



I N R E V I E W

Canadian Society of
Hospital Pharmacists



Société canadienne des
pharmaciens d'hôpitaux

HOSPITAL PHARMACY IN ONTARIO

SUMMER ISSUE 2021

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Olivia Ng

PRESIDENT'S ADDRESS & ADVOCACY CORNER

In the last edition, you will recall that CSHP-OB wrote to the Ontario College of Pharmacists (OCP) in support of the proposed regulatory amendments that enable the creation of an emergency registration certificate class of pharmacy professionals to grant conditional licensure for pharmacy graduates, recently impacted by the COVID-19 public health restrictions. We are pleased to see the Pharmacy Act amendments that enable the creation of the emergency assignment registration certificate class of pharmacy professionals and OCP's initiation of the registration process. A special thank you to Samantha Yau, Past President, and Narthaanan Srimurugathanan, OPRA Liaison, for their leadership in the advocacy efforts.

The emergency registration certificate class will provide much needed support as hospitals and public health units continue COVID-19 vaccine administration. Pharmacists, pharmacy students and pharmacy technicians are integral workforce members in vaccinating as much of our population as we can and as quickly as we can. This increased scope of practice is needed – pharmacy professionals are essential healthcare workers in this fight to battle the COVID-19 pandemic.

Thinking ahead to our future as a profession, I also had the privilege to speak at the white coat ceremonies for the pharmacy class of 2024 at both University of Toronto and University of Waterloo. As I reflected on the takeaway that I wanted to give the class, I realized

that the most important qualities needed to be a pharmacist are the ones we had even before we entered pharmacy school: it's how we want to make a positive difference in the lives of others and how we care deeply for others. As a new mom myself, I think even more about the expanding possibilities our profession holds and how we can make healthcare even better for future generations, including for little baby Simon!

If you have any questions, comments or would like to say hello, please don't hesitate to reach out to me at obpresident@cshp.ca.

Respectfully submitted,
Olivia Ng
President, CSHP-OB



Welcome baby Simon Hao and congratulations Olivia!





Olivia Ng

New Message — ↗ ✕

To: **obpresident@cshp.ca**

Subject: We would love to hear from you!

Reach out to the CSHP OB president with any:

- Questions
- Comments
- Suggestions

Send ▼

Canadian Society of
Hospital Pharmacists



ON
BRANCH

RECOGNITION

[NATIONAL DELEGATES' REPORT]



Megan Riordon



Vivian Lee

CSHP IN 2021

Throughout the global pandemic, CSHP has been hard at work to ensure the Society remains a key contact point for members and a strong voice for our practice.

Despite the many challenges, CSHP has adapted to meet its members' needs and has found new opportunities to engage its members. Please take a moment to recognize yourselves and your colleagues for all the progress we have made, and the invaluable teamwork that has made it all possible.

We were pleased to represent the Ontario Branch on the CSHP Board as your National Delegates at the April 2021 virtual Board meetings. Here is a closer look at the top 3 national updates from CSHP:

1) Strategy Towards Sustainability

COVID-19 has reprioritized some pieces of our strategy towards sustainability but the fundamental plan remains on track because over the past year, we grew membership, engaged members, and reduced operating budget

Membership

As of March 31, 2020, CSHP has reached 3,557 members, which is 114% of our target. Ontario Branch also exceeded its membership target at 136%! Congratulations Ontario Branch! We appreciate everyone's ongoing efforts to demonstrate and promote the value of CSHP membership for pharmacists practicing in both acute and ambulatory care settings and ultimately, on patient care.

Engagement

We continued to see increases in member engagement with 45 webinars and over 10,000 views in the past year!

Financial Sustainability

CSHP's revenue drivers have exceeded targets in most areas over the past year including 108% of membership dues, 105% of advertising, 187% of sponsorship, and 143% for the Together Conference. Combined with decreased expenses throughout the pandemic and a significant federal subsidy for COVID, we will likely balance the budget this year, but will continue with a planned deficit for April 2022, which is the 3rd year of planned deficit per the strategic plan for reinvestment in the Society, followed by balanced budgets in 2023 and onwards.

Professional Practice

Christina Adams and her professional practice team have created a number of webinars and educational events over the past year. Over the next 2 years, they will be focusing on a new anticipated source of revenue by pursuing specialization and credentialing opportunities.

