Support Specialist with BCPhA and a relief community pharmacist. "In my eyes, the biggest win this year is pharmacists' unwavering dedication to patient care and positive health outcomes, despite the current challenges the profession faces."

Shelina Rayani has been a pharmacist with the BC Drug and Poison Information Centre for 20 years. "Pharmacy's biggest accomplishment in 2018 has been our involvement in the opioid crisis by increasing the availability, teaching and administration of naloxone all over the province."

Member News

Do you have a professional or personal update you want to share in *The Tablet*? Email editor@bcpharmacy.ca to share your member news.

Members of the BC Pharmacy Association hosted representatives from the Australian Pharmacy Guild Aug. 21 and 22 when they stopped in Vancouver during a visit to Canada. Members **MacDonald's Prescriptions, Shoppers Drug Mart** on Davie Street, and **Pharmasave** on Burrard, along with **London Drugs**, gave tours to help them understand British Columbia and Canadian pharmacy.

In November, planning for the **BCPhA's annual Excellence in Pharmacy Awards** kicked off. Nominations for award recipients will open on December 3 and close on Feb. 11, 2019. The Board Awards committee members include: **Kris Brown** (Thrifty Foods), **Dr. Sandra Jarvis-Selinger** (UBC), **David Pavan** (College of Pharmacists of BC), **Alex Dar Santos** (BCPhA past president), **Lori Hurd** (Board member), **Jamie Wigston** (Board member) and **Shawn Sangha** (Board member).

During the flu season kick off, members **Anoop Khurana**, **Parm Johal, Allan Wong**, **Miguel Lopez-Dee**, **Rechelle Laman** (Cortes), **Sorrento Pharmacy**, **Jeonghee Han**, **Cridge Pharmacy**, **Nader Khattab**, **Blaine Wilkins** and **Save-on Foods** gave their local MLAs flu shots at their respective pharmacies.

Courtenay pharmacy manager saves man's life with naloxone injection

Tara Oxford gives life-saving drug to London Drugs customer who overdosed

While most pharmacists know that naloxone is an important tool in the fight against B.C.'s opioid epidemic, London Drugs pharmacy manager Tara Oxford experienced firsthand the drug's life-saving power this fall, after personally administering a naloxone shot to a customer who had overdosed inside the store.

"I just knew what I needed to do," says Oxford, recalling the incident that took place in early October. "There was no judgment, I just thought, 'This is the drug that is going to save his life.' The situation was very intense, but it was very calm. Everybody had a very good understanding of what they needed to do."

The day started out like any other, with Oxford serving patients behind the counter at her Courtenay-based London Drugs pharmacy. The day's events took a turn when a 24-year-old man asked to use the store's public washroom and never reappeared. After about 40 minutes, and repeated failed attempts by staff to get his attention, London Drugs store manager Adam Fraser opened the door with an emergency key, where the man was found slumped over on the toilet seat and unresponsive. Surrounded by drug paraphernalia, the man was pale blue and barely breathing.

London Drugs staff immediately jumped into crisis mode, calling 9-1-1, cordoning off the area, performing CPR and notifying Oxford to administer a naloxone injection. After gathering her supplies and running to the scene to inject the life-saving drug, Oxford recalls how quickly the medicine took effect.

"I gave the shot, and his colour came back pretty quickly," she says. "He started to come round and by the time paramedics arrived and gave him some oxygen, he had turned pink again and walked straight on to the stretcher. It was absolutely incredible."

After receiving treatment at North Island Hospital Comox Valley, the young man was released and later came back to London Drugs that evening to offer his sincere gratitude for saving his life and allowing him to spend Thanksgiving with his family, Oxford says.

While Oxford is intimately involved with the take-home naloxone kit campaign, as a Board member of the College of Pharmacists of BC who had a hand in implementing the drug's descheduling for emergency use in 2016, this was her first time administering the drug in a real-life situation. She encourages all pharmacists to not only stock naloxone kits in pharmacies, but to be educated and trained on how and when to use it.

"This could happen anywhere at anytime," says Oxford. "We're a store inside a mall in the small town of Courtenay. Who would've thought that this would happen here? Don't be afraid to give the shot; it saves lives without a doubt." T

While 50-year-old **Shelley Hempstead** holds many titles in her life – pharmacist, wife, mother, volunteer – there is one in particular that sets her apart from the average Canadian: veteran. A member of the Canadian Armed Forces from 1986-1996, Hempstead served her country and her fellow CAF members as a military pharmacist, serving at several army bases in Eastern Canada, as well as on a six-month United Nations tour in Croatia during the Yugoslav Wars.

An aspiring biochemist as a teen, she changed her course after a summer job with the Canadian Army Reserve opened her eyes to a career in the military. After reviewing the military's available career options, she settled on pharmacy, altering her application to the University of British Columbia just days before the deadline.

After a busy several years of education, in which she learned how to become both a pharmacist and an officer, Hempstead left B.C. for her first posting in Quebec, followed by stints in Petawawa, Ontario and Ottawa, before ultimately leaving the military and returning to her home province. Now a part-time pharmacist in Prince George and mother to three active children, aged 11 to 16, Hempstead displays her army veteran license plates proudly: "When we come up to Remembrance Day, it means a whole lot more to me now."

From military officer to community pharmacist

You joined the Canadian Armed Forces as a student. What was this experience like?

I spent two years at Okanagan College studying biochemistry before transferring to UBC. I jumped into the second year of pharmacy, and it was a little bit of a rude awakening, but I discovered I really like dealing with people and being able to help them. The military doesn't train pharmacists directly, so I would attend pharmacy school during the school year and then spend summers training as an officer, doing basic officer training, second language training and medical assistant officer training.

What role does a pharmacist play within the military?

There are a number of different roles to serve within the military — at a base hospital, where you provide in and outpatient pharmacy, as well as at health clinics. Pharmacy officers are responsible for the medical supply and equipment system, so I learned a lot about medical-related products you wouldn't normally learn about as a community pharmacist, such as x-ray technology. I also offered training to medics on how the medical supply system worked, and taught pharmacy math. Pharmacy officers can also work in a medical depot, where medical supplies and equipment are managed and distributed to bases within Canada, as well as units deployed into the field, which at my time included places like the Persian Gulf, Rwanda, Somalia and Croatia.

You spent six months serving in Croatia. What was your role?

I did a six-month tour to Croatia in 1993 with the United Nations Protection Force, which was a peacekeeping force during the Yugoslav Wars. It was a very interesting learning experience, seeing what goes on in UN operations. We were there to help demilitarize the area between Croatia and Serbia, and there were many different countries involved – about 30-50 at any given time. I and my team were there to provide pharmacy and medical supplies support. Sometimes we Canadians would help out some of the other countries that had troops there but few resources. While I was not working on the front lines, I did once have to go to Sarajevo to survey the medical supply needs in our Forward Surgical Hospital and was accompanied from the airport to the base by two armoured personnel carriers. We had to wear flak jackets, helmets, the whole nine yards.

What led you to leave the army?

When I joined up, for every month of education I received, it was agreed I would pay back with two months of service. So a total of 24 months of education equaled 48 months of service. When I got out it had been six years, so I felt I had served more than my time. When I met my future husband, who was not in the military, we wanted to decide where we would live rather than have the military decide for us.

Above: Prince George pharmacist Shelley Hempstead spent six years as a pharmacy officer with the Canadian Armed Forces in Eastern Canada, including a six-month United Nations tour to Croatia during the Yugoslav Wars. Inset: Hempstead was a member of Canada's military from 1986 to 1996.

How is it different to practice as a community pharmacist?

There is a huge difference between the military and the civilian world as the patient population is completely different. In the military, everyone is fairly healthy, all adults, and predominantly male (although there were more and more females joining). I never had to charge anybody for anything, although there was still a definite formulary for dispensing drugs. When I began working in the community, processing prescriptions through all the different drug plans was a very big difference, as well as working with children, seniors, and people who are very ill. Although with this being said, I have found that moving from one community to another, or even from one pharmacy to the next in the same town can be quite different!

You have chosen to work part-time since having your first child 16 years ago. Why is this an important decision for you?

These days, I generally work about one to two days a week, as well as filling in for others during their vacation time. I feel that in pharmacy there is way too much change to stay away for any significant time. You have to be in it to keep up. It feels good to be able to help people and get things sorted out for them, such as trying to get a drug paid for or giving people their vaccines. There is a preventive aspect of health care to pharmacy that I really enjoy.

What does it mean to be a veteran, more than 20 years later?

