THE Tablet

SPRING 2019 | ADVOCATING FOR BRITISH COLUMBIA PHARMACY

Meet the New Doctors of Pharmacy

B.C.'s first Entry-to-Practice PharmD grads PAGE 16

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Pharmacy Association
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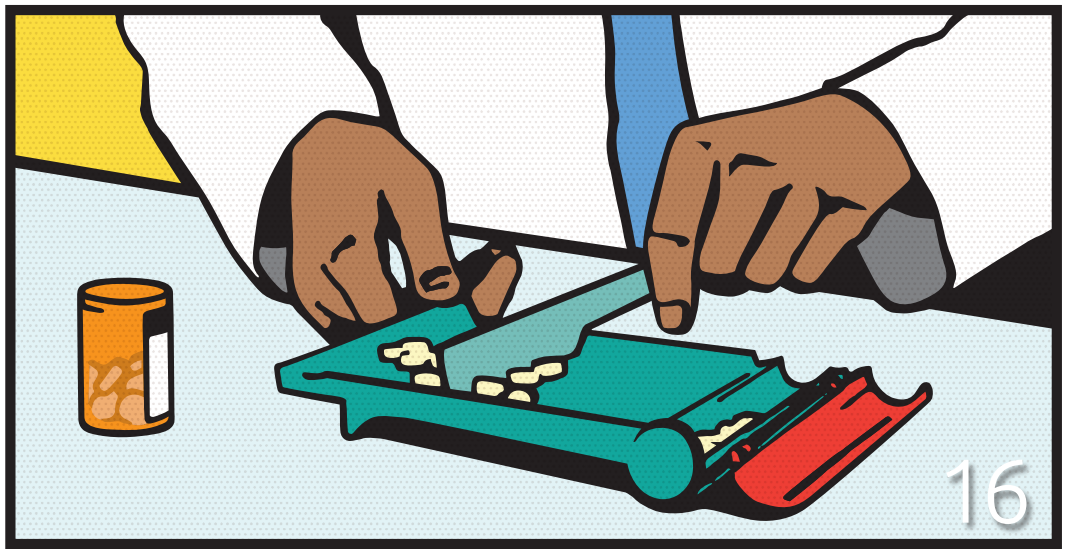

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ILLUSTRATION BY: ALLAN WIEBE

Check out all the latest news at **bcpharmacy.ca** | Got a story to share? Tell us at editor@bcpharmacy.ca

Chris Waller

We are patient advocates

As a pharmacist with 20 years of practice and, now as your Board president, I can speak from personal experience when I say that pharmacists bring so much more to the table than their ability to fill prescriptions. We are lifelong learners, problem solvers and business specialists. And, above all, we are patient advocates. The foundation for all that we do is a desire to improve patients' lives.

It was a privilege to meet with my fellow pharmacists from across the province at the BC Pharmacy Association's Annual Conference in May. It was an engaging and eye-opening examination on finding solutions for our patients. From headlining speaker and patient advocate Melissa Sheldrick, who shared of the need for medication error reporting in the wake of her son's untimely death, to discussions on the safe and fair distribution of medical cannabis and the role of therapeutic nutrition in managing Type II diabetes, among many other topics, the conference provided an excellent opportunity for the pharmacy community to challenge its own biases and assumptions in providing exceptional care to patients.

One such area affecting many pharmacists this year is OAT therapy. I had the great opportunity to complete the Association's new Opioid Agonist Treatment training course on Mar. 9, which was both informative, in terms of its content on therapeutics and pharmacology of current treatment options, and professionally enriching. There is great value in interacting with our fellow colleagues and discussing different case scenarios, learning from one another and raising the bar of professionalism with our patients.

As we look ahead to pharmacy's future in B.C., we must take a moment to pause and congratulate the first graduating class of the University of British Columbia's Entry-to-Practice PharmD program. As we welcome these graduates into our professional community, we look forward to benefiting from their depth of training, their clinical lens and their fresh enthusiasm. As pharmacy is widely accepted as the most accessible level of health care, especially in smaller and more rural communities, it's imperative pharmacies and pharmacists play a bigger part in meeting patients' needs. I believe the PharmD would be of immediate value to smaller communities, where new grads would have the greatest opportunity to enact the breadth of their clinical, hands-on training.

But, regardless of where you serve patients, remember you play an essential role in providing healthy outcomes for B.C. patients. Thank you for your professionalism, your expertise, your dedication and your compassion. T

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Geraldine Vance

PharmDs forging a new path

This spring marks the graduation of the first Entry-to-Practice PharmD students from the University of British Columbia (UBC). It really is the first step in charting a new frontier for the profession of community pharmacists. And like all explorers charting new frontiers, it is not possible to clearly know what lies ahead or where the destination will end. And that's okay. Because any good journey involves some surprises along the way.

There is no shortage of challenges facing community pharmacy these days. Economic pressures have never been greater and the drive to contain drug expenditures by payers means that pressure isn't going away anytime soon. But as is always the case, the way out of a problem rarely involves doing things the way they have always been done before. It is about creating new opportunities and raising the bar.

Certainly, the leadership of UBC's Faculty of Pharmaceutical Sciences is to be commended for its commitment to innovation and leadership in all the work it did to create the new program. It took passion and lots of hard work to develop a program that met the needs of the profession today and equips pharmacists to take on the opportunities of the future. The way health care is changing means all health professionals will need to be ready and willing to do things differently. Patients and government no longer want siloed health care and turf protection. They want health-care teams that genuinely collaborate and work in the best interest of patients.

Collaborative, patient-centred care seems so obvious. But it represents a fundamental shift in the way our health-care system operates. One need only look at how health-care budgets are struck: there is one budget for physician services, one for PharmaCare, one for health regions and hospitals, etc. It's not easy to cross budget lines to deliver comprehensive, team-based care.

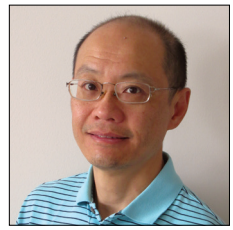
But changing the mindset and culture is the first step to revamping our fragmented health-care delivery system. Pharmacists from UBC's new program enter the profession with experience in interprofessional collaboration and with expertise that is crucial to this perspective shift. These first graduates are really the first explorers set to find a new path where pharmacists have opportunities to use the full range of their expertise and build strong partnerships with prescribers and their patients (read more in our cover story, "Shaping the future of pharmacy," on page 16).

Congratulations to all the new graduates. The BCPhA looks forward to supporting you as you find your way to new destinations. T

The Tablet asks our contributors:

"How can pharmacists further enhance collaborative care with other health-care professionals?"

Fawziah Lalji is a professor in the Faculty of Pharmaceutical Sciences at UBC. "I use LINK to help me work collaboratively with physicians and other health-care professionals. L: Learn about the community that you are practicing within; I: Identify and engage the key clinicians you will be working with; N: Negotiate and agree upon goals and objectives of the linkage; K: Know and provide value-added services that help the clinician and improve patient outcomes.



Raymond Li has been a pharmacist at the BC Drug and Poison Information Centre for the past 25 years. "Continue to provide high-quality information and advice, tailored to patients' (and health-care providers') needs. Knowing your patients well is important; access to laboratory results would help."

Dr. Christy Sutherland is the medical director for PHS Community Services Society, education physician lead for the BC Centre on Substance Use and a clinical assistant professor at UBC. "I feel so lucky to have amazing pharmacy colleagues. I love calling them up to ask things like, 'Can you check interactions on this for me?' or 'Is there a version of this that is covered?' I appreciate them in my day-to-day clinical practice as well as in their overarching work as patient advocates."

Member News

Seven pharmacists, one family physician and two pharmacy students were named winners of the 2019 BC Pharmacy Excellence Awards. Award winners include: **Zahir Jiwa** (Murray Dykeman Mentorship), **Mona Kwong** (Pharmacy Leadership) **Dr. Alan Low** (Ben Gant Innovative Practice), **Sukh Sidhu** (Collaborative Care), **Andrea Silver** (Patient Care), **Irvin Tang** (Pfizer Consumer Healthcare Bowl of Hygeia), **Dr. Andre van Wyk** (Friend of Pharmacy), **Felicia Yang** (New Practitioner) and **Amy Kwan** and **Riaaz Lalani** (Apotex Inc. Future British Columbia Pharmacy Leader). Award winners were honoured at the 2019 BC Pharmacy Association Annual Conference. Hosted in Vancouver for the first time in more than a decade, the conference had a record number of 343 guests in attendance.

BC Pharmacy Association member and community pharmacist **Barbara Schultz** passed away from cancer on Mar. 10, 2019, at the age of 56. Graduating from UBC in 1987 with a pharmacy degree, Schultz practiced pharmacy in Halifax for nine years, before relocating to Victoria in 1999. She and husband Michael Schultz had four sons together.