2) 2021 Together Conference

Due to COVID-19 restrictions, CSHP's Professional Practice Conference (PPC) collaborated with the Banff Seminar and Harrison Hospital Pharmacy Management Seminar to host a joint virtual conference this year, *Together: Canada's Hospital Pharmacy Conference 2021*. The conference was held virtually March 20-27, 2021, on the Pheedloop platform

RECOGNITION

[NATIONAL DELEGATES' REPORT continued]

and included a combination of live didactic programming, exhibit halls, pre-recorded sessions, satellite symposia, poster presentations, workshops as well as networking and social events. Over 800 registrants from across the country attended virtually, including 222 registrants from Ontario Branch. Some of the conference's highlights included an address from Canada's Chief Public Health Officer, Dr. Theresa Tam, as well as sessions from several keynote speakers: Lisa Belanger (Brains at their Best), Andre Picard (Canadian Healthcare in the post-COVID world), Hadiya Roderique (Promoting Allyship in the Workplace), and Joe Roberts (From Skid Row to CEO). The top 5 Education sessions were 1) Working with someone you don't like (workshop); 2) How to increase vaccine acceptance in the time of COVID: evidence-based

strategies (concurrent session); 3) How implementation science can strengthen pharmacy change initiatives (workshop); 4) What teaching strategies improve clinical decision making in pharmacists? (concurrent session); and 5) Pharmacotherapy for COVID-19 One Year On: Hits and Misses (concurrent sessions).

Stay tuned for next year's event, which will also be online on January 29-30 and February 5-6, 2022.

3) IT Update

Part of CSHP's Core Business Responsibilities include improving the member experience. IT and website updates are planned over the next year with a few steps already completed, including a new CSHP main website and

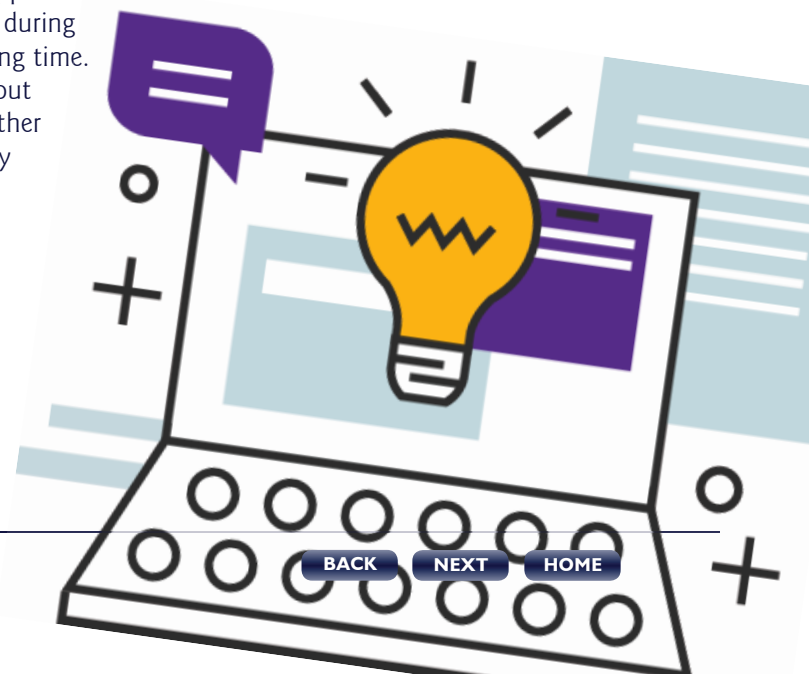
new member portal ready for the upcoming membership renewal campaign. Stay tuned for new Branch micro-sites this fall, an integrated communications system to replace MailChimp, as well as a committee management & document storage system and more!

We look forward to continuing to represent the Ontario Branch on the Board and support our members during this challenging time. Please reach out anytime to either of us with any questions or feedback.

Best regards,

Megan Riordon
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Andrea Wist

CHAPTER CORNER (SOUTHWESTERN)

BUILDING A SAFER SYSTEM: HOSPITAL PHARMACIST DISCHARGE FACILITATOR ROLE

Andrea Wist is the Director of Pharmacy at Bluewater Health in Sarnia, ON, an acute care community hospital with 320 beds.