I don't think about it all of the time, but I do feel very proud of my role. I never went to any Remembrance Day parades or services growing up, but now I go every year. And if it's asked for veterans to stand, I will stand proudly. When I went to get my veterans' license plate, I had very young children, and I think it was surprising to a lot of people that a young woman with young children could be a veteran. T

Shoppers Drug Mart pharmacist/owner Allan Wong delivers a flu shot to Surrey Fleetwood MLA Jagrup Brar.

Pharmacists gear up for biggest flu season yet

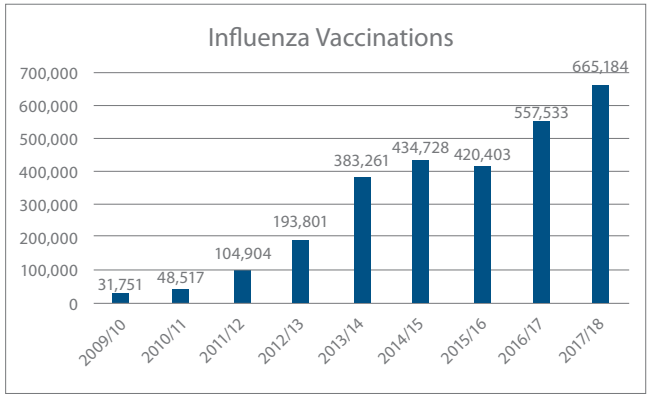
Community pharmacies across the province are preparing to administer another record number of flu shots to help protect British Columbians against influenza for this year's flu season. Last year, pharmacists provided more than 660,000 flu shots, an increase of nearly 20 per cent compared to the previous year. If these numbers are any indication, the BC Pharmacy Association predicts a similar, if not increased, number of flu shots administered by pharmacists for this year's flu season.

Pharmacists have not only become an increasingly popular choice for British Columbians wanting a flu vaccine, but health authorities across B.C. are now having their public health units refer individuals wanting flu vaccines to pharmacists and other health-care providers to help ease pressures they face.

"Our members have been incredibly busy. There has been quite a demand for flu shots from pharmacists," says Linda Gutenberg, Deputy CEO and Director of Pharmacy Practice Support at the BC Pharmacy Association.

One group that B.C.'s community pharmacists are hoping to reach are those ages 18 to 64 years old, who don't get their flu shots as often as other groups, like seniors or those with chronic conditions.

"Getting immunized is not only important for those with chronic conditions, but also for all family members and their caregivers," Gutenberg says. "We need to create a bubble of vaccinated individuals around those people with chronic conditions to keep them protected from the flu."



Number of publicly funded flu vaccines provided by B.C. pharmacists since 2009 (first year given authority to administer injections)

In B.C. care providers or family members of those with chronic conditions just have to declare their status to qualify for the publicly funded flu vaccine. "I don't think many of those people are aware they qualify for a free flu shot," Gutenberg says.

The BCPhA has also used the flu season campaign as a way of raising awareness about the convenience and accessibility of community pharmacists with elected officials. Members of the BCPhA's MLA outreach program, which is a grassroots advocacy program, have hosted MLAs across the province in their pharmacy and used that opportunity to help them understand the role pharmacists can play.

NDP MLA Jagrup Brar (Surrey-Fleetwood) was one of a number of MLAs who got their flu shot from a BCPhA advocacy program member.

Allan Wong, with the support of the BCPhA team, invited Brar to his Shoppers Drug Mart pharmacy.

"In doing this we're able to connect with our MLAs and the media. It gives them a chance to be out in the community and see firsthand what constituents experience, what we do in pharmacy and how we can help increase access to care," says Allan Wong, pharmacist/owner of Shoppers Drug Mart 2122 in Surrey. T

Want to get more involved in the BCPhA's MLA outreach program? Contact Communications Officer Andy Shen at andy.shen@bcpharmacy.ca.

New opioid training program for pharmacists launches in December

This December, the BC Pharmacy Association launches a new training program on Opioid Agonist Treatment (OAT) for community pharmacists.

The program, which includes an online self-study program followed by an in-person workshop, provides essential information on topics ranging from opioid use disorder and treatments to pharmacy practice and payer requirements. Taking this training will allow pharmacists to feel more confident in engaging with patients and prescribers – one more step in helping address the overdose crisis in B.C.

"This is unlike any other training program for pharmacists in Canada," says Geraldine Vance, CEO of the BC Pharmacy Association. "From the 1990s, when community pharmacists in B.C. began dispensing methadone, treatment options for patients with opioid use disorder continues to evolve."

Called OAT CAMPP (Opioid Agonist Training Compliance and Management Program for Pharmacy), the course will expand B.C. pharmacists' knowledge about methadone, buprenorphine/naloxone and slow-release oral morphine (SROM). Other components include how to reduce stigma, improve patient engagement and understand patients' experiences in treatment.

This training program will be required by both the College of Pharmacists of BC and the Ministry of Health. The PharmaCare program will also be phasing in the new pharmacist training as a mandatory requirement for pharmacists to receive PharmaCare's current methadone witnessed ingestion fee and any other future fees related to OAT for treatment of opioid use disorder. The intent is to have at least one pharmacist from each of the OAT dispensing pharmacies in B.C. trained by the summer of 2019.

The remaining pharmacists will have a mandatory requirement to complete the training by March 31, 2021.

The BCPhA has worked closely with the Ministry of Health's Pharmaceutical Services Division (PSD) over the years to ensure patients get the best care during their often-daily interactions with pharmacists. Approximately 18 months ago the BCPhA began conversations about how best to support pharmacists to handle the complexity of care for this fragile patient population.

"We agreed there was a need to enhance the training pharmacists receive on OAT based on the latest evidence and research. In addition, OAT is a key intervention as part of B.C.'s response to the overdose crisis because it saves lives," Vance says.

With financial support from the Ministry of Health, the Ministry of Mental Health and Addictions and Health Canada's Substance Use and Addictions Program, and working closely with the First Nations Health Authority, the BCPhA has developed a robust OAT training program consistent with BC Centre on Substance Use (BCCSU) guidelines, the updated professional practice policies of the College and the requirements of the Ministry of Health.

The cost of the program is $300 for members and $550 for non-members. To register for the program, visit bcpharmacy.ca/etraining. T

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The Hon. Judy Darcy has served as B.C.'s first and Canada's only Minister of Mental Health and Addictions since July 2017. An MLA for New Westminster, Darcy has been an elected official since 2013. In her current role, the minister's highest priority has been tackling the opioid overdose crisis through increased access to naloxone and expanded treatment and recovery options.

Prior to her role in government, Darcy was national president of the Canadian Union of Public Employees and secretary business manager for the Hospital Employees Union in B.C., where she negotiated an historic settlement for B.C.'s health-care workers in 2008.

Meet B.C.'s Minister of Mental Health and Addictions Judy Darcy

The Tablet speaks with Darcy on pharmacy's role in managing mental health and addictions issues.

What role do you see B.C.'s community pharmacists play in B.C.'s opioid overdose epidemic?

Community pharmacists are valued and trusted leaders in their communities. We are so grateful for the role they are playing dispensing credible and compassionate advice during this public health emergency. Over 800 community pharmacies now have naloxone available to their clients. Having these kits readily available is essential in our effort to save more lives, because we know that someone has to be alive to be able to receive treatment and create a pathway to hope and healing.

Recently, through our partnership with Save-On-Foods, we embedded our anti-stigma campaign posters and materials in each of their pharmacy locations throughout B.C. All Save-On-Foods pharmacies now offer free naloxone kits as well as training in overdose recognition and response.

From our very first day in office, we have been escalating our response to the overdose crisis every day, every week, every month. In addition to expanding access to naloxone, we also continue to increase access to opioid agonist therapy (OAT) and injectable OAT to provide people additional pathways to hope and healing and we continue to work with physicians, nurses and pharmacists on innovative ways to expand treatment options even further.

A collaborative relationship with the BC Pharmacy Association and the College of Pharmacists of BC is essential to saving lives and stemming the tide in the overdose crisis.

One in five will personally experience mental health issues each year. How can community pharmacists help patients with mental health issues?

Community pharmacists know too well the negative effects of stigma associated with mental health and addictions challenges and are committed to preventing their patients from experiencing stigma at their pharmacies — for that I am extremely grateful. This demonstrates respect, compassion and promotes the well-being of their patients, which is absolutely essential.

Pharmacists have an important role to play when it comes to talking about pharmaceutical options, including options that are working, ones that are not working and new options that could be of value to people living with mental health challenges.

We want to ensure pharmacists are able to help their patients navigate their options as quickly and easily as possible and we are committed to supporting pharmacists with tools to help them provide the best evidence-based advice and direction possible.

There have been discussions about getting patients on OAT immediately, when needed. Access to physicians has been identified as a barrier due to shortages, long waits or incompatible hours. How do you see that pharmacists can initiate OAT therapy, like Suboxone®, to patients in need?