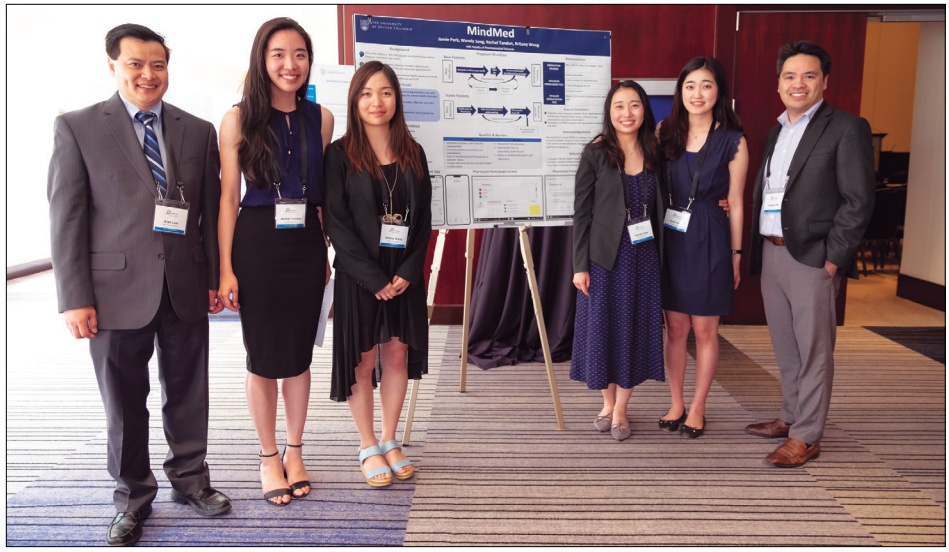


PHOTO: VINCENT CHAN

Members of the winning student competition group, MindMed, stand in front of their poster presentation at the 2019 BCPhA conference. From left to right: Competition facilitator Dr. Alan Low, students Rachel Tandun, Britany Wong, Wendy Song, and Jamie Park, and mentor Douglas Ma.

MindMed named winning group in 5th annual student sponsorship competition

Four University of British Columbia pharmacy students were named the winners of the 5th annual BC Pharmacy Association Student Sponsorship Competition, selected by delegates at the Association's Annual Conference on May 11, 2019.

Wendy Song, **Jamie Park**, **Britany Wong** and **Rachel Tandun** of the group, MindMed, received first prize in the annual student competition where pharmacy students are tasked to imagine themselves as consultants to a community pharmacy and develop a unique clinical service offering to distinguish themselves from others, benefit their patients, and help advance the profession.

The winning group's vision was enhanced pharmaceutical care for mental health patients through the use of an app-based platform called MindMed. The app is designed to bridge the gap of primary care in B.C., allowing patients greater access to health-care and pharmacists a greater role in monitoring depression and anxiety.

The student competition began on Feb. 6, 2019, when seven teams presented their innovative ideas to a panel of judges and their peers at UBC's Faculty of Pharmaceutical Sciences building, hosted by pharmacist and clinical associate professor Dr. Alan Low. Teams were judged based on their presentation quality, creativity, feasibility of their ideas and if their idea met patient needs and supports the profession.

In total, five out of seven teams were selected to be sponsored by the BCPhA to attend the Association's conference (including full conference registration and shared accommodation), and participate in the competition's final round of presentations to conference delegates. Selected teams included first round winners Women's Pharmacist Clinic (Michelle Ebtia, Doris Stratoberdha, Jenah Alibhai, Tina Shafiee), Mastermind (Joo Hwan Oh, Bryan Ng, Ryan Tse, Solomon Chow), Inclusivity Rx (Manrose Mann, Amanjot Saini, Deepi Mann, Manvir Mehanger), Community Allergy Testing (Randeep Dhillon, Tejeshwar Dhadial, Jonah Khanna, Manrubby Dhillon) and final round winners, MindMed.

After the first round of presentations, all five teams were matched with a mentor from the competition's judging panel, which included Justin Dovale, Douglas Ma, David Masaro, Kamran Salehi, and John Shaske. The mentors helped students fine-tune their ideas and transpose their presentation into a poster for the second part of the competition, held at the BCPhA conference. T

PHOTO: TIFFANY COOPER

Patient care for vulnerable populations

Initially torn between engineering and pharmacy when applying to university, **Omar Saad's** fascination with the science behind medicine — how it works in our bodies and how each person responds to medication in their own unique way — tipped the scales in pharmacy's favour. Omar has since graduated with a Bachelor's degree in Pharmacy and went on to pursue a Master's degree in BioMedical Technology, and has practiced in various settings in Ontario, Alberta and B.C.

Homing in on his passion for specialized patient care, he soon left the frontline pharmacy to provide strategic management for specialty pharmacy services. Now the Senior National Director of Specialty Pharmacy with Remedy Holdings Inc., based in Vancouver, Saad is responsible for managing the pharmacy chain's specialty pharmacy portfolio across three provinces — B.C., Alberta, and Ontario— and also volunteers as a Board member with AIDS Vancouver.

Why did you pursue a master's degree in biomedical technology?

When I graduated, biomedical technology and genetics were just taking off. At that time, I felt I had a solid background on traditional medication — pills and creams. I wanted to stay up-to-date with what I thought at the time, would be the near future of therapeutics. I was captivated by gene therapy, and how you can add a gene to a virus, insert into cells, and potentially cure the medical condition at hand. I am confident gene therapy and biomedical technology will be the future — we are already seeing the value of genetic screenings and this is just the beginning.

What does you role as Senior National Director at Remedy'sRx Specialty Pharmacy entail?

Remedy Holdings Inc. is an independently owned, multi-province pharmacy provider with three lines of business — community pharmacy, specialty pharmacy and HumanisRx. Remedy's Holdings Inc. Specialty Pharmacy is one of the top five largest specialty pharmacies in the country. I am responsible for the growth and sustainability of our specialty division through business development and managing our existing accounts. I am also responsible for the quality of services of our division, and bringing innovation in technology and clinical programming.

Why are medication management programs important for group care settings?

Some of our most vulnerable Canadians requiring assistance with their day-to-day activities reside in supportive living environments, such as long-term care, assisted living communities, transitional care units and rehabilitation homes, group homes and addiction treatment centres. These homes are staffed either by nurses or care aides or a combination of both. There are various legislative requirements that need to be met, in addition to best practices and accreditation standards and lots of medications being handled every day. Individuals in these living environments typically have complex medical conditions and complex medication therapies, which require a higher level of support and monitoring. This is where specialty pharmacy comes into the picture.

Our clinical pharmacists work within an interdisciplinary team model on optimizing each resident's medication to align with the resident's positive health care outcome objectives. But this is only one part of what a specialty pharmacy does. We have to build a medication management program, along with policies and procedures to ensure medication processes are not only compliant with legislative requirements but are also safe — reducing risk of medication-related incidents — and are efficient for staff. Every hour you can save through building an efficient system is an

PHOTO: TIFFANY COOPER

Omar Saad speaks with a resident of the Langley Seniors Village, an assisted living facility where he oversees pharmaceutical care, as the Senior National Director at Remedy Holdings Inc. Specialty Pharmacy.

hour dedicated back to direct client care. We can achieve this through the introduction of technology and innovation. From there, we develop educational programs on medication management in addition to therapeutic topics to support staff care for their residents and clients, and partner with homes on broader clinical initiatives, such as falls prevention programs or antipsychotic reduction initiatives that would benefit the residents of the home.

You also volunteer as Vice Chair at AIDS Vancouver. How do you champion the role of pharmacy within this position?

AIDS Vancouver is an organization dedicated to providing supportive services to HIV-positive and AIDS patients in addition to supporting individuals who might be at a higher risk of contracting HIV. We have a number of case managers interacting with our clients on a daily basis, and a big part of that interaction is to provide them with support on maintaining the integrity of their medication supply chain. Members on the Board of Directors provide guidance and act as a sounding board for the leadership teams of non-profit organizations. The diverse background of the Board is of critical success to continuing to innovate in the services provided to the clients benefiting from the organization.

You are passionate about serving Canada's vulnerable populations. What can you share with pharmacists who are caring for HIV patients or individuals at high risk of contracting HIV?

The first step is education, on multiple topics such as HIV and medications, resources available, harm reduction and ending stigma. Pharmacists are the most accessible health-care professionals and there is a need to be able to identify individuals at high risk of contracting HIV and guide them to available support services. There are plenty of educational resources and tools available for pharmacists, including modules of the Educate To Empower: Train the Trainer program. Developed by Dr. Tasha Riley, this is the only HIV/AIDS curriculum that has been approved as a resource for teachers in B.C. schools. Available for a nominal fee, anyone interested in obtaining these prevention education materials can contact Volunteer Resources Coordinator Anoop Gill at anoopg@aidsvancouver.org or 604-893-2201. T

Health Minister Adrian Dix spoke with delegates of the BC Pharmacy Association Annual Conference on May 10.