What:

Pharmacy helps facilitate the patient discharge process with focus on educating patients on effective and safe medication use. This plays an invaluable role in seamless care from hospital to home.

Who:

The Pharmacist Discharge Facilitator (PDiF)¹ is comprised of a team² of four to five hospital pharmacists who rotate in the role. There is one pharmacist scheduled to work in the role daily for a week at a time to provide consistency.

The PDiF is available to help with patient counselling on discharge and

to review prescriptions and discharge instructions. Patients at higher risk for medication adverse events, readmission and non-adherence are prioritized for this service:

- COPD, CHF, stroke, heart attack, atrial fibrillation (or other new diagnosis)
- More than 6 new medications or prescription changes
- Complicated patient with questions about medications

In addition to speaking to the patients and their caregivers, the PDiF communicates with any number of members of the healthcare team, which can include the hospitalists or most responsible physicians (MRP), primary care physicians, community pharmacies, outpatient family health teams, nursing homes, etc.

Where:

Current focus is on Medicine and Telemetry units. Support is given to the Rehab unit when staffing permits and able to utilize help from Pharmacy students.

When:

Started with a pilot on Medicine unit in January 2018 and rolled out to Telemetry unit November 2018. Hours available: Monday-Friday 0800h-1600h. Outside of these hours, discharge is directed by a nurse and physician.

Modifications during Covid-19: Patients are being counselled virtually while still in hospital via telephone from PDiF to the patients' room and discharge chart reviews are completed and then discussed with the patients' teams.





CHAPTER CORNER (SOUTHWESTERN) continued

Why:

The PDiF role was created to:

- 1) Educate patients about their medications, with a focus on new medications or changes to prior home medications,
- 2) Improve patient understanding of the discharge plan as it relates to medications,
- 3) Reduce hospital readmissions with decrease in adverse drug reactions post discharge,^{3,4}
- 4) Help nurses and physicians with the med rec discharge process to facilitate seamless care of patients back into the community or LTC.

How:

Referral to the PDiF is made through charge nurse or ward clerk. The referral is created in the electronic health record software and sent to the PDiF office printer. The PDiF

also carries a cell phone for urgent communication from charge nurses and clerks.

Successes:

- **The total number of patient discharges reviewed** by the PDiF in 2020 increased compared to the previous year (1464 versus 1367) despite COVID-19 restrictions. In 2020, the PDiF was involved in 62% of discharges from these units (1464 of 2339 discharges) compared with 54% of discharges during PDiF working hours in 2019. The role is consistently meeting targets of reviewing 45-60% of all discharges on Medicine and Telemetry units. Notably during the pandemic year of 2020, the number of chart reviews increased compared to 2019 while the number of patients seen in person decreased. This demonstrates

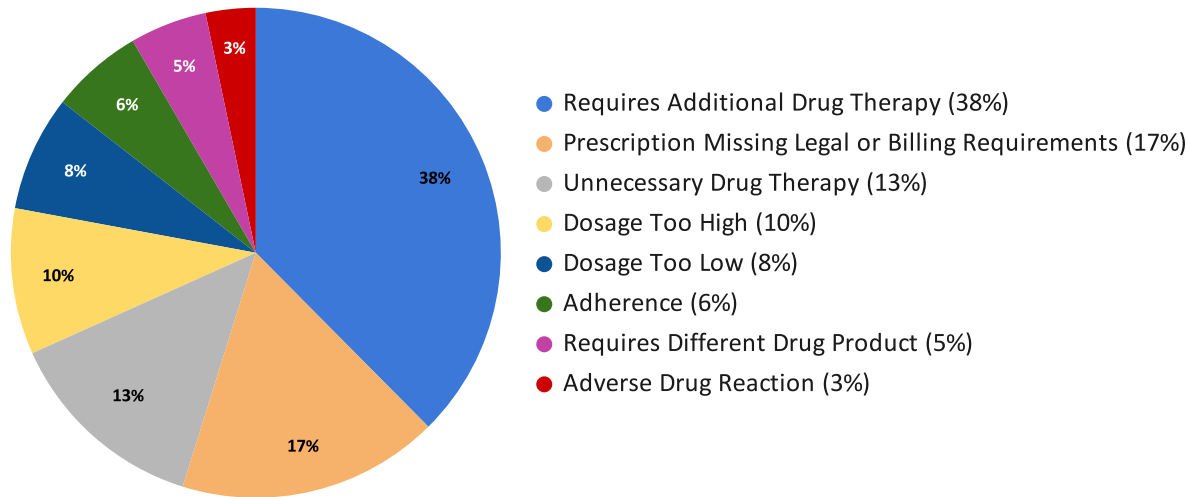
the PDiF team's commitment to patient safety by evolving to perform the role virtually.