I'm pleased to share that – in a sev-

en-month period here in B.C. – the number of physicians that are able to prescribe opioid substitution therapy increased 60 per cent and the number of people receiving opioid substitution therapy increased 126 per cent. Nurse practitioners across the province can now also prescribe OAT. While OAT is currently out of the scope of practice for community pharmacists, they play an important role in finding innovative ways to connect people to new treatment options. The BC Centre on Substance Use (BCCSU) is doing critical work to drive evidence-based improvements to the system of addictions care including the creation of guidelines for the treatment and care of people with addictions, including oral and injectable opioid agonist therapy. From day one as a government, we decided that our response to the overdose crisis would be a "whole of government" approach – an approach that not only breaks down the silos in government, but one that addresses the root causes and social conditions that can play such a big role in addiction.

The opioid crisis has affected communities across the province, many of which have pharmacists but may not have doctors or hospitals. How do you see pharmacists helping in, what you have described as "a system of care where you ask for help once and get help fast?"

As you mention, many communities do not have hospitals and many British Columbians do not have family doctors, which means community pharmacists play an even bigger part in the delivery of services on the ground and helping those in need. In some rural and remote communities, pharmacists are the only health-care professionals that people can depend on. Whether it be distributing naloxone, counselling patients about their medications, connecting with prescribers, or one of the many other important roles community pharmacists take on, they will all continue to play an active role in supporting people living with mental health and addictions challenges. We are committed to supporting pharmacists so they have the tools to help connect people to treatment options that meet their individual needs. Moving forward, we believe pharmacists will continue to be a part of innovative solutions to expand treatment options throughout B.C. T

Naz's Pharmacy pharmacists Zahid (left) and Nafisa Merali (right) specialize in diabetes care for the South Asian community, including 80-year-old patient Kirpal Dhinsa (centre).

Bringing Heart

TO DIABETES CARE

Independent pharmacy chain Naz Wellness Pharmacy Group offers diabetes care to the Lower Mainland's South Asian community.

BY SHIRLEY WONG

Pharmacist and business owner Nafisa Merali walks through the doors of her Surrey-based pharmacy, Naz's Pharmacy, and immediately recognizes a patient, stopping to ask how they are doing. The popular pharmacy, located at 72nd Avenue and 125th Street is brimming with a steady stream of patients, many lining up for free glucose testing and counselling, at times blocking the entrance.

Located in a tiny neighbourhood strip mall across from a South Asian grocery store, the cozy pharmacy has become a pillar of health and wellness to the Surrey community, where many patients struggle with the negative effects of diabetes, high blood pressure and heart disease, among other illnesses. In fact, according to Fraser Health's South Asian Health Institute (SAHI), South Asians are two to three times more likely to develop heart and kidney disease, stroke and diabetes 10 years earlier in comparison to other ethnic groups.

"Every day, our goal is to educate patients and guide them in their journey to health and wellbeing," says Nafisa. "We have witnessed firsthand the difference that proper education, diet and medication can make in the lives of not only our patients struggling with diabetes and high blood pressure, but to their entire families, who now have a healthy member of the family again. It really is an honour to be a part of making that difference."

Nafisa has been specializing in diabetes care, pharmacy and general wellness since opening her first pharmacy in 1995. A throwback to her family's former business in her native Africa, the pharmacist came up with the name Naz Prescription Plus Pharmacy – a combination of the first initials of the family's three children. Over the next 20 years, in partnership with her brother Zahid, the pair grew their respective independent pharmacies, now named Naz Wellness Pharmacy Group, to include 13 locations across the Lower Mainland.

As a bulwark to the South Asian community, Nafisa recalls how this unique specialization began in 1991, as a pharmacist learning the ropes in her first job after graduation. She started in a predominantly South Asian community, with residents from Punjabi, Muslim and Hindu ethnic backgrounds. Coming from Africa, Nafisa realized she needed to understand her community's needs. Many of her patients couldn't speak English and she couldn't speak Punjabi or Hindi.

As a community pharmacist, it was up to her to learn the language of the people in her neighbourhood. She practiced speaking Punjabi and Hindi with her staff, picking up common phrases and expressions that would help her to build a common ground with her patients. Opening the doors to better communications and understanding of her patients' backgrounds made a huge difference. She learned about their culture, from eating habits to lifestyle, and quickly understood that a number of her patients demonstrated the most common risk factors for the diseases that affected them – diabetes, high blood pressure and heart disease. According to a 2016 South Asian Health Report published by Fraser Health, it was found that a number of common factors contributed to the community's disproportionate representation of these chronic conditions, including high sugar intake, poor exercise habits and an unbalanced diet.

"I saw a gap where most education was catered to Canadian foods, not taking into account a very

(Clockwise, from left to right) Naz's Pharmacy patient Chana Chahal is committed to living a healthy lifestyle since being diagnosed with diabetes and hypertension; Fourth-year UBC pharmacy student Gurvinder Gadri, who works at Naz's Pharmacy, explains the results from the blood glucose test to a patient at a local temple; registered dietician Harmeet Mundra talks about healthy alternatives with a patient at Naz's Pharmacy in Surrey.

different diet and understanding of the health risks," says Nafisa. "Most of my patients didn't even know what a blood sugar test was. I had to do something and give back to the community."

And fill the gap she did. Early on in her career, Nafisa volunteered to understand the health of her community and saw a need to increase awareness of diabetes and heart disease. She visited different temples and mosques, community centres and health units, encouraging them to let her run teaching programs that specifically focused on the South Asian diet and lifestyle. She looked into developing an outreach program that included free clinics offering not only diabetes education, but also information on cholesterol, osteoporosis, flu vaccinations and travel health. These programs have continued to run for more than 25 years.

When Nafisa reached out to the leader of one of the largest temples in North America, the Guru Nanak Sikh Gurdwara in Surrey eight years ago, to ask if her pharmacy could hold onsite blood screening and diabetes counselling, she also noticed that the meals served contributed to diabetes risk.

A local temple or Sikh gurdwara can serve hundreds of daily meals prepared by volunteers. As a common gathering place for locals, it was an opportunity to go straight to the patients, many of whom would never have thought they had diabetes or health issues, as well as their family members.

"It is generally males who are diagnosed as diabetic but who does the cooking in these more traditional families?" asks Nafisa. "We have to get the wife involved so we do the family approach. If we cannot get them to change their eating habits, I ask them, 'Do you want your children to have health problems later in life?' I find they change their diet for the people with diabetes but will not change their diet if there is no diabetes. No matter what, we are aiming to change for healthier communities."

Eighty-year-old Kirpal Dhinsa, a retired Indian Army veteran, is a local farmer. Through an interpreter, Dhinsa says that in late 2015, he happened to visit Naz's Pharmacy on 72nd Avenue in Surrey to get some over-the-counter (OTC) products. He saw a free diabetes clinic being provided onsite and decided to get his blood sugar checked. The result prompted the pharmacist to send a note to Dhinsa's physician to book an appointment as soon as possible.

"When I went to see the doctor, I found out that I was diabetic," recalls Dhinsa. "It was the pharmacist who found out that there was something wrong. I used to forget to take or even understand my own medication. It was so complicated. But my pharmacist at Naz's Pharmacy would help provide a blister pack as well as advise me on exercising and keeping my medical appointments."

Nafisa's commitment to the South Asian community would go a step further, when she partnered

with Fraser Health Authority on a new program geared towards healthy outcomes for South Asians. Home to more than 250,000 South Asian residents, Fraser Health created the South Asian Health Institute (SAHI), to better understand and meet the specific health needs of the South Asian population. SAHI developed the Sehat program, a health promotion campaign that teaches the South Asian community how to make healthy choices such as healthy eating, portion control and alternatives to sugar and fat. Featuring presentations, videos and brochures in Hindi and Punjabi, Naz's Pharmacy is the only pharmacy offering the health unit's education program.

Educating Patients with Diabetes

Naz's Pharmacy also offers diabetes coaching on site, during monthly diabetes clinics hosted by registered dietician Harmeet Mundra. Here, she provides education, coaching and one-on-one counselling for patients seeking to gain better understanding of how to make healthy choices. Using pictures as examples to help patients understand portion size, Mundra also demonstrates what a single portion should be, balling up her fist, while pointing out common misperceptions about what a single serving size contains. She highlights the high amount of sugar found in South Asian cuisine, including many common foods and popular drinks, and provides alternative options.

> *"[Patients] will come looking for you because of trust."*
>
> — Nafisa Merali

For example, in Mundra's recommended dietary alterations, a single cup of tea containing four teaspoons of sugar is significantly reduced to 1.5 teaspoons. White flour roti, a baked flatbread, is replaced with whole wheat or chickpea flour. And whipping cream, a base for curries, can be replaced with low fat yogurt or low fat sour cream. It is important to demonstrate that reduction of sugar and fat, including portion size, can have healthy benefits in the short and long term, even one step at a time, says Mundra.