PHOTO: VINCENT CHAN

B.C. health minister tells pharmacists he wants "fewer health colleges"

BY MICHAEL MUI

British Columbia's Health Minister Adrian Dix suggests there could be sweeping changes coming to the way health care is regulated in the province. In his speech to pharmacists at the BC Pharmacy Association Annual Conference on May 10, Dix says there are too many health colleges in B.C.

"In British Columbia for example, we have ... about 23 colleges for our five million people," Dix told the crowd. "In the United Kingdom, there are nine. They have a few more people in the United Kingdom than in British Columbia."

Dix, who is promoting the concept of team-based care, says the problem with having the current number of colleges is that it's splitting up the health profession. Though the College of Pharmacists of British Columbia ranks among the larger health regulatory bodies in B.C., there are some who have too few members. These changes will be coming through amending the *Health Professions Act*, he says.

"One of those improvements has to be fewer health colleges, in my view," Dix says. "They need to be regulated together. We have health professional colleges with as few as 85 members, we have lots with hundreds of members, and that is insufficient to build an infrastructure in those colleges."

It's unclear whether, and how, pharmacists could be impacted, and Dix says the pharmacists' regulatory body is not among those colleges who have insufficient members.

What pharmacists want, however, is a larger role and recognition of their training as front-line health-care providers. In response to questions, Dix says he would "consider" allowing pharmacists in B.C. to prescribe for minor ailments, and that he is watching developments in Ontario, where that government announced in April that pharmacists will soon be able to provide on-site assessments and prescribe medications.

"It's not just a question of are you for or against, the question is how does it fit against other expenditures?" he says. "The short answer is: I am open to it, I haven't decided to do it, haven't decided not to do it, but we've got some work to do."

Dix says he has already invested $105 million to eliminate PharmaCare deductibles for lower-income patients. He says he is also spending $23 million over the next three years to add 50 new pharmacists as members of primary-care network teams across the province. T

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FNHA enters new partnership with Pacific Blue Cross

Improved health benefits program for First Nations people in B.C.

CEOs Joe Gallager (front left, First Nations Health Authority) and John Crawford (front right, Pacific Blue Cross) sign a five-year services agreement and commitment to cultural humility and safety.

PHOTO: FIRST NATIONS HEALTH AUTHORITY

The First Nations Health Authority (FNHA) recently announced that it has partnered with Pacific Blue Cross to administer a suite of health benefits to First Nations residents of B.C.

Starting in September 2019, Pacific Blue Cross will administer benefits on behalf of the FNHA for dental, vision, medical supplies and equipment as well as drugs not covered by PharmaCare. Currently, approximately 144,000 First Nations people in B.C. receive these benefits primarily through Non-Insured Health Benefits (NIHB) — a national program that provides coverage to registered First Nations for a specified range of medically necessary items and services that are not covered by other plans and programs

"This migration off the Health Canada system is another step forward in self-governance over health services in British Columbia," says Joe Gallagher, Chief Executive Officer (CEO) of the FNHA. "It offers us an opportunity to review and re-design the delivery of non-insured health benefits to improve coverage and make the system more efficient and effective — for clients and health-care providers alike."

Pacific Blue Cross was selected in a proposal process overseen by a multidisciplinary selection committee that included Allan Louis of the First Nations Health Council and Vanessa Charlong of the First Nations Health Directors Association.

Gallagher says partnering with Pacific Blue Cross will allow the FNHA to draw on the experience of a health benefits provider that has a successful track record of working with both health-care providers and clients.

"We are confident Pacific Blue Cross will be an excellent partner. It has a comprehensive and effective health claims infrastructure and it has demonstrated a collaborative approach as well as a strong commitment to Cultural Safety and Humility."

John Crawford, the President and CEO of Pacific Blue Cross, says his organization is excited to be part of an interconnected system evolving to support the health and wellness needs of First Nations people across the province.

At a signing ceremony held on Apr. 16, 2019, at the Vancouver Aboriginal Friendship Centre, both FNHA and Pacific Blue Cross CEOs signed a Declaration of Commitment to Cultural Safety and Humility safety and a five-year services agreement.

The first phase of the benefits transition from Health Canada to the FNHA took place in October 2017 with the transfer of non-insured pharmacy benefits to PharmaCare Plan Wellness. The second phase is expected to take place in mid-September. Already, the FNHA and Pacific Blue Cross have been carrying out a comprehensive consultation effort with health regulators, individual health-care providers, clients and other individuals and organizations involved with the delivery of First Nations health care.

Further updates will be communicated through health-care professional associations for changes to the First Nations Health Benefits program. If you have any questions, please contact provider@fnha.ca. T

Shoppers Drug Mart pharmacy manager Elaine Louie prepares to administer an immunization to patient Ria Gill.

PHOTO: VINCENT CHAN

Association gets green light for MMR vaccine wholesale distribution

BC Pharmacy Association urges government for more reliable access to publicly funded vaccines

BY ANGELA POON

When Vancouver pharmacist Elaine Louie heard about the city's measles outbreak at three local French-language schools in mid-February 2019, she jumped into action.

With one of the affected schools — École Anne-Hébert Elementary — just a few blocks away from her Shoppers Drug Mart in Vancouver's Killarney neighbourhood, she quickly stepped in to offer an immunization clinic for anyone at the school in need of a measles, mumps, rubella (MMR) vaccine.

As pharmacy manager of a small community pharmacy, Louie was accustomed to servicing a modest but consistent immunization clientele and expected a handful of people to attend her pop-up clinic on Saturday, Feb. 23, 2019. She was surprised, however, when at the clinic and in the days immediately following, she and her staff provided publicly funded MMR vaccines to more than two dozen patients — 20 per cent of whom were children — before running out of stock only a week later.

She learned later the school's principal, Johanne Asselin, had publicized the MMR clinic to not only the school's roster of parents but also the members of a local French club that meets on school grounds. Patients both young and old responded to the invitation, citing different reasons for their visit. Some were new to Canada and unsure of their health records and others could not produce documentation to verify their immunization status, choosing to err on the side of caution.

TABLE 1 Total number of doses given to B.C. children and youth 5-19 by pharmacists*

Date	2018	2019
January 1 - March 31	22	636
April 1 - 30	8	215

The turnout confirmed a fact she already knew well. "Pharmacists are more accessible to the public," says Louie, adding her flexible hours, weekend availability and drop-in opportunities allowed members of the public to update their vaccination status in an easy and approachable way.

As the threat of measles loomed over B.C. this winter and spring, pharmacists are playing a vital role in the B.C. government's newly launched measles immunization catch-up program, which launched in April and runs until June 2019. With the goal of immunizing as many school-age children as possible before the end of the school year, the province purchased a $3 million-supply of the MMR vaccine — the amount usually procured for a full year.

As health-care's most accessible avenue for patient care,

pharmacists are best poised to make an immediate impact in the success of this vital public health program. Children and adults can be immunized by pharmacists (children age five and up), as well as by their family physicians.

Pharmacists are up for the task. Following the measles outbreak in Vancouver in February, pharmacists administered more than 1,000 MMR shots to British Columbians of all ages. In April 2019, as part of the province's catch-up program, pharmacists administered 215 doses of measles-containing vaccine to children and youth aged 5-19, compared to just eight doses during the same time period in 2018 (see Table 1).

However, while pharmacists have become widely recognized as a go-to source for flu immunizations — administering more than 700,000 flu shots last year alone — pharmacists' ability to reliably source publicly funded vaccines from local public health units has been impacted by low supply and complex distribution channels.

At Shoppers Drug Mart, Louie unfortunately turned numerous patients seeking vaccinations away throughout March and April due to the unavailability of the MMR vaccine from her local public health unit.

That's why since late February, the BC Pharmacy Association has been working with the Ministry of Health, the BC Centre for Disease Control (BCCDC) and Canadian Association for Pharmacy Distribution Management (CAPDM) on wholesaler distribution of the publicly funded MMR vaccine to community pharmacies.

"We are in full support of the government's plan to increase rates of immunization through this catch-up program," says Geraldine Vance, CEO of the BC Pharmacy Association. "As the most accessible member of health care, we know pharmacists can help make this happen."

The Ministry of Health has been supportive of funding the direct distribution of MMR vaccines to pharmacies to help in alleviating issues of patient access and wait times for the vaccine. They have assured the Association that this will happen. While wholesaler distribution plans are put into place, the Association has remained in constant contact with the BCCDC on next steps, and continues to encourage pharmacists to place their orders for MMR vaccines through their local public health unit until further information is available. T

*Source: Measles Immunization Catch-up Program May 2019 Report

PHOTO: (BOTH PAGES) ANDY SHEN.

Connecting local politicians with pharmacists

BC Pharmacy Association program offers pharmacy tours to MLAs

BY MICHAEL MUI

Surrey-Cloverdale MLA Marvin Hunt (second from left) speaks to Fred and Christine Cheng and pharmacy staff of Cloverdale Pharmasave during his MLA Outreach Program tour.