- **The number of clinically significant interventions** made by the PDiF in 2020 was 394, which was nearly double the previous year's 189 events. This demonstrates the value of the pharmacist's role in ensuring patients are discharged home on safe and effective medications⁵.
- **To support the Rehab unit,** the PDiF pharmacist continues to lead a once-monthly Stroke Medication education session as part of the Life after Stroke Education series. Despite the program being suspended due to COVID-19, the PDiF was able to facilitate 7 sessions and educate over 50 patients and caregivers in the year 2020.
- **Annual patient satisfaction surveys** continue to give the discharge pharmacist program a high rating. For example, in January 2021, forty-three surveys were completed and 100% of participants stated that they agreed or strongly agreed that the discharge pharmacist helped them understand the intended use of their medication and how to take it safely and correctly, and as a result, they felt that their overall health and wellbeing will be improved. In the survey, 77% of respondents indicated they would be interested in filling their discharge prescription at Bluewater Health outpatient pharmacy if this service were offered.



[CHAPTER CORNER (SOUTHWESTERN) continued]

Drug Therapy Problems Identified in 2020



8

Future Goals

As indicated by the patient satisfaction survey, we believe offering to fill discharge prescriptions would be additionally beneficial to seamless care upon a patient's discharge.

- One of the barriers to achieving seamless discharge transition has been issues with filling discharge prescriptions in a timely manner. Patients' prescriptions are often written on the day of discharge which does not allow the community pharmacy

to obtain less commonly used medications. Community pharmacies do not routinely stock some hospital medications such as oral vancomycin, fidaxomicin, octreotide, edoxaban and low molecular weight heparin (LMWH) injections which may

delay discharge, or it may cause a delay in filling the prescription in the community after the patient is home already.



[CHAPTER CORNER (SOUTHWESTERN) continued]

- Dispensing the discharge prescription at the hospital outpatient pharmacy could eliminate any unintended discrepancies at the community pharmacy interpreting the discharge prescription. In this way the discharge pharmacist can speak to the patient with the discharge prescription and/or actual medications in hand. This would be a win-win to improve seamless care and increase the hospital's revenue.

References:

- 1 Acknowledgement - Bluewater Health adopted the PDiF name and concept with permission and mentorship from Colleen Cameron, RPh, PharmD, Grand River Hospital Pharmacist
- 2 Current BWH PDiF team is led by Peter Delanghe, RPh, PharmD, ACPR and co-lead Kristina Frizzle, RPh, BScPhm; plus Laura Dunn, RPh, PharmD, Yida Li, RPh, PharmD, Michael Marsella, RPh, PharmD, and Gayathri Radhakrishnan, RPh, BScPhm;
- 3 Erickson, A, Seamless integration of inpatient and outpatient pharmacist services reduces hospital readmissions. *Pharmacy Today*, Volume 22, Issue 10, Oct 2016, pages 6-7, [https://www.pharmacytoday.org/article/S1042-0991\(16\)30973-2/fulltext](https://www.pharmacytoday.org/article/S1042-0991(16)30973-2/fulltext)
- 4 Weiyi Ni, Danielle Colayco, Jonathan Hashimoto, Kevin Komoto, Chandrakala Gowda, Bruce Wearda, Jeffrey McCombs, Reduction of healthcare costs through a transitions-of-care program. *American Journal of Health-System Pharmacy*, Volume 75, Issue 10, 15 May 2018, Pages 613–621, <https://doi.org/10.2146/ajhp170255>
- 5 Ryan Craynon, David R. Hager, Mike Reed, Julie Pawola, Steve S. Rough, Prospective daily review of discharge medications by pharmacists: Effects on measures of safety and efficiency. *American Journal of Health-System Pharmacy*, Volume 75, Issue 19, 1 October 2018, Pages 1486–1492, <https://doi.org/10.2146/ajhp170638>