As part of the diabetes clinic, Mundra takes patients on a tour at the nearby grocery store selling predominantly South Asian ingredients, and shows them how to read package labels, identifying fruits and vegetables and how to use alternative options to cooking oils and fats.

One patient joining the tour is Chana Chahal, a retired truck driver. At 68 years old, he has Type 2 Diabetes, hypertension and even underwent a coronary artery bypass. Chahal had never been to a doctor or a pharmacist until a life-changing moment in 2005.

"It was a usual work day in the afternoon when I was going to the bank," recalls Chahal. "It was when I reached the door that I felt weak and then passed out. When I regained consciousness, I was in a ward at Vancouver General Hospital."

Chahal committed to a healthy lifestyle, following the incident. "My pharmacist at Naz's Pharmacy prepared a care plan for me, personally checks about my compliance and any medication issues. I keep my health-care appointments and never skip my 30-minute walks. This is my secret for staying away from hospitals," he says, with a smile.

A Growing Business

Following in his elder sister's footsteps, Zahid Merali recalls with pride at how he first got started in pharmacy.

"My initial spark was seeing Nafisa become a pharmacist. I was in ninth grade at the time but I remember her coming home happy, calling it fulfilling, doing something different everyday. So when she opened Naz's Pharmacy in 1995, I helped out after school – sweeping floors, talking to customers and, my favourite, being her assistant. I was pre-pharmacy but I knew this would be my future."

Coming from a family of entrepreneurs, Zahid knew he wanted to bring his personal experience to help grow the business. Graduating with his pharmacy degree from the University of British Columbia in 2000, he looked for opportunities to develop experience that was more advanced. He did one year of community residency at UBC, during which he worked for a time in the United States, in Washington State, as it was further along than B.C. in terms of innovations in pharmacy practice, says Zahid.

This experience proved to be eye-opening as Zahid wanted Naz's Pharmacy to be more than just a pharmacy. Six years ago, he was approached by a local physician who had been unable to provide pharmacy assistance to administer patches for an Alzheimer's patient in their home. "I saw the gap in patient care, so I went to the patient's home. I drove from Vancouver to Surrey seven days a week to change the patient's patch. My philosophy is, if you take care of the patient and their family, the rest will take care of itself."

This philosophy grew into what is known as the Naz Wellness Home Monitoring Program, now running for more than six years, providing support to patients in their own homes, including blood glucose monitoring, medication management and ongoing assessment.

"People make the mistake that they think care stops once they leave the pharmacy," says Nafisa. "I've gone to 100-year-old birthday parties, I get involved with the families. I tell my staff to get to know the patients, to talk to them. They'll come looking for you because of trust." T

PIONEERING PRACTICE IN THE TREATMENT OF OPIOID USE DISORDER

Microdosing of Buprenorphine for Induction

(the Bernese Method)

BY EUNBIN CHO, PY4 PHARMD STUDENT, AND SANDY LU, BSC (HONS), BSC (PHARM), RPH

Bob is a 42-year-old patient who was started on methadone a year ago for the treatment of opioid use disorder. He is currently receiving a methadone dose of 120mg daily. Today, he presents to your pharmacy with a new prescription for "buprenorphine/naloxone 2mg/0.5mg tablets" (See Figure 1 for more details) as well as a continuing prescription for methadone at the same dose. It is the first time that you have seen this combination together. How would you assess these prescriptions? What type of information do you need?

Introduction

In 2017, the BC Centre on Substance Use (BCCSU) and Ministry of Health released new guidelines that recognize buprenorphine/naloxone as a first-line treatment for opioid use disorder. This decision is largely based in response to the nation-wide opioid crisis. Last year, 1,451 illicit drug overdose deaths were reported in the province according to the BC Coroners Service. This epidemic continues into 2018, with 742 overdose deaths reported between January and June. It is evident that new strategies are needed to fight this ongoing public health emergency.

In this article, we present a novel approach to opioid agonist treatment by *Hämmig et al.* using microdoses of buprenorphine with concomitant full opioid agonist use, also known as the Bernese method.

Background

Buprenorphine is a partial mu opioid agonist and weak kappa opioid antagonist used to treat opioid use disorder. In Canada, buprenorphine is available as a fixed combination tablet with naloxone in a 4:1 ratio. Naloxone has poor bioavailability upon sublingual administration, and it serves to prevent diversion and misuse. Once administered, buprenorphine exerts partial agonist activity on the mu opioid receptor with high affinity and stays for a long time (Figure 2). Affinity of an opioid to the mu receptor is quantified by K_i values, as shown in Table 1 (page 20). Of note, buprenorphine exhibits a higher affinity relative to other opioids such as morphine and methadone. Because of its partial antagonist effect and low intrinsic activity when used in opioid-dependent individuals, buprenorphine will displace the full

agonists from receptor sites without activating the receptor to a comparable degree. This can cause a phenomenon known as precipitated withdrawal, which is a rapid and intense onset of withdrawal symptoms (i.e. drug craving, anxiety, restlessness, gastrointestinal distress, diaphoresis and tachycardia). To avoid this, an individual must be in a state of mild withdrawal before starting buprenorphine. The need to be in withdrawal before induction and the risk of experiencing precipitated withdrawal after induction may pose a barrier to starting buprenorphine treatment and/or increase the risk of relapse during treatment. The BCCSU recommends buprenorphine as first-line therapy over methadone for most patients in the absence of contraindications as it has minimal effect on QTc prolongation, fewer drug interactions, less potential for abuse and overdose.

The Bernese Method

A 2016 case study published out of Switzerland by *Hämmig et al.* introduced two cases of successful buprenorphine induction overlapping with full opioid agonist use. The authors' hypotheses for the study were that small, repetitive dosing of buprenorphine with sufficient dosing intervals (i.e. 12-24 hours) should not precipitate withdrawal, and buprenorphine will begin to accumulate at the receptor due to its high receptor affinity and long binding time, and as a result, an increasing amount of full agonists will be gradually replaced by buprenorphine.

The study introduced a case of a 30-year-old female using street heroin who failed the traditional induction method multiple times and another case of a 49-year-old male who was enrolled in a heroin-assisted treatment (HAT) program for six years, receiving full opioid agonist therapy with diacetylmorphine (DAM) IV and methadone daily. The study lacked a consistent protocol for dosing of buprenorphine, but both cases were started with 0.2mg of buprenorphine and titrated upward slowly while tapering off the overlapping administration of full agonists (street heroin or prescription agonists). Microdosing regimen for Case 1 is presented in Table 2. The titration was more complex and slower in Case 2 as the patient was well-stabilized on known high doses of full agonists and at high risk of precipitated withdrawal.

The authors reported that in Case 1, the patient tolerated the induction period with much fewer withdrawal symptoms with the Bernese method compared to her two previous trials with the conventional method. The authors suggested that the Bernese method may be useful for patients who experienced severe withdrawal during conventional induction or are concerned with the withdrawal symptoms.

FIGURE 1 Sample of full micro-induction regimen

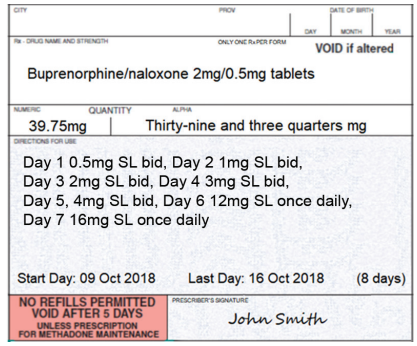
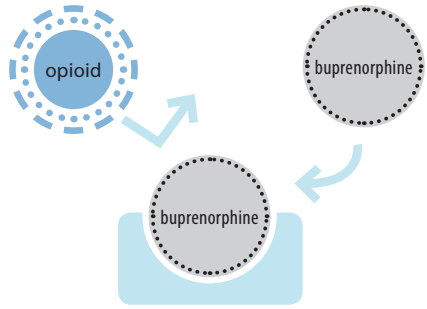


FIGURE 2 Mechanism of action of buprenorphine



buprenorphine has very high affinity for opioid receptors

Clinical Implications

Current buprenorphine/naloxone induction guidelines require an individual to be in moderate withdrawal (clinical opioid withdrawal scale greater than 13) before initiating buprenorphine/naloxone, which can take 12 to 24 hours for short-acting opioids and 48 to 72 hours for long-acting opioids. For those switching from methadone, ideally the dose is tapered to 30mg or less then stopped for at least 36 hours before induction. Even though this method is simple, it is associated with increased risk of destabilization due to prolonged tapering of methadone.