One of the biggest challenges facing pharmacy has been the lack of understanding that government decision makers have about the value pharmacists provide by interacting with patients on the front-lines.

The problem, at least according to Ralph Sultan, the Member of the Legislative Assembly (MLA) for West Vancouver-Capilano, has to do with how many still don't understand what a pharmacist does for the patient because they hadn't previously thought about the profession.

Unfortunately, it's that lack of attention that is currently undermining the sector. But a growing number of politicians who have taken educational tours of local pharmacies are now taking a closer look through the Take Your MLA to Work program.

"I think many people regard the pharmacists as sort of a retail clerk, you go up there, you give a prescription, they give you a bottle of pills, you pay your money and that's the end of it," says Sultan, who recently participated in the BC Pharmacy Association program.

The program invites pharmacists in the community to take their local MLA to work for tours with the goal of showing these decision makers that pharmacists are key members the of health-care team as a whole. Over the past two months, MLAs have toured pharmacies in their local ridings all over the Lower Mainland, including pharmacies at the Marpole Safeway in Vancouver, the Park Royal London Drugs in West Vancouver, the Madison Centre Save-On-Foods in Burnaby, the Burquitlam Safeway in Coquitlam and the Cloverdale Pharmasave in Surrey.

"The population is becoming more sophisticated. They demand access, they demand competent advice," says Sultan. "Here we have an existing network that does provide certain types of treatment, certain types of advice. Unfortunately, they aren't used more extensively."

Another MLA who took part in a tour, Rick

Glumac, who represents Port Moody-Coquitlam, says he learned that pharmacists do a lot more than the average person knows.

"It is a lot more," he says. "My advice to people that go to the pharmacy is to take a moment to talk to your pharmacist, get to know them. They're health advocates, and you can learn a lot in talking with them."

For the most part, politicians are willing to listen, says Marvin Hunt, the MLA for Surrey-Cloverdale, but this is the first time they've heard from front-line pharmacists.

"One of the big things is that (pharmacists) need to help people like me, who don't normally have much of an interaction with them at all, but yet are in government ... to understand how frank and educated they are on the whole issue of drugs and the drugs involved," Hunt says.

"The reality is, that we as legislators, I'm just going to say this really bluntly, we're ignorant."

BC Pharmacy Association CEO Geraldine Vance says the program is a unique opportunity for pharmacists to make sure their voices are heard. The Association plans to continue its outreach to local politicians. Seven additional tours are already being planned, with the goal of eventually covering every provincial riding in B.C., and hopefully generating wider public and media exposure for pharmacists.

"This is an opportunity to take MLAs behind the scenes and see what happens behind the dispensary, to really make a difference in terms of developing their understanding of pharmacy," Vance says. "That, in turn, leads to government being better able to support pharmacists' practice."

Linda Tam, pharmacy manager at the Madison Centre Save-On-Foods, meanwhile, says she felt the visit from her MLA was very valuable. The MLA she spoke with asked many questions, she says, and promised that the information learned from the tour would be brought back to the legislature. Tam says she had an opportunity to educate the MLA on services in addition to dispensing that pharmacists provide, such as injection services, medication reviews and training patients on technology devices.

Burquitlam Safeway pharmacy manager Albert Wong (centre) speaks with Port Moody-Coquitlam MLA Rick Glumac (right) during a MLA Outreach Program tour.

"Each area of B.C. has its own challenges that pharmacies and pharmacists encounter, so hosting their MLA will provide an important opportunity to voice their concerns, discuss potential solutions, educate their MLA on the pharmacy profession and the cooperative relationship we have with other health-care professionals," Tam says.

Albert Wong, pharmacy manager at the Burquitlam Safeway, says he felt the MLA he met with was receptive and wanted to know more. He says other pharmacists should consider becoming involved in outreach efforts to showcase their work.

"It's a very good experience in terms of pushing our profession forwards. If we were to get more recognition at the government level, in terms of the funding they can provide pharmacists in general, I think these visits all help," Wong says.

Hoang Nguyen, pharmacy manager at the Marpole Safeway, says she told the MLA she met about how pharmacists in B.C. have a limited scope of practice compared to other provinces, such as being unable to prescribe for minor ailments.

"MLAs must see that pharmacists can play an important role in providing better health care for the people of B.C.," Nguyen says. "If we are permitted to expand our scope of practice, we could help to reduce wait times at doctor's offices and at emergency departments across B.C."

The Take Your MLA to Work Program is a component of the MLA Outreach Program. If you are interested in joining the MLA Outreach Program, please contact Angie Gaddy, Director, Communications, at angie.gaddy@bcpharmacy.ca. T

Shaping the future of pharmacy

As B.C.'s first graduating class of the University of British Columbia's Entry-to-Practice PharmD program enters pharmacy practice this spring, will reality live up to expectation?

BY ANGELA POON + ILLUSTRATIONS BY ALLAN WIEBE

While many pursue careers in health care with the wellbeing of patients in mind, Margaret Lu's primary motivation is more specific than that — happiness.

"It's really hard to have your maximum happiness when you're sick," says Lu.

She started out in research, earning an undergrad degree in immunology from McGill University, before a change of heart redirected her focus to pharmacy.

"I thought, 'Am I going to pipette forever?'" notes Lu. "Research is so far removed from what people get in the end. I realized I was more interested in face-to-face health care."

The Burnaby native left Montreal's frigid temperatures in favour of Vancouver's mild climate and, in September 2015, became one of the first students to enter the University of British Columbia's (UBC) newly launched Entry-to-Practice (E2P) PharmD program.

Four years later, on May 30, 2019, Lu and 192 of her classmates are making history, as the first pharmacy students in B.C. to graduate with the E2P PharmD distinction.

While the doctor of pharmacy designation has been recognized by many countries around the world — some for many decades and others within the last decade — Canada has only recently made the shift to the standardized title. Following international standards, in 2010, the Association of Faculties of Pharmacy of Canada and the Association of Deans of Canada committed faculties to replacing the baccalaureate pharmacy curriculum with the Doctor of Pharmacy program by 2020. The UBC Faculty of Pharmaceutical Sciences began planning for the program's transition shortly afterwards, officially launching the new program in September 2015.

Currently, seven Canadian universities in addition to UBC offer PharmD degrees, including the University of Alberta, University of Saskatchewan, University of Toronto, University of Waterloo, Université de Montréal, Université Laval and Memorial University of Newfoundland. The University of Manitoba will commence its PharmD program in September 2019 and Dalhousie University will begin in September 2020.

With a strong emphasis on clinical training, critical thinking and practical application of pharmacy knowledge, the PharmD program is designed to not only address pharmacy's increasing complexity but to enhance future opportunities for the profession, says Kerry Wilbur, Executive Director of UBC's E2P PharmD program.

> *"It's not the degree that's going to change practice. It's going to be the people that come out of the degree."*
>
> — Margaret Lu

"If I were to characterize some of the demands of a career in pharmacy, three I might choose include an increasingly diverse patient population (and workforce) in British Columbia, the need to keep up-to-date with best practices in patient treatment and new drug therapies and the pull of administrative responsibilities," notes Wilbur. "The campus-based PharmD curriculum is purposeful in terms of its delivery of information or concepts and then repeated opportunities for students to practice application of these knowledge and skills in various simulated situations."

Examples include adoption of cultural humility and safety programming, participation and leadership in interprofessional education and integration of evidence-based practice course series and tutorials, notes Wilbur.

The program's first cohort of students has been involved in providing feedback throughout the duration of the program, says Lu, including through in-class surveys, student representatives and faculty reviewers, who regularly learned alongside students to better anticipate students' future needs and questions within the degree's modular-based learning system.

"We were blasted by all of this information," says Lu, "but they've provided us with more alternative avenues of practice and alternative industries we could pursue, given our education. It's going to be our responsibility to make those opportunities happen."

Despite the increasingly stringent admission requirements, in which prospective students must complete two years of prerequisite studies totaling 60 credits — compared to the bachelor degree's prerequisite of 30 credits — and the mounting tuition fees — $430 per credit instead of $265 — Wilbur says the faculty's number of applications have remained relatively consistent over the past 10 years.

PharmD grads agree the higher tuition — which Wilbur notes is in line with universities across the country — is simply an unfortunate reality of the revised program.

"There is definitely a lot of financial stress," says Lu. "A lot of us took out loans and the wages will not necessarily be higher for us. But I think most college grads are stressed about their finances."

Fellow PharmD grad Joey Bhullar is using the higher costs as a further motivating factor to work as a floater in community

STUDENT VOICES

Four E2P PharmD grads on how the new role will help drive pharmacy forward.