Andrea Wist,
R.Ph., B.Sc.Pharm., MBA
Director of Pharmacy
Bluewater Health
Sarnia ON





REFLECTIONS ON THE MScPhm PROGRAM AT THE LESLIE DAN FACULTY OF PHARMACY, UNIVERSITY OF TORONTO



Maria Marchese



Jessica Stovel

WRITTEN BY MARIA MARCHESE, JESSICA STOVEL

Some of you may have heard about the new MScPhm program offered by the Leslie Dan Faculty of Pharmacy at the University of Toronto. As inaugural students approach the 18-month mark of this 24-month program, and the first part-time student began this year, we would like to share our experiences to date. Here are the questions we are most frequently asked.

Why did you choose the MScPhm program?

(Jessica) After exploring hospital

pharmacy in several different clinical areas, I was interested in advancing my *clinical practice leadership* skills and exploring *clinical research* so that I can contribute to shaping pharmacist practice going forward. In addition, I was excited by the opportunity to further explore *teaching* as I have always been passionate about educating and mentoring. This program called to me as these three areas are critical to becoming an advanced practice leader who can help shape the practice of future pharmacists.

What has been your career path to date?

(Maria) After graduating in 2015 from Pharmacy at U of T, I completed a one-year hospital residency in Kingston, ON. After this, I returned to my hometown of Thunder Bay, where I worked two jobs in hospital and long-term care/community. In the hospital, I mostly worked in surgery and both inpatient and outpatient oncology.

A lot of people ask if residency is required for this program. Although I completed one and it is listed as “preferred” on the program website,

what is really needed is prior practice experience, so in short, residency is not a must.

(Jessica) I completed my HonBSc and BScPhm at U of T in 2003 and 2007, respectively, and then moved to London, ON to complete my hospital residency. As I valued their culture of education and mentorship, I accepted a position as a pediatric pharmacist there in 2008. I continued to work in London on a variety of services before moving back to Toronto for the MScPhm program.



REFLECTIONS ON THE MScPhm PROGRAM continued

Were you concerned about this program never having been offered before?

(Maria) Having graduated from the first cohort of the Entry to Practice PharmD degree program at U of T, I was not afraid of being in this program's first cohort. I was comfortable selecting this program from the Leslie Dan Faculty of Pharmacy knowing that they have a strong academic track record and infrastructure to support advanced clinical and research activities.

How are you involved with CSHP?

(Maria) From 2016-2019, I was on CSHP Ontario Branch Council as the Chapter Chair of Northwestern region. I continue to be involved with CSHP working with Vivian Lee as the CSHP OB Journal Club co-lead. I have recently rejoined Ontario Branch Council for

Membership Committee as it is meaningful to be engaged with fellow health care institution pharmacists.

(Jessica) I have been a CSHP member since 2006 and have attended six CSHP PPC conferences and presented posters. In addition, I was a Resident Representative on the Educational Services Committee in 2007-2008 and moderated different presentations at the 2008 CSHP PPC Conference.

The program requires a clinical practicum. What has this experience been like?

(Maria) My clinical area is adult oncology under the supervision of Dr. Carlo De Angelis at the Sunnybrook Odette Cancer Centre. The clinical practicum can be shaped and tailored to your interests, and I was fortunate enough to have

my supervisor support me in these arrangements. I continue to be involved with supportive care and chemotherapy-induced side effect management of ambulatory cancer patients. I also managed patients in the cannabis consultation service, and this has transitioned to a supervisory role of pharmacy students and building on several program improvements. One rewarding experience has been collaborating with the oncology hematologist in the Cancer Associated Thromboembolism (CAT

Clinic, which is one of my fond interests. Here, I am working to integrate the role of the pharmacist and developing resources with updated guidelines for our hospital intranet. There may be further opportunities to study direct oral anticoagulant use in this area.

The clinical practicum has some required assignments as well. There are required presentations, practice reflections, a clinical writing assignment, a patient care challenge proposal, and formal evaluations.





[REFLECTIONS ON THE MScPhm PROGRAM continued]

(Jessica) My supervisor for the MScPhm program is Dr. Beth Sproule at the Centre for Addiction and Mental Health (CAMH). My clinical practicum has provided me with much opportunity to be taught and mentored by an exceptional leader in my field of interest.