Prescribers may find the Bernese method more convenient than the classic induction method, since treatment can be initiated immediately without waiting for the patient to be in withdrawal first. Given these two case studies, there may be a role for microdosing in the treatment of opioid use disorder especially in patients who have previously had difficulty starting or continuing buprenorphine. Further randomized, systematic studies are required to determine whether the Bernese method is associated with better tolerability and treatment outcome compared to conventional induction methods, and to establish an optimal dose titration scheme.

Practical Pearls

You may begin to see patients coming to your pharmacy with a prescription for microdosing of buprenorphine/naloxone as more prescribers trial this method. Here are our recommendations when you receive these prescriptions:

1. Ensure that you are familiar with the principles and guidelines from the College of Pharmacists of BC's Professional Practice Policy (PPP-66) *Buprenorphine/Naloxone Maintenance Treatment*. The College has not released a practice policy guideline on micro-induction as of current; however, the principles still apply.
2. Upon receiving the microdosing buprenorphine/naloxone prescription for the first time, have a discussion with your patient on this regimen as this method is not evidence-based. Counsel your patients on possible precipitated withdrawals as

TABLE 1 Mu opioid receptor binding affinity

Drug	K_i (nM)
sufentanil	0.1380
buprenorphine	0.2157
hydromorphone	0.3654
morphine	1.168
fentanyl	1.346
methadone	3.378
oxycodone	25.87
codeine	734.2
tramadol	12,486

K_i denotes the binding affinity of opioid to mu opioid receptor. The smaller the K_i value, the stronger the binding affinity to receptor.

TABLE 2 Buprenorphine dosing schedule and use of heroin in Case 1

Day	Buprenorphine (SL) (mg)	Street heroin (sniffed) (g)
1	0.2	2.5
2	0.2	2
3	0.8+2 †	0.5
4	2+2.5 †	1.5
5	2.5+2.5 †	0.5
6	2.5+4 †	0
7	4+4 †	0
8	4+4 †	0
9	8+4 †	0

† denotes twice daily dosing

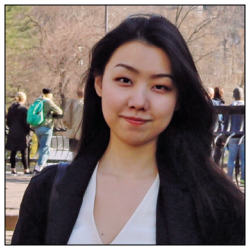
mild symptoms may occur even with microdosing. Support your patients for possible withdrawal symptoms by assessing the need for clonidine (to treat anxiety, tachycardia and restlessness), dimenhydrinate (to treat nausea and/or vomiting), loperamide (to treat diarrhea), hyoscine (to treat stomach cramps), acetaminophen or nonsteroidal anti-inflammatory drugs (to treat aches and pain). An important part of patient counselling is to ensure that they should not stop using illicit drugs or opioid agonist treatments until a clinically stable dose is achieved.

3. Always check with the prescriber about missed dose protocols and subsequent dosing following a missed dose, if this information is missing. Maintenance buprenorphine/naloxone treatment allows five consecutive missed doses before the prescription is cancelled. However, this does not apply for microdosing. Some clinicians will repeat the missed day dose and others will encourage reassessment, if an individual has missed one day. Two or more consecutive missed doses generally necessitate a reassessment.
4. There are many variations to the Bernese method, depending on the prescriber and/or clinic. Common starting dose for induction is 0.5mg of buprenorphine, which will involve splitting the buprenorphine/naloxone 2mg/0.5mg tablet into quarters. Here are some examples of micro-induction regimens:
   - Day 1 0.25mg SL once daily, Day 2 0.25mg SL bid, Day 3 0.5mg SL bid, Day 4 1mg SL bid, Day 5 2mg SL bid, Day 6 4mg SL bid, Day 7 and 8 12mg SL once daily. Daily witness morning dose and carry evening dose
   - Day 1 and 2 0.5mg SL once daily, Day 3 1mg SL once daily, Day 4 1.5mg SL once daily, Day 5 2mg SL once daily, Day 6 2.5mg SL once daily, Day 7 3mg SL once daily, Day 8 4mg SL once daily, Day 9 5mg SL once daily, Day 10 6 mg SL once daily
   - Day 1 0.5mg SL bid, Day 2 1mg SL bid, Day 3 2mg SL bid, Day 4 3mg SL bid, Day 5, 4mg SL bid, Day 6 12mg SL once daily, Day 7 16mg SL once daily

   It is best practice to keep any partial tablets patient-specific for the next dose, as splitting the tablets will result in uneven doses. Certain brands of buprenorphine/naloxone will split better compared to others due to varying tablet porosity.
5. Document wastage. Buprenorphine/naloxone is a narcotic, hence, it is a standard of practice to maintain accurate inventory at all times. Any partial tablets lost during dispensing must be reported to Health Canada Office of Controlled Substances within 10 days of discovery.
6. As this method is currently under development, pharmacists play an important role in collaborating with clinicians to evaluate patient response and success rates. We encourage pharmacists to share treatment outcomes with the prescriber for quality control and data collection purposes. T

DISCLAIMER: The information and views set out in this article are those of the authors and do not necessarily reflect the official opinion of the Lower Mainland Pharmacy Services or BC Centre on Substance Use.

References available at bcpharmacy.ca.



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MEDICINAL AND RECREATIONAL CANNABIS

Pharmacy's role in counselling patients

With the legalization of recreational cannabis in Canada on Oct. 17, 2018, pharmacist Shelina Rayani explores how pharmacists can counsel patients about the various forms of cannabis.

BY SHELINA RAYANI RPH, CSPI, BC DRUG AND POISON INFORMATION CENTRE
REVIEWED BY C. LAIRD BIRMINGHAM, MD, MHSC, FRCPC AND HANIF RAYANI, RPH

Following the legalization of recreational cannabis on Oct. 17, pharmacists will play an active role in counselling patients on appropriate use, drug interactions, management of side effects, potential addictive behaviours and contraindications. This article provides an overview of medicinal versus recreational cannabis, drug interactions and factors to consider when evaluating patients.

Marijuana is the common name for cannabis. Marijuana is derived from the flowering buds of various female cannabis species. Over one hundred unique compounds known as phytocannabinoids have been isolated from cannabis. Two of these compounds have been most studied. These are Delta-9-tetrahydrocannabinol (THC) and Cannabidiol (CBD).

THC may have some beneficial effects as an analgesic, antiemetic, appetite stimulant and muscle relaxant, but it is also responsible for the euphoria as well as most of the adverse effects associated with cannabis. CBD has antipsychotic, anxiolytic, antiepileptic and anti-inflammatory effects. The ratio of THC to CBD in each strain of cannabis is responsible for its therapeutic and adverse effects. Cannabis strains used recreationally for a euphoric effect contain higher levels of THC, whereas, medicinal cannabis strains have a higher CBD to THC ratio.

There are three major species of the cannabis plant, as well as hybrids of these and other species. These are Cannabis sativa (highest THC level), Cannabis indica (greater CBD than THC) and Cannabis ruderalis (least psychogenic). Table 1 compares medicinal and recreational cannabis. Non-cannabinoid compounds found within the plant (e.g. flavonoids, terpenoids) may enhance the therapeutic effects and/or reduce the adverse effects of phytocannabinoids; this is known as the entourage effect.

Another variant of Cannabis sativa is Hemp. Hemp is a cultivated variety of cannabis with negligible amounts of THC (less than 0.3%) and higher levels of CBD. It has no euphoric properties. Fibre from hemp stalks can be used in making paper, textiles, rope or twine, and construction materials. Grain from hemp can be used in food products, cosmetics, plastics and fuel.