Jenny Jiang "I am excited to see how my fellow classmates in the PharmD class of 2019 work to push for an expanded scope of practice for pharmacists. We have been a very vocal year when it comes to advocacy for the profession, and I believe we will be able to prove to patients and other prescribers that we are capable of being well-rounded clinicians. Like many of my peers, I have an enormous amount of passion for pharmacy and the communities that I serve. I'm looking forward to being an advocate for not only my profession, but all my patients' health."

Amber Mann "I am excited to be part of the first Entry-to-Practice PharmD graduate class of UBC! With that said, more and more universities across Canada have already, or are in the process of switching to this kind of program. I think this change is part of a changing role of pharmacists in our health-care system. Our program has equipped us to apply clinical skills despite our practice setting. Similar to the BSc program, most of my classmates (including myself) will work in community pharmacy. I feel we will be better prepared to take on an expanded scope, and provide evidence based care."

pharmacy while finishing school, paying off debts while also gaining real-life experience. "I know my first job is not going to be my last job."

For Stephanie Leung, another PharmD grad, she says while there are certain parts of the new program's curriculum that would entail a higher tuition, the additional practicum placements can be burdensome.

"I wish there were more support from the school when it comes to placements outside of the Lower Mainland. There can be additional financial stress."

The program does take students' preferred geographical rankings for practicum course into consideration, but it's a delicate balance, says Janice Yeung, the Director of the Office of Experiential Education at the Faculty of Pharmaceutical Sciences.

"Placements are a vital component of our students' learning experience and over 1,500 placements are facilitated by the faculty each year. While we can't guarantee student preferences due to the complexity of scheduling multiple practicum courses across all four program years, we take ranking information into careful consideration."

Trading the classroom for the workplace

With the introduction of a new standardized title and more advanced education in B.C. pharmacy, there have been questions on whether the current pharmacy model will meet the enhanced expectations of pharmacy's newest grads.

Rod Shafer had those same questions 15 years ago. The former CEO of the Washington State Pharmacy Association, Shafer witnessed Washington pharmacy's transition to the PharmD designation in the early 2000s.

"There was a little bit of angst about the fact that what the students were being taught — treatment decisions, more time with their patients, input on their care — was not the reality of what pharmacy practice was," he says. "In reality, it was still about filling prescriptions as fast as they can. I don't know if [the new title] made a huge significant difference in the practice of pharmacy at the time."

But regardless of the extra cost and time associated with enhanced education, pharmacists did enjoy the shift to the new title of doctor of pharmacy, Shafer says.

"You feel more competent and more equal with physicians," he says, adding that graduates today can use the designation as a mechanism to push the profession forward. "I think the profession now is going to have to deal with the expectation that these students have and the tension there will be when they begin working in actual practice."

Today's grads know it's not as simple as a title change.

"It's not the degree that's going to change practice," notes Lu. "It's going to be the people that come out of the degree. It's not like we're going to suddenly take over. There's the microcosm of my patient interactions and the macrocosm of how my and future classes' interactions play into the public's perception and politics, ultimately changing remuneration models. It's going to be a lot of working together to build new frameworks to find a way to thrive in the current landscape of Canada."

Leung plans to take her training back East. Not only does she love the vibrancy of Toronto as a city, she hopes to one day work in government and public policy, in order to help a larger number of patients nationwide. While she hopes to make connections and build her resume in an area that leads to change, she also knows it will take time.

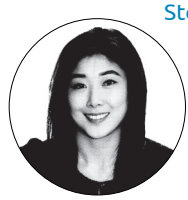
"There is change happening within the pharmacy world, and unfortunately with change, it happens very slowly," she says. "The fact that there is a new program, it's already a big step forward. There is potential, but we will have to be patient."

PharmD graduate Taylor Jameson plans to return home to his native Okanagan to work in community pharmacy and apply the resources and skills he has learned to his daily practice: "I'll get out of it what I put into it. If I'm a staff pharmacist in a busy setting, I would try my best to zero in on opportunities to do more."

Wilbur notes these concerns surrounding scope of practice are not necessarily new to the E2P PharmD graduates.

"When I graduated from my pharmacy program 20 years ago, these very same concerns were being expressed at the time," she says. "Nevertheless, I am certainly not advocating complacency. The pace of change to realize the potential of what practice can become — like the practical adoption and reimbursement for expanded services — is sometimes slow. However, progress is being made and it is the expectations of all pharmacy program graduates, from all academic institutions, year after year, that frame the

Taylor Jameson "As a graduate of the PharmD program, I believe that it will be up to not only me and my fellow PharmDs, but my colleagues already working in our province's communities with years of experience to continue to advocate for the profession and prove to the public at large that we can do so much more than count pills. We must all work together to show that we are more than capable of playing a more involved role in the management of our patients' medications that goes beyond simply dispensing and talking to patients about side effects. Of course, these are very important, intrinsic, well established roles of a pharmacist, but I believe that by fully using our current scope it will help shift the perception that the public and other health-care providers have about pharmacists being pill counters."



Stephanie Leung "I'm excited to be a part of UBC's first E2P PharmD graduating class. We've been exposed to and honing a multitude of clinical skills during these past 4 years, and I'm very intrigued to see how we can apply them to our full capacity as a licensed pharmacist in improving patient care. One thing I'm especially looking forward to is the increase in point-of-care testing tools available in community pharmacy. While they aren't diagnostic tools per se, they will allow us to help triage certain conditions and diseases, and more importantly, show patients how integral and accessible pharmacists are in the health-care system. Another important aspect of our education was our interprofessional sessions. I think we can draw from these workshops to increase collaborations not only within hospital, but also in community to ensure more well-rounded services for patient care."

ongoing dialogue surrounding the positive changes that are needed to move the profession forward."

Integrating a clinical perspective into patient care

B.C. pharmacy chain London Drugs is excited about the clinical perspective PharmD graduates will bring to pharmacies and patient care. This year alone, the company has hired 20 new E2P PharmD grads from UBC, the University of Alberta and the University of Saskatchewan — double the amount of new grads normally hired, says Pharmacy Operations Manager Jerry Dhaliwal.

"I know that these graduates are going to have a lot more tools to offer," he says. "But the traditional role is still a big part of pharmacy practice. It's going to be slow; it's not going to be an overnight thing where they're using all of their skills."

Dhaliwal says that, in addition to regulation changes such as prescribing for minor ailments and access to laboratory results, the profession needs more pharmacy technicians to help free up pharmacists to focus on more clinical-oriented services.

He suspects as more PharmDs begin practicing, more pharmacists who graduated with bachelor's degrees will consider upgrading their title through a professional bridging program.

For pharmacy manager Andrea Silver, who graduated in 2015, the shift to PharmD was "only a matter of time," considering its prevalence globally and in the United States. The title change won't impact her current practice, she says.

"Yes, the coursework is integrated in a new way, but the theoretical knowledge is still going to be very similar," she says. "In the end, the title doesn't really make a big difference in the community. Every one of my patients calls me Andrea."

Responsible for initiating many clinical services at her Victoria-based Heart Pharmacy IDA, such as an in-home medication adherence program, diabetes coaching and the creation of an online health information resource for practitioners, Silver says the opportunities for new grads are limitless.

"This is one of the most exciting times to graduate from pharmacy," she says. "Lots of independent pharmacies are looking to expand their clinical scope. The demand for clinically-oriented practice and services is only just beginning to boom."

Silver suggests getting out of the Lower Mainland to practice in more rural areas: "As long as you integrate yourself well in the community, you can practice to a greater depth."

Colleen Hogg seconds that notion. Pharmacist and owner of the independent Cove Pharmacy on Quadra Island, she's also a fourth year preceptor for PHRM 473, a Select Advanced Pharmacy Practice Experience practicum, for which students are able to rank their preferred practice setting. To be a pharmacist in a rural or remote area takes confidence and quick thinking, she says.

"We get a lot more therapeutic interventions, we work a lot more collaboratively with doctors," she says. "It takes a specific person with the right attitude to work in rural pharmacy. Because you're often the only one there providing services, they want you to do everything really well."

Welcoming her first set of E2P PharmD students this past year, Hogg was pleasantly surprised with their confidence and willingness to stand behind their decisions. She feels the E2P PharmD program is the right step toward allowing people to believe that pharmacists can practice to the full extent of their abilities, she says.

PharmD graduate and former BC Pharmacy Association Ambassador Amber Mann is ready to enter the world of pharmacy. Excited to put into practice the skills she learned throughout the E2P PharmD program, Mann is one of several PharmD grads hired by London Drugs.

While interested in pursuing a role in mental health in the future, she's happy to start out as a floater pharmacist and gain as much experience as possible for the next few years. While pharmacy has a long way to go to match the scope of practice that pharmacists are trained for — prescribing for minor ailments, interpreting laboratory values, applying new research to practice — she is grateful to have laid the foundation for a bright career ahead.

"I think one great thing that our program has taught us is to prepare for an expanded scope in the future," she says. "It's up to us how we advocate for both ourselves and our patients. When a change arises, we'll be ready to adapt." T

The contraindication to MMR vaccine in pregnancy is primarily a precautionary measure.