What I have particularly liked about my clinical practicum experience is that my supervisor has chosen my clinical opportunities based on my expressed interests. I thoroughly enjoyed my first clinical opportunity on the Child and Youth Unit at CAMH as it allowed me to further explore my interest in pediatric/youth psychiatry. I also spent time working with an Interprofessional Pain and Addiction Recovery Clinic, as well as the Concurrent Outpatient Medical and Psychosocial Addiction Support Service. Both of these clinical areas match my longstanding interest in

substance use disorder and pain management.

I also appreciated how flexible my practicum has been as it enabled me to continue my clinical work while I completed course work.

To help with the development of my clinical and research acumen, my supervisor also encouraged me to complete the Collaborative Specialization in Addictions Studies (CoPAS), which has provided me with additional learning and connections with leaders in my field of interest.

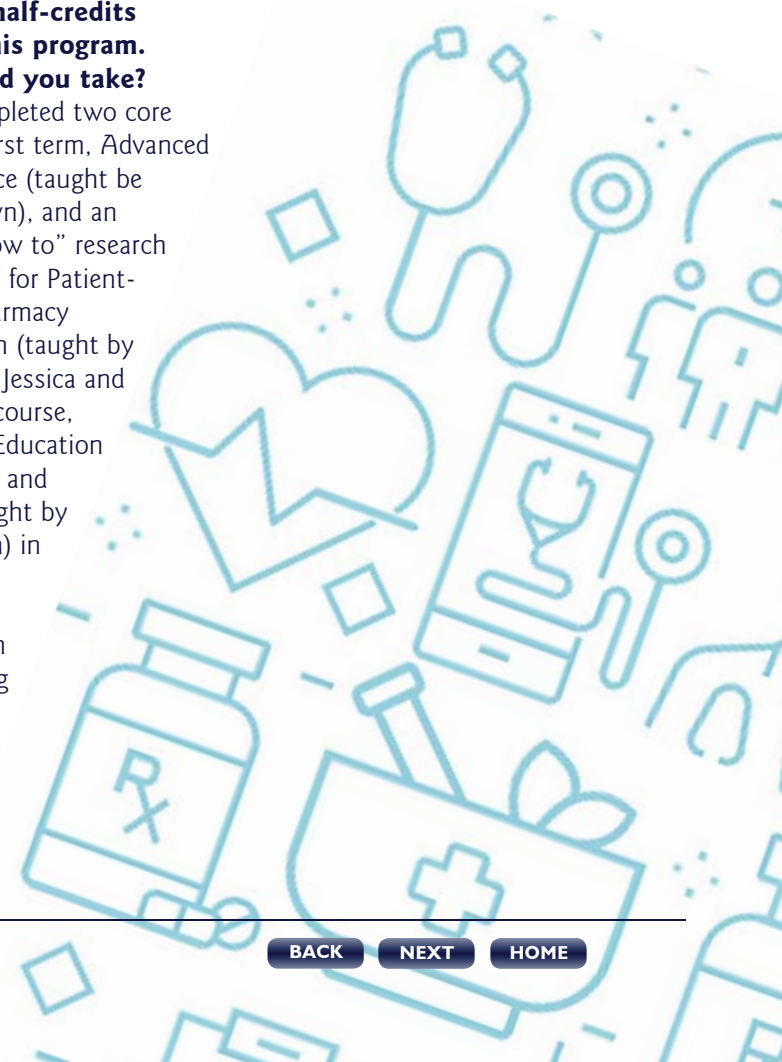
Are you paid for your clinical work or to conduct research?

No. You are not funded by a research grant stipend, nor are you paid for your clinical work. However, you do receive a form of remuneration in terms of the rich learning experiences you gain through this program.

There are six half-credits required for this program. Which ones did you take?

(Maria) We completed two core courses in our first term, Advanced Pharmacy Practice (taught by Dr. Natalie Crown), and an introductory “how to” research course, Methods for Patient-Focused and Pharmacy Practice Research (taught by Dr. Lee Dupuis). Jessica and I took the third course, Introduction to Education Theory, Practice, and Scholarship (taught by Dr. Zubin Austin) in the Spring term.

It may have been ambitious, taking three condensed Spring courses at once, but I managed.





REFLECTIONS ON THE MScPhm PROGRAM continued