TABLE 1 Comparative Of Medicinal & Recreational Cannabis

	MEDICINAL CANNABIS	RECREATIONAL CANNABIS
POSSESSION LIMITS	› The lesser of a 30-day supply or 150 grams of dried marijuana or equivalent amount if in another form. › Formulas are available to determine how many plants can be grown based on the daily quantity of dried marijuana authorized in the registered person's medical document.	› Up to 30 grams of dried legal cannabis or equivalent in non-dried form in public › Up to 4 cannabis plants per household (not per person) for personal use, from licensed seeds or seedlings › Share up to 30 grams of dried cannabis or equivalent with other adults
INDICATION	› Spasticity from multiple sclerosis › Neuropathic pain › Chronic pain (3rd line agent) › Specific pediatric seizure disorders › Antiemetic post chemotherapy	› Recreational use › 19 years and older (in B.C.)
CANNABINOID RATIO	CBD > THC (less psychoactive)	THC > CBD (more psychoactive)
TYPES	› Phytocannabinoids (No Drug Identification Number (DIN) or Natural Product Number (NPN)) › Synthetic cannabinoids (DIN, Requires prescription): › Nabilone (THC analogue, oral) › Sativex (THC & CBD, buccal)	› Phytocannabinoids (No DIN/NPN) › Illicit synthetic cannabinoids
DOSAGE FORMS	Dried cannabis, extracts in oil, tinctures, concentrates, edibles, beverages, capsules	
ROUTE	Inhalation (smoking, vaporized), oral, buccal/sublingual, topical, rectal	
AVAILABILITY	**LEGAL** › Require medical document from MD or Nurse practitioner › Order from Licensed Producer (LP) on Health Canada website; OR › Register self or designate with Health Canada to grow own (supplies acquired from LP); OR › Cannabis storefront dispensary IF licensed by Health Canada (currently majority are not) **ILLEGAL** › Illicit source › Grow own (without registration	**LEGAL** › Licensed Producers (LP) › No paperwork required › In B.C.: Online via BC Liquor Distribution Branch and one government-owned storefront in Kamloops open on Oct. 17, 2018 (others to follow) › Limited amounts of fresh or dried cannabis, seeds and oils available › Edibles, beverages, topical creams, suppositories, concentrates and vape juice are not yet legal **ILLEGAL** › Illicit source › Grow own
PROS/CONS	› Legal products are standardized for THC/CBD content, monitored, free of pesticides/mold/contaminants › Legal products will probably have a higher cost › Recreational cannabis easier to obtain › Risk of drug diversion › Risk of dependence and addiction › Safety concerns	

PHARMACOKINETICS*	**ROUTE**	**BIOAVAILABILITY**	**ONSET**	**PEAK**	**DURATION**
	Inhalation	15% to 50%	5 to 10min	10 to 20min	2 to 4h (Up to 24h)
	Oral	6% to 20%	30 to 60min (Up to 1 to 3h)	2 to 4h (Up to >6h)	Adults: 4 to 6h (Up to 24h) Children: 6 to 12h (Up to 36h)

* Inhaled bioavailability varies based on the number, depth, duration and frequency of inhalations, as well as the amount of time substance is held in the lung, and If vaporized, the temperature of the vaporizer. Oral bioavailability is reduced due to extensive first pass metabolism. Food may alter bioavailability.

Pharmacists evaluating patients should consider the following

- Indication i.e. medicinal versus recreational
- Cannabis strain and THC/CBD ratio
- Route of administration and dosage form
- Dosing (start low and go slow when titrating)
- Adverse effects (depending on route, ratio and dose)

ACUTE USAGE Euphoria, hallucinations, mydriasis, conjunctivitis, sedation, increased appetite, dry mouth, cognitive and motor impairment, agitation, tachycardia, dizziness, postural hypotension, ataxia, anxiety**, nausea and vomiting**

CHRONIC/HEAVY Impaired brain development in youth (possibly until mid 20s), potential decline in IQ, increased risk/worsens anxiety, depression, paranoid ideation, precipitation of psychosis in susceptible patients, increased risk of schizophrenia as an adult

OTHER Cannabinoid Hyperemesis Syndrome (CHS), respiratory effects (chronic bronchitis, pneumonia), lung cancer and emphysema reported in heavy smokers***, cardiovascular effects (Myocardial Infarction, Stroke)

** Paradoxical effect

*** Many smoke tobacco concurrently. The College of Family Physicians of Canada recommends vaporization or oral ingestion rather than smoking cannabis.

- Drug interactions (See Table 2)
- Labeling e.g. label edibles (gummies, brownies, cookies) for safety. Pediatric ingestion can cause significant CNS depression, hypotonia and coma.
- Storage as per manufacturer insert. Keep out of reach of children.
- Contraindications: Pregnancy, breastfeeding, known sensitivity to cannabis.
- Avoid use in those under age 25, history of psychosis, cardiovascular disease, and/or respiratory disease.
- Tolerance with heavy or frequent use.
- Dependence i.e. withdrawal symptoms from abrupt cessation in chronic users may include anxiety, irritability, craving, dysphoria and insomnia. The dependence risk for cannabis users is 9%, and higher for those that begin use during adolescence.
- Addiction (Cannabis Use Disorder) is the continued use of cannabis despite harm or risky behaviour, cravings and/or impaired control over cannabis use. Especially common in those who start use as adolescents. T

DISCLAIMER: This article is not a legal document and is not a comprehensive review of cannabis. It is recommended to access other available resources for more information. In addition, for the legal indications and limitations of cannabis use, pharmacists must refer to the most current and appropriate local, provincial and federal laws and guidelines.

References available at bcpharmacy.ca.

TABLE 2 Cannabis Drug Interactions
THC and CBD are metabolized by CYP1A2, 2C9, 2D6, 2C19 and 3A4

INTERACTING DRUG	EFFECT	MANAGEMENT
CYP 2C9, 2C19, 3A4 INHIBITORS a	Increase cannabinoid concentration	Monitor for increased clinical and adverse effects of cannabis
CYP 2C9, 2C19, 3A4 INDUCERS a	Reduced cannabinoid concentration	Monitor for reduced clinical effect of cannabis
CYP1A2 SUBSTRATES a	› Cannabis is a CYP1A2 inhibitor › **SMOKING** cannabis can induce CYP1A2	Monitor therapy for enhanced or reduced clinical effect of CYP1A2 substrates
Anticholinergic drugs (e.g. TCAs, sedating antihistamines)	Additive hypertension and/or tachycardia	Monitor therapy
Antipsychotics (e.g. Chlorpromazine/Thioridazine)	Marked hypotension and disorientation	Monitor therapy
Cisplatin	Case report of a fatal stroke	Avoid
CNS depressants (e.g. Alcohol, Barbiturates, Opioids, Benzodiazepines, Hypnotics)	Additive sedation and cognitive impairment	› Avoid › Cannabis is sometimes used with opioids for synergy
Disulfiram	May enhance adverse effect profile of cannabinoids	Monitor therapy
MAOI inhibitors	Possible serotonin syndrome	Caution/monitor therapy
Nicotine (transdermal)	Tachycardia (additive), stimulant effects	Monitor therapy
Stimulants (e.g. Amphetamines, Cocaine, MDMA)	› Additive hypertension, tachycardia, cardiotoxicity › Prolongation of stimulants' hyperthermia	Avoid
Highly protein bound drugs (e.g. Warfarin)	Potential to displace drugs that are protein bound	Monitor therapy

[a] Refer to https://drug-interactions.medicine.iu.edu/Main-Table.aspx for full list of inhibitors and inducers

As one of the most accessible members of health care, pharmacists have become a go-to source for immunization. Pharmacy managers are responsible for immunization services at their pharmacies.

BEST PRACTICES FOR COMMUNITY PHARMACY MANAGERS

5 Helpful Tips on Immunization Management

BY JERRY MEJIA

The BC Pharmacy Association, in partnership with the College of Pharmacists of BC, has developed a new training program for community pharmacy managers to ensure regulatory compliance, encourage best practices and offer overall guidance and support. BCPhA pharmacy practice support specialist Jerry Mejia shares some useful tips on immunization management for community pharmacy managers. Read the full series at t.bcpha.ca/pmtraining.

As perhaps the most accessible member of B.C.'s health-care team, community pharmacists are well positioned to play an important role in vaccine provision in the province. Having administered more than 660,000 flu shots during the last flu season, pharmacists have become a go-to source for immunization. Let's take a look at how community pharmacy managers can help manage immunization services at their pharmacies.

1 Review staff roles and responsibilities

With flu season in full swing, it's important to review with your staff their responsibilities around vaccine administration. This can include giving an overview of the pharmacy's immunization procedures from patient intake and assessment to the actual injection of the vaccine and how each staff member can support every step. Other topics could involve supplies ordering and preparation, public and private vaccine procurement process and hours of available immunizers. As a reminder, although pharmacy assistants and registered pharmacy technicians can aide in determining patient eligibility for certain immunization programs, pharmacists are ultimately responsible for assessing the appropriateness and safety of immunizations for each patient. Take this time to review pharmacy's staffing levels to determine if they are sufficient to meet the increased demand of the busy flu season, further establishing pharmacy's role as a key and safe community vaccine provider.

2 Cold chain management

This is the time of the year when pharmacies receive hundreds of vaccine doses, in addition to existing fridge inventory, which can potentially go to waste if cold chain protocol is not properly followed.

Your discussion with staff could include:

- the recommended temperature range (+2°C to +8°C)
- thermometer temperature monitoring
- implications of cold chain incidents that are irreversible and permanent (e.g. freezing can reduce vaccine potency and heat and light can affect the stability of live-virus vaccines)
- how to manage cold chain incidents (e.g. back-up plans for power outages)*

The College of Pharmacists of BC's Professional Practice Policy-68 (PPP-68) *Cold Chain Management of Biologicals* provides guidance and directs pharmacy managers to BC Centre for Disease Control's (BCCDC) *Communicable Disease Control Manual, Immunization, Appendix E – Management of Biologicals* for specific requirements. Please take the time to review these documents and ensure your pharmacy manuals are up-to-date.