PHOTO: ISTOCK

Risks of MMR vaccine in immunosuppressed and pregnant patients

In the wake of Vancouver's measles outbreak this past winter, pharmacist Raymond Li explores the need to review immunization status and immunize before pregnancy or immunosuppression when administering MMR vaccine

BY RAYMOND LI, BSC BC DRUG AND POISON INFORMATION CENTRE

REVIEWED BY C. LAIRD BIRMINGHAM, MD, MHSC, FRCPC

The recent measles outbreak has increased use of the measles, mumps, rubella (MMR) vaccine. This increases the possibility that patients with contraindications to the vaccine could inadvertently receive the vaccine, a vaccine that contains live attenuated viruses. The vaccine is contraindicated in patients who are immunosuppressed or pregnant, because of concerns of disseminated infection or risk to the fetus. This column will briefly discuss risks of the MMR vaccine in pregnancy and immunosuppression and steps to take if it is inadvertently administered.

> Estimates from the U.S. and the U.K. are that approximately 2.6% to 3.2% of adults have a major immunocompromising condition, not including HIV/AIDS and end-stage renal disease.

Measles, mumps and rubella

Measles, mumps and rubella are independent diseases but are often thought of together because they cause some similar clinical symptoms (fever, upper respiratory symptoms, lymphadenopathy, maculopapular rash) and because the three vaccines were combined in 1971 to make immunization more efficient. In susceptible individuals, measles, mumps, and rubella are highly contagious diseases that are associated with a high rate of morbidity and mortality. The vaccines are highly effective in preventing infection and its associated morbidity and mortality.

Infection in immuncompetent individuals is usually self-limited. However, serious complications including pneumonia and secondary infections can occur. Measles can cause diarrhea, otitis media, keratoconjunctivitis and encephalitis. The mortality rate from measles encephalitis is approximately 15%. Mumps complications include meningitis and rarely encephalitis (mortality rate of 1.5%), deafness, and pancreatitis. Rubella complications include arthritis, thrombocytopenia and rarely encephalitis.

In immunocompromised patients, measles can cause more severe disease with a prolonged course and a greater risk of

death. The severity of mumps and rubella may not be increased in immunocompromised patients but there is a greater risk of mumps infection even in those with prior vaccination.

In pregnancy, measles infection can cause severe disease in the mother and is associated with a higher risk of miscarriage and premature delivery. Mumps infection in pregnancy may cause an up to two-fold risk of spontaneous abortion in the first trimester, but disease severity is not increased in the mother. Neonatal parotitis and pneumonia may occur if maternal infection occurs late in pregnancy. Rubella infection is not more severe for the mother, but infection in the period from just prior to conception up to 10 weeks of gestation can cause malformations in 90% of cases (congenital rubella syndrome = CRS). Malformations are rare after the 16th gestational week but sensorineural hearing loss can occur as late as 20 weeks.

Attenuating the vaccine viruses

Viruses can be attenuated by serial passage in cells from a species other than the normal host. With each passage in foreign host cells (e.g. chicken), the ability to infect the original host cells (i.e. human) is reduced. The measles and mumps vaccine viruses were attenuated by serial passage in embryonated chicken eggs and whole embryo or fibroblast cell cultures. The rubella vaccine virus was attenuated by passage in human lung fibroblast cell culture at colder temperatures (down to 30° C) which selected for a strain with lower virulence.

Disseminated infection from MMR vaccine viruses

Immunocompromised patients

A systematic review of the literature to 2016 reported the complication rate in 798 patients who received MMR live vaccine. These patients had bone marrow transplant, or were receiving immunosuppressive therapy for inflammatory disease or solid organ transplant. One patient (juvenile idiopathic arthritis (JIA), on methotrexate) developed a fever and rash 20 days after vaccination, but the reaction was considered to have resulted from the underlying disease. Two other patients with solid organ transplant developed parotitis. In an international survey of rheumatologists and immunologists treating patients with interleukin blockers, one patient with systemic JIA (on canakinumab) received MMR vaccine and developed bacterial pneumonia and flare of her disease; these events were considered not to be vaccine-related. Thus the risk of disseminated disease from vaccine virus strains among immunocompromised patients appears to be low, though the authors of these papers state that the data are not sufficient to change current vaccination recommendations.

VACCINE STRAINS

The Edmonston measles strain (and Schwartz and Moraten derivatives) used in North American vaccines was isolated from a schoolboy, David Edmonston. The mumps virus strains used are derived from the virus isolated by Merck researcher Maurice Hilleman from his daughter, Jeryl Lynn. The RA 27/3 rubella virus used in MMR vaccines was isolated by Stanley Plotkin et al. at the Wistar Institute in Philadelphia from a tissue sample from the 27th in a series of fetuses aborted during the 1964 rubella epidemic.

Pregnant patients

The contraindication to MMR vaccine in pregnancy is primarily a precautionary measure. The greatest theoretical concern is with the rubella vaccine virus due to the teratogenic effects of natural infection. Fetal infection has occurred in roughly 3.5% of cases where rubella vaccine was given in pregnancy, but no features of CRS were observed in those cases. The theoretical risk of CRS is estimated to be 0.2 to 2.1%, but the observed risk remains zero as no cases have been reported from the vaccine in more than 3500 vaccinated mothers. The measles vaccine virus has not been shown to cross the placenta and infect the fetus. Although the mumps vaccine virus has been detected in the placenta, it has not been associated with fetal harm.

Management, monitoring and reporting

For all patients who receive MMR vaccine, adverse events (e.g., adenopathy/lymphadenopathy; parotitis; orchitis; rash; seizures; encephalopathy, encephalitis; meningitis) should be reported if they occur within 30 days following MMR vaccine administration. Refer patients who experience an adverse event to their physician for further assessment and diagnosis. An adverse event following immunization (AEFI) report must be submitted to the public health if the respective AEFI meets reporting criteria. Refer to the *BC Immunization Manual, Part 5 – Adverse Events Following Immunization*.

For pregnant patients who inadvertently receive the MMR vaccine, termination of the pregnancy is not warranted. Inadvertent immunization during pregnancy is not considered a medical indication for therapeutic abortion and the pregnant woman should be reassured that teratogenicity from the vaccine has not been observed. An adverse reaction report (exposure during pregnancy) can be submitted to Health Canada's MedEffect program even if there is no adverse outcome, though if fetal death or malformation occurs an AEFI report must be submitted to the public health unit. Note: Merck and GSK do not have North American pregnancy registries for their MMR vaccines.

For more information, see the *BC Immunization Manual* or contact your local public health unit. References available at bcpharmacy.ca. T

Shoppers Drug Mart pharmacist/owner Allan Wong prepares a flu shot at his Surrey pharmacy. Immunization rates in older adults remains low across Canada, putting this population at risk for health complications.

Immunizations for older adults

Pharmacists need to become key drivers in the promotion of immunizations for adults

BY KANE LARSON, BSC, PHARMD AND FAWZIAH LALJI, BSC (PHARM), PHARMD

Vaccines are essential health measures to protect patients from severe diseases that are preventable. While everyone is in agreement that communicable disease prevention is of utmost importance in children — leading to the virtual elimination of all immunization-related barriers for this age group — support for the immunization of older adults remains ineffectual. This results in considerable morbidity and mortality and directly contributes to tremendous health-care costs in Canada. In contrast to the childhood program, adult immunization rates are very low, resulting in social, racial and ethnic disparities.

It is imperative that health-care providers — including pharmacists — play a vital role in addressing the lack of importance placed on adult immunizations and the misinformation surrounding them, including the efficacy and safety of vaccines. Pharmacists, especially, are poised to take on this responsibility. Pharmacists are widely trusted by the Canadian public and are easily accessible compared to other health-care professionals.

According to the Canadian Pharmacists Association (CPhA), there are more than 42,500 pharmacists working in 10,000 pharmacies across Canada, providing advice on more than 625 million prescriptions per year. Pharmacists are well-positioned to educate and immunize the public against vaccine-preventable infections, and, in fact, a recent national survey showed that approximately 80 per cent of Canadians trust pharmacists to provide action on vaccinations and would consider going to their pharmacist for a flu shot or other vaccines.

PHOTO: TIFFANY COOPER

Vaccination in adults is necessary

Canada's National Advisory Committee on Immunization (NACI) conducts an evidence-based review on the efficacy and safety of newly marketed vaccines and provides their recommendation to health-care professionals. During the past decade a number of new vaccines have been marketed in Canada, and while most of these are publicly funded for childhood immunization programs in Canadian provinces, vaccines which are targeted specifically for adults, such as herpes zoster, conjugate pneumococcal and high dose influenza vaccines, are, for the most part, not publicly funded through our respective provincial governments, although a small number of Canadian provinces have provided limited funding to targeted immunization programs. For example, Ontario provides herpes zoster vaccine for individuals 65 to 70 years old, as well as the high dose influenza vaccine for patients in long-term care facilities.

Vaccination in adults is necessary for several reasons. The process of aging leads to waning of natural immunity, predisposing older adults to increased infections, and further to this, many studies have clearly shown that hospitalization, exacerbation of comorbidities, and death occurs more commonly in the older adult population, particularly for influenza, pneumococcal infection and herpes zoster. The process of immunosenescence — the gradual deterioration of the immune system due to aging — also means that even though individuals may have been vaccinated during childhood, immunity wanes over time, necessitating additional doses in adulthood (e.g., Td boosters — which protect against tetanus and diphtheria — every 10 years). Adults with chronic health conditions, such as cardiorespiratory illness, diabetes, chronic kidney or liver disease and immunosuppression, are particularly at risk for pneumococcal disease and influenza. Lifestyle factors such as homelessness, smoking or alcoholism also predispose adults to pneumococcal infections; individuals who have multiple sexual partners are at risk for hepatitis B an HPV; and men who have sex with

men (MSM) may be at higher risk for HPV disease. Adults working in certain settings, such as health-care settings, corrections facilities or laboratories, are also at higher risk of acquiring infections. Finally, adults who are travelling internationally may be at risk for vaccine-preventable diseases such as typhoid, influenza, cholera, meningitis and hepatitis A and B.

Vaccines recommended by NACI for all adults include influenza, pneumococcal, herpes zoster, tetanus, diphtheria, and acellular pertussis, among others, depending on their age*, level of immunosuppression** and chronic medical conditions or whether they fit into special populations***. Unfortunately, immunization rates in adults are very low and only 10 per cent of adults are up-to-date on immunizations required for their age, according to a 2014 national survey on adult immunization coverage by the federal government. For example, the national rate of influenza vaccine for adults between the ages of 18-64 years, with at least one comorbid condition, was only 37 per cent in 2015/16, far below the national goal of 80 per cent. Furthermore, adults at the age of 65 or older are often under-vaccinated as well for influenza (67%), tetanus (38%), pneumococcal (36%) and pertussis (9%) vaccines. It is clear that more work is required to increase the vaccination rates among Canadians, especially those at high risk for morbidity and mortality. There is no available study that provides a complete review of the economic impact of low immunization rates in Canada, but a U.S. study conducted by McLaughlin et al. estimated an annual cost for influenza, pneumococcal infection, zoster and pertussis to be $15.3B in individuals 65 years of age and older, representing 58 per cent of the total health-care costs related to patient care. But more importantly, vaccine preventable diseases are associated with significant morbidity, reduced quality of life and mortality. The best example of these statistics is influenza infection, which is associated with 3,500 deaths and 12,000 hospitalizations per year in Canada.

Barriers to vaccination

There are a significant number of barriers preventing patients from getting vaccines and recent articles by NACI and the Immunization Action Coalition (IAC) categorized the multitude of barriers into three distinct categories: undervaluation of adult immunization, inadequate infrastructure and payment for adult vaccinations.

The importance of adult immunization is under appreciated, both by the public and the provider. Traditionally, immunization campaigns have been piecemeal — targeted towards a specific vaccine, likely a newly marketed one or influenza — have not provided adequate information on safety of vaccines or have been kyboshed by the anti-vaccine movement that provides misinformation to the public. Further, campaigns have not focused on making the public understand the potential impact of low vaccination rates, in terms of lost wages (i.e., individual impact), and costs to the health-care system (i.e., to society as a whole). With respect to targeting campaigns towards providers, the IAC suggests it is important to make the health-care providers understand that the public values their recommendation greatly, given the multitude of studies that have shown that the public is more likely to get vaccinated when the advice comes from their health-care provider.

In Canada, the public health system provides a strong infrastructure to support the childhood immunization program, from birth to school-aged programs. In contrast, this infrastructure is not present for adult immunizations, with the exception of influenza and polysaccharide pneumococcal vaccines. As such, most of the adult vaccines are provided by either physicians or pharmacists, rather than public health, but in a system where there is a significant lack of infrastructure — lack of a comprehensive data system, missed opportunities, lack of clinical knowledge, complicated schedules, no provision of standing orders, underutilization of reminder systems, shortages and confusion about the vaccine supply, struggles with storing inventory and cultural and language barriers are not addressed. From the patient perspective, a Canadian survey conducted by the Canadian Immunization Research Network indicated the most common reason for vaccine hesitancy was due to misinformation, lack of knowledge, fears and mistrust about receiving the vaccine.

The third and final barrier that needs to be addressed is the lack of federal or provincial funding for adult immunizations in Canada. Unlike the childhood vaccines that are free for the public as they are on the provincial formulary, many of the adult vaccines are in the "recommended but not funded" category, resulting in considerable out-of-pocket expense for the patient. The expense of the new adult immunizations creates a significant barrier for patients, and in some cases, it is not a one-time cost, but needs to be born on a yearly basis (e.g., high dose influenza vaccine).

The shifting paradigm

In the United States, the National Vaccine Program Office of Department of Health and Human Services (DHHS) has recently created a new strategic plan for adult immunization — the National Adult Immunization Plan, which can be found at hhs.gov — that suggests that while barriers to vaccination have been

addressed by different groups, the approach has been piecemeal, and has resulted in no real change with respect to immunization uptake. Thus, to increase immunization uptake rates and decrease the barriers, it will require a culture shift by providers and the public, as well as renewed commitment and leadership by all the stakeholders involved in adult immunizations — including pharmacists.

Part of the DHHS' adult immunization plan includes the update of standards for adult immunization practice, to better reflect the changing landscape and inclusion of new immunization providers. The standards emphasize all providers embrace four fundamental actions:

- Assess immunization status of all patients at every clinical encounter;
- Recommend strongly the vaccines the patients need;
- Administer the vaccines needed (or refer to a provider); and
- Document vaccines administered to the patient.

The IAC has provided a step-by-step guide of this action plan that suggests the following:

(a) When carrying out the assessment for patients, health-care providers should determine the patient's previous vaccination history and past diseases to which they may be immune. However, if the patient is unable to provide a written record (except for influenza and polysaccharide pneumococcal vaccine), and you have checked with the local health authority, pharmacy records, and/or physician's office, the guide suggests administering the vaccine.

(b) In order to determine which vaccines are needed, one of the suggested tools to follow is the HALO approach — determine vaccine requirements based on your patient's current Health condition, Age, Lifestyle, and/or Occupation. The tables provided in this article are helpful to determine the recommended vaccines for your patient, as the categories are listed across the top and/or in the footnotes.

(c) Screening for contraindications and precautions for the vaccines would be the next step, keeping in mind the most of them are temporary (e.g. pregnancy or illness) and the vaccine may be given at a later date.

(d) Finally, the provider should provide a strong recommendation as to which of the vaccines are to be administered, administer the vaccines and document.

It is essential that health-care providers — including pharmacists — assume a leadership role and help address undervaluation of adult immunizations, misinformation and lack of knowledge on the efficacy and safety of vaccines, and lack of access to vaccines. At the same time, our national health-care organizations need to engage the Canadian government to provide funding for many of these recommended but unfunded vaccines. T

Surrey Fleetwood MLA Jagrup Brar receives a flu shot at a Surrey Shoppers Drug Mart owned by pharmacist Allan Wong.

PHOTO: TIFFANY COOPER

*See Table 1 at bcpharmacy.ca
**See Table 2 at bcpharmacy.ca
***See Table 3 at bcpharmacy.ca
References available at bcpharmacy.ca.

Kane Larson is a recent graduate of UBC's Entry-to-Practice PharmD Program.
Fawziah Lalji is a professor in the Faculty of Pharmaceutical Sciences at UBC.

Methadose™ or Metadol-D®?

Working collaboratively to find the right medicine for OAT patients

BY DR. CHRISTY SUTHERLAND

Former OAT patient Chereece Keewatin of VANDU, who lost her battle to opioid use disorder in March 2019, reported experiencing opioid withdrawal symptoms while taking Methadose™.

In 2014, B.C. patients taking methadone for opioid agonist treatment saw a formulation change of their benefit-covered medication. PharmaCare moved coverage of a 1mg/mL pharmacy compounded formulation of methadone to Methadose™, a commercially available 10mg/mL cherry-flavoured oral solution.

Almost 17,000 people with opioid use disorder who were on methadone underwent a formulation change en masse, which resulted in destabilization for many. Some patients who had been stable on their formulation of methadone reported they were not able to manage their opioid withdrawal symptoms.

In fact, in a 2016 study, 50 per cent of people who had been moved to the new formulation saw a decrease in the drug's effectiveness. Research done in Vancouver showed that this destabilization, which included waking up every morning in withdrawal, lead individuals back to illicit drug use and relapse. Individuals who relapsed also reported intravenous drug use. And individuals with HIV who had been on methadone prior to the formulation change had decreased antiretroviral adherence after the 2014 methadone formulation change.