3 Resources and education materials

Pharmacy Operations and Drug Scheduling Act (PODSA) bylaws require that materials regarding new information are readily available and up-to-date for all staff members. Specific to immunization, many government agencies and health authorities have developed resources designed to help vaccine providers in their respective practices. However, it is important to note that BCCDC's immunization manual remains the ultimate guide for publicly funded vaccine programs in the province. The National Advisory Committee on Immunization (NACI), on the other hand, publishes recommendations on the intended use of both publicly funded and private-pay vaccines currently available in Canada. These two resources are updated periodically and users can subscribe to mailing lists for email notifications of any revisions. Encourage staff members to review these resources at least annually and use the information to increase patients' awareness and uptake of available vaccines, both public and private.

BCPhA has created and maintains a list of immunization-related resources and learning materials on its website at bcpharmacy.ca. Pharmacy managers in particular may find the Flu Resource page useful, which contains up-to-date and season-specific influenza information including health authorities' implementation plans, vaccine products and relevant forms.

4 Inventory management and billing

Since 2009, pharmacists authorized to administer injections have had access to publicly funded vaccines. These can be either routinely ordered or requested on a case-by-case basis from public health units for eligible B.C. residents. Ordering procedures vary between health authorities so ensure that your pharmacy notes appropriate quantities and uses the correct order forms if applicable (usually found on their respective websites). To prevent wastage and ensure equity amongst other vaccine providers, BCCDC generally recommends that orders should be limited to quantities that can be reasonably used within one month. For vaccines with limited and allocated supply such as influenza vaccines, this guideline could be even less.

As a reminder, pharmacists can only provide publicly funded vaccines and claim clinical service fees for their administration using PINs to eligible patients who meet the criteria described in Part 4 of the BCCDC immunization manual. All other individuals must be immunized using the private supply and billed accordingly.

5 Documentation and reporting

As pharmacists become increasingly established community vaccine providers, our role in helping maintain accurate and current immunization history for our patients also becomes more pronounced. It is crucial that we notify patients' primary physicians as well as relevant health units, after obtaining consent, whenever we administer any vaccines apart from influenza. Doing so removes the guess work in establishing a patient's immunization history and potential missed opportunities or duplicate vaccinations. Patients should also be provided with a record of their immunization either using the traditional fillable cards or on newer electronic platforms such as CANImmunize.

Adverse reactions stemming from vaccines must also be reported using the Adverse Events following Immunization (AEFI) document. Developed by British Columbia Immunization Committee's Vaccine Safety Working Group, this form is designed to track unwanted effects after a vaccine that cannot be attributed to other etiologies. Part 5 of the BCCDC immunization manual provides further details on the reporting criteria for these events and their management and implications for other vaccinations. The reporting process is summarized in a pharmacist-specific flowchart and is available for download on PharmaCare's website.

**For full details, consult BCCDC Communicable Disease Control Manual, Immunization, Appendix E – Management of Biologicals.* T

Pharmacists should take note of the annual quantity limits allowed for blood glucose strips under various public and private payer plans.

Ask the Experts

Q What are the annual quantity limits for blood glucose test strips when processing through various public/private payer plans?

A

PharmaCare

PharmaCare introduced annual quantity limits for blood glucose test strips (BGTS) back in 2015. These limits are based on the type of diabetes-related medications a patient is taking in the previous 180 days and the patient is assigned to one of four categories:

1. Managing diabetes with insulin: Annual quantity limit of 3,000 test strips
2. Managing diabetes with anti-diabetes medications with a higher risk of causing hypoglycemia: Annual quantity limit of 400 test strips, including, but not limited to, insulin secretagogues (e.g. sulfonylureas, meglitinides)
3. Managing diabetes with anti-diabetes medications with a lower risk of causing hypoglycemia: Annual quantity limit of 200 test strips, including, but not limited to, alpha-glucosidase inhibitors (e.g. acarbose), biguanides (e.g. metformin), dipeptidyl peptidase-4 inhibitors (DPP4I), incretin mimetics/glucagon-like peptide (GLP-1) agonists, sodium-glucose cotransporter 2 (SGLT2) inhibitors (e.g. canagliflozin), thiazolidinediones (TZDs).
4. Managing diabetes through diet/lifestyle: Annual quantity limit of 200 test strips.

For patients in categories 2, 3 and 4, physicians may request an additional 100 test strips above the annual limit through the Special Authority process.

It should be noted that:

- These limits apply to all BGTS purchased, regardless of coverage.
- There are two different PINs for each eligible brand of test strip to choose from when processing claims for BGTS; one used for patients who have not exceeded their annual limit, and another for patients with Special Authority coverage for additional test strips.

Most blood glucose testing strips are benefit items under Plans I, C, F and W, reimbursed at their actual acquisition cost up to the PharmaCare maximum price for the product, plus a dispensing fee. To qualify for coverage, all patients (except those covered under Plan W) must first complete blood glucose monitoring training at an accredited Diabetes Education Centre. For more information, please see section 5.16 of the PharmaCare Policy Manual or contact the help desk at (604) 682-7120 or toll-free at 1 (800) 554-0225.

NIHB
(Only for patients not covered under Plan W)

BGTS listed in section 36:26.00 of the PharmaCare Policy Manual are limited use benefits and do not require prior approval. Similar to PharmaCare, the number of test strips covered will depend on the patient's category. Patients are again assigned to one of four categories, with a slight difference in category 1:

1. Managing diabetes with insulin: Quantity limit of 500 test strips per 100 days.
2. Managing diabetes with diabetes medication with a higher risk of causing hypoglycemia: Annual quantity limit of 400 test strips.
3. Managing diabetes with diabetes medication with a lower risk of causing hypoglycemia: Annual quantity limit of 200 test strips.
4. Managing diabetes through diet/lifestyle: Annual quantity limit of 200 test strips.

Claims for BGTS must be submitted with a valid PIN from NIHB Drug Benefit List (note that these PINs are different than those used by PharmaCare).

Pacific Blue Cross

Unlike PharmaCare, the limit for BGTS through Pacific Blue Cross is 3,000 strips per claimant per year (maximum 100 days' supply for each claim still applies), regardless of patient category or medication used for diabetes (insulin or oral glucose lowering medications). Claims for BGTS must be submitted with a valid PIN from the PharmaCare Diabetes Product Identification Numbers list, found on the PharmaCare website.

However, effective Jan. 1, 2019, Pacific Blue Cross will align with PharmaCare's quantity limit based on the same four categories found under the PharmaCare section of this article.

For more information, please see section 5.12 of the Pacific Blue Cross Pharmacy Reference Guide or the help line at (604) 419-2000 or toll-free at 1 (877) 722-2583.

TELUS Health

Previously, the TELUS Health Pharmacy Manual contained a section titled "Monthly Maximums" that indicated that the maximum quantity limit for BGTS was 600 strips per 100 days. The manual has since been revised in April 2018 and this section has been removed. We've received confirmation from TELUS Health that the reason for removal was because system functionality is now in place to allow applicable messaging to appear as response messages visible on the adjudication screen indicating the allowable maximum. Claims for BGTS must be submitted with a valid PIN from TELUS Health's Diabetic Pseudo-DIN List. If any questions arise, pharmacies are advised to contact the provider support centre at 1 (800) 668-1608.

Green Shield Canada

Patients with Green Shield coverage for BGTS are assigned to one of two categories:

1. Non-insulin dependent diabetics: Annual quantity limit of 600 test strips.
2. Insulin-dependent diabetics: Annual quantity limit of 3,000 test strips.

Note that under Green Shield, the annual limit applies starting from the date of the first paid claim and not the calendar year. For questions or further clarification, please contact the Green Shield customer service centre at 1 (888) 711-1119.

Ask the Experts is a column written by BCPhA's Pharmacy Practice Support team. In it, they answer some of the most common questions from members. Got a question you want answered in print? Let us know at editor@bcpharmacy.ca.

KNOW YOUR NUMBERS

Managing your business through financial reviews

BY DEREK DESROSIERS, BSC(PHARM), RPH

Recently, I was having a conversation with a pharmacist business owner about financial aspects of the business, discussing various business environmental factors and how they may affect profitability. When I asked him how his own business was faring, given updates such as the pan-Canadian Pricing Alliance agreement, I was flabbergasted when he admitted it wasn't until his accountant reviewed his records at the end of each year whether he had made a profit.