This is not the first time a population of people on methadone have been affected by a change in formulation. In the United Kingdom, a change in methadone formulation in 1992 was correlated with increased use of non-prescribed opioids, a decline in social stability and an increase in pharmacy break-ins.

From a clinical and research perspective, what is most interesting is understanding what impact and effectiveness different formulations have on a patient.

A 1999 study by Dr. Marc Gourevitch, MD, in New York, was conducted to see if there were any differences in subjective symptoms and pharmacodynamic measures for patients as they changed from three different formulations of methadone. The study, which looked at only 18 patients, found that there were no significant differences in the plasma methadone levels. However, those levels may not be the best measure of efficacy of the medication.

Methadone is a racemic mixture, and different formulations may have different ratios of enantiomers. It makes sense that people who had been previously stable on a particular ratio of enantiomer don't experience the same therapeutic benefits with a different ratio. However, this is still speculative.

While more work still needs to be done on what makes one formulation of methadone work for one patient but not another, we must consider there are many medical conditions for which people have a strong preference for one formulation of a medication over another. And we don't have enough research to know why.

For example, in a family medicine clinic, someone with depression will pick an SSRI to try, and over time, may need to try several medications within this class before they experience

PHOTO: VINCENT CHAN

any benefit. When people are trying various kinds of medication within a class of drug, it's important to support them in the process as they work to find the right medication to ease their condition.

With our patients on OAT, we can work with them to find the best medication for each person.

Metadol-D ®, is a clear, colourless and unflavoured formulation of methadone that has been approved by Health Canada. The 10mg/mL formulation must be diluted in a beverage like Crystal Light or Tang to reduce the risk of diversion. It has recently been approved as a PharmaCare benefit, but only on an exceptional basis.

As a clinician who works with patients with opioid use disorder, I often must determine when to switch a patient on Methadose™ to Metadol-D®. I consider the following criteria on switching to Metadol-D® if the patient:

- Cannot take Methadose™ because of vomiting or nausea when ingested;
- Has an allergic reaction to the ingredients in Methadose™ (e.g. red dye);
- Has had no decrease in using other non-prescribed opioids or has had an increase or reintroduction of non-prescribed opioids, alcohol or other substances to manage cravings or withdrawal symptoms;
- Has experienced new side effects or symptoms, like insomnia, that they haven't had before with the other formulation of methadone;
- Is showing other outcomes that significantly impact their health, wellness and quality of life and increases their risk of harm because of suboptimal treatment.

Making the change to Metadol-D® is a collaborative decision that the patient and I make together after discussing all aspects of treatment. I have never declined a patient's request to change formulation.

In the future, I hope to see increased access to Metadol-D®, without the special authority application process. The process of choosing between Methadose™ and Metadol-D® would be a discussion with the patient, with the decision in their hands, just as the decision between SSRIs is also in their hands. This requires longitudinal care, with follow-up to discuss goals, drug use, sleep and quality of life. As a clinician follows a patient over time, they can work together to adjust doses and medications to optimize the patient's health.

People on OAT in B.C. have been working as a group to tell us that they feel unwell on Methadose™, and we can listen and advocate as health-care professionals to ensure that patients who benefit from the old formulation, or Metadol, or Metadol-D® are able to access the care they need. T

Dr. Christy Sutherland is the medical director for PHS Community Services Society, education physician lead for the BC Centre on Substance Use and a clinical assistant professor at UBC. References available at bcpharmacy.ca.

PHOTO: VINCENT CHAN

Finding a competitive edge

BY DEREK DESROSIERS, BSC(PHARM), RPH

Mario Linaksita, pharmacy manager of University Pharmacy on the UBC campus, created a unique revenue stream by striking a collaboration with UBC Athletics to offer a wide range of clinical services for its athletes.

Retail community pharmacy is a competitive business. It can be hard to differentiate your pharmacy from all of the others fighting for client loyalty. When it comes to being successful over the long term, pharmacy owners must find ways to increase overall profitability, position themselves as community leaders and strive to enhance the morale of your staff and team members.

First off, time is always a big issue for pharmacists. You need to fully optimize your work time so that you are staying focussed on the business rather than spending your time working in the business. Figure out where your time is best spent to achieve your business plan goals instead of always just being reaction driven.

Your staff team probably need more attention than you are giving them. To maximize results you need a highly motivated team that have had the opportunity to receive all the training they need to do their job to the best of their abilities. They need to have strong product knowledge and a solid base of sales skills so that they are professional in helping your customers find the right solution while increasing sales volume for your pharmacy.

Be a socially responsible business. That starts with creating a caring culture within your pharmacy staff team. Then build upon that culture and team vision by having a pharmacy mission to contribute to your community. Be a community leader yourself by getting involved in things like volunteer opportunities.

Understand and anticipate your customers' needs. This can be a real differentiator. Although you probably already know, use your pharmacy system to run reports showing you who your top 100 customers are. The Pareto principle (also known as the 80/20 rule) comes in here. Generally, you will find that 80 per cent of your revenue comes from 20 per cent of your customer base. Talk with your customers from a strategic perspective and fulfill their needs with integrity. Go out of your way, occasionally, to do something special for them. Your actions will resonate with them and they will trust you, take your advice and be loyal to your pharmacy because you are

delivering value to them. That translates into increased sales and great word of mouth marketing.

Your staff team also need to know who your key customers are so they can build a rapport with them. If they are graceful and ethical in their sales approach to your customers, it will be easy for them to upsell by offering additional products and services that will add to the value the customers are receiving. This can have a tremendously positive effect on sales growth.

Think about your overall value proposition so that you have identified the products and services that are most important and compelling to your customers. This adds to the trust factor and will lead to your customers relying on only your pharmacy and the expertise of you and your staff to fulfill their health requirements.

Spend some time reviewing your marketing strategies and make sure they are relevant to your target customer population. For example, if you are targeting millennials, then you want to be sure you are using various social media streams in your marketing strategy. Test them, measure them regularly and make changes as required.

Ensure that all of your workflow processes and systems are maximized for efficiency. Cut down on unnecessary time spent on activities that add no value to your business or your customers. Streamlining your processes will make things easier on you and your staff, which leads to increased profitability and more personal freedom.

Finally, and this is a BIG one, make sure you have an up-to-date business plan that covers at least the next 12 months. It should have goals and action points for you and your staff to follow. Everyone on the team should know what to do and how and when he or she should do it. You will see improved results and a better return on your investment. T

Derek Desrosiers, BSc(Pharm), RPEBC, RPh is President and Principal Consultant at Desson Consulting Ltd. and a Succession & Acquisitions Consultant at RxOwnership.ca.

A LOOK AT THE BC Pharmacy Association's 2019 Annual Conference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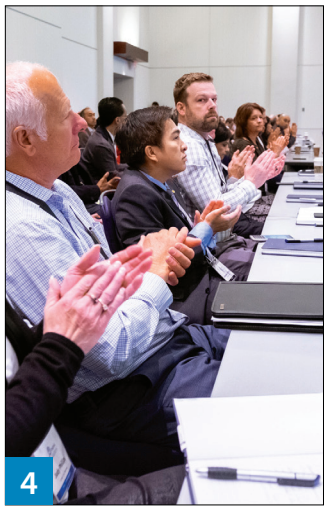
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PHOTOS: VINCENT CHAN

1 Murray Dykeman Mentorship Award recipient Zahir Jiwa (centre) celebrates at the BC Pharmacy Excellence Awards gala with wife and fellow pharmacist, Rozmin Jiwa, and BCPhA Board Past President Alex Dar Santos.

2 Keynote speaker Melissa Sheldrick, who lost her eight-year-old son when he was given the wrong medication, speaks about her call for mandatory medication incident reporting across Canada at the BC Pharmacy Association Annual Conference on May 10.

3 BC Pharmacy Association CEO Geraldine Vance (left) and B.C. Health Minister Adrian Dix (right) speak before the minister updated conference attendees on the government's plans for pharmacists and health care in the province.

4 More than 300 guests attended BC Pharmacy Association's Annual Conference on May 10 and 11, 2019 at the Hyatt Regency Hotel in downtown Vancouver.

5 BC Pharmacy Association board president Chris Waller (left, on stage) stands with B.C. Health Minister Adrian Dix (right, on stage) as the cabinet member addresses questions from the audience during the BCPhA Annual Conference on May 10.

6 Pharmacy students Giordano Bua, Manvir Mehanger, Jaspreet Rayat, Depinder Mann and Amanjot Saini enjoy the Annual Conference's trade show on May 10. T

2019 BCPhA Elections are Going Digital

SIGN UP FOR E-VOTING NOW

The BC Pharmacy Association Board elections will be held on **Nov. 1, 2019**.
This year, members have the option to vote electronically or by paper ballot.

But you have to sign up to vote electronically.

Go to **bcpharmacy.ca/evoting-optin** to sign up

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May 10 - 11, 2019

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