Operating a business without regular ongoing monitoring of financial performance is akin to jumping off a cliff without knowing how far the drop and how the deep the water is, or even if there is any water there at all. While some pharmacies do seem to fall under the category of what I like to call "successful in spite of themselves" – profitable because of being in the right place at the right time – it's imperative that pharmacy business owners operate with sound fiscal management.

There is a lot of information available on how to read financial statements and other factors that your financial manager will want to monitor, but in an effort to keep things simple for the purposes of this article let's focus on three important documents: profit and loss (P&L) statement (also known as income statement), balance sheet, and cash flow statement.

The P&L statement is a snapshot in time that summarizes the revenues, costs, and expenses incurred during a specific time (usually a fiscal quarter or year). You use this document to learn from and inform the changes you want to make to your business, as you want your next statement to look better than the one you are currently reviewing. Compare your current P&L to a previous one: Look at sales figures, the gross margin and gross profit dollars. Analyze why any difference exists and if it is worse, what you can do to correct it. Maybe it comes down to marketing or other environmental factors like generic price decreases. Finally, compare your operating expenses. See where you have saved money or could save money and make necessary changes to improve the picture.

Like the P&L, the balance sheet is also a historical document, but it also provides additional information that gives a view of your business' sustainability. The first section of the balance sheet is the assets, which are divided into two sections – current and long-term. Current are the things that you anticipate will be changed into cash within the next year, such as inventory and receivables. Long-term assets are things like leasehold improvements, fixtures and computers. The next section is liabilities, which follows a similar definition of current and long-term. Things you anticipate paying in the next year are current liabilities (e.g. loan principal payments for the next 12 months) and other debts such as loan principal payments to be made after the next 12 months will be long-term. The final section of the balance sheet is shareholder equity, which includes the initial capital you put into the business when you purchased it and any retained earnings from previous years. The assets = liabilities + owner's equity. So, the larger the owner's equity, the stronger the business is likely to be, because the liabilities constitute a smaller percentage.

The cash flow statement may be the most important of the three documents we have discussed yet many businesses do not

utilize this important tool. It illustrates the future of the business and the ability of the business to meet its financial obligations over the next year. For example, foreseeing a cash flow shortage 10 months ahead allows you to make changes to things like operating expenses and inventory to avoid the potential shortfall. You create the cash flow statement by starting with a budget, which requires some estimation, so your cash flow statement is only as accurate as your ability to estimate things like sales.

The bottom line is that you really need to know, understand and use your numbers to manage your business well. Staying on top of them puts you in a better position to anticipate and meet your customers' needs while at the same time managing the welfare of the business. T

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BENCHMARKING YOUR BUSINESS

Wondering how you stack up against other pharmacies? There is a free benchmarking resource available online at retailowner.com. Find the pharmacies and drug stores category under the tab "Benchmarks." While this is a U.S. resource, the information and numbers are still relevant.

Calculate these values for your own business and see how you compare to the industry:

- Current ratio
- Gross margin return on investment (GMROI)
- Gross margin
- Earnings before interest, taxes, depreciation, amortization (EBITDA)
- Inventory turnover
- Debt to equity ratio

OAT A HISTORY OF OPIOID AGONIST TREATMENT IN B.C.

Over the past 60 years, B.C. specialists have been addressing the need for safe and effective treatment for drug addiction. Let's look back at some of the milestones achieved on the path towards the development of Opioid Agonist Treatment (OAT).

1959
Vancouver addictions treatment specialist Dr. Robert Halliday launches a methadone maintenance treatment experiment (MMT).

Late 1960s-70s
MMT programs launch across Canadian provinces, including B.C.

1996
The College of Physicians and Surgeons of BC takes over managing B.C.'s MMT program.

1964
Canada's first MMT program begins, run by the Addiction Research Foundation in Ontario, which eventually became part of the Centre for Addiction and Mental Health (CAMH).

1980
B.C.'s first needle exchange program began.

2001
PharmaCare introduces methadone witness ingestion fee for pharmacists.

2006
There are 482 OAT dispensing pharmacies in B.C.

2011
The College of Pharmacists of BC requires pharmacists and managers to undergo training before dispensing methadone.

2015
PharmaCare covers Suboxone® as a benefit.

June 2017
BCCSU releases new provincial guidelines that recommend prescribing Suboxone® as first line therapy for Opioid Use Disorder.

August 2017
Federal government makes decision that allows all physicians to be able to prescribe methadone.

2014
Commercially available Methadose® 10mg/ml introduced. Pharmacists required to use Methadose® rather than compounded methadone.

2017
PharmaCare expands coverage of OAT to include Kadian®.

December 2017
B.C. community pharmacies offer free Take Home Naloxone kits.

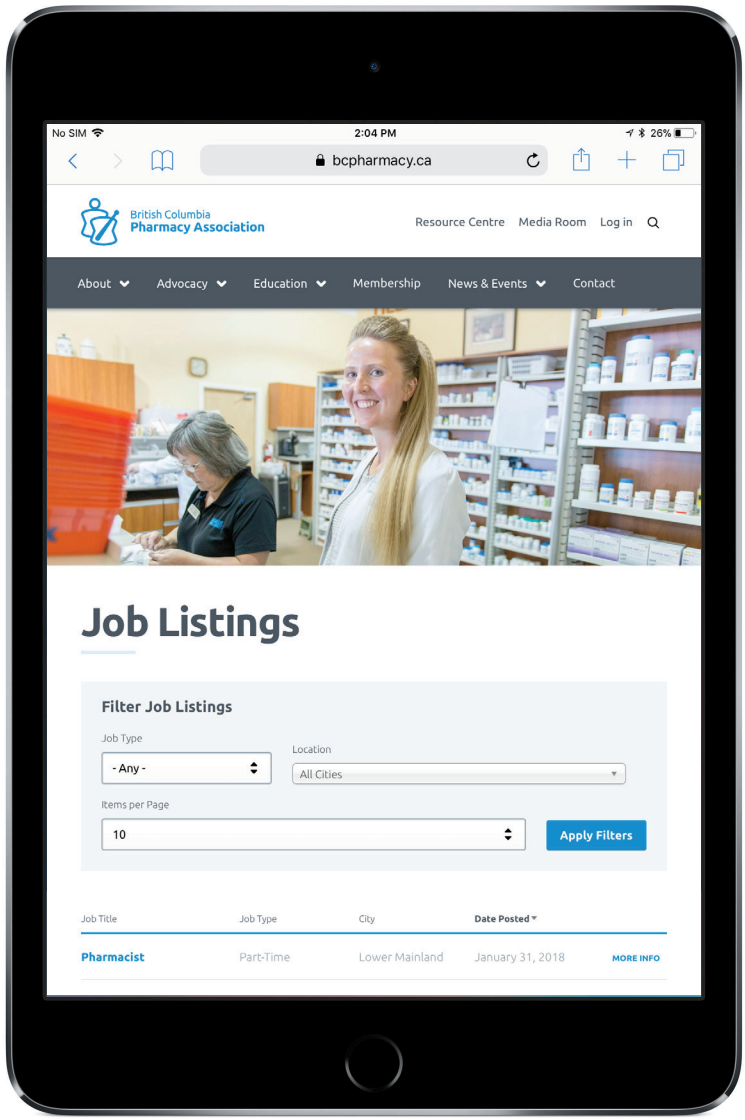
January 2018
CPBC's PPP-66 and Policy Guides for Suboxone® and Kadian® became effective.

2017
OAT expands to include injectable hydromorphone and diacetylmorphine based on the SALOME and NAOMI clinical trials at Vancouver's Crosstown Clinic.

March 2018
As of March 2018, there are 1,131 pharmacies dispensing OAT in B.C.

September 2018
CPBC's PPP-67 and Policy Guide for iOAT become effective.

December 2018
OAT CAMPP training for B.C. pharmacists launches.



The BC Pharmacy Association Job Board

British Columbia's Premier Job Board for pharmacists

For pharmacists:

- Over 50 jobs posted every month all across British Columbia.
- Opportunities all over British Columbia from Victoria to Vancouver to Creston.
- Opportunities from pharmacists to pharmacy managers.

For pharmacies:

- Postings are published on the website, with over 4000 views each month from pharmacists.
- Postings are advertised in the Practice Update.
- The postings are available to all pharmacist members and pharmacy technician insurance subscribers.

Visit www.bcpharmacy.ca/jobs to view or post jobs!

Not a member yet? Visit www.bcpharmacy.ca/membership to learn more.

BC PHARMACY ASSOCIATION

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British Columbia **Pharmacy Association**

Williams Lake Pharmacist Cathie Hamm, winner of the 2018 Patient Care Award, who served patients during the 2017 B.C. wildfires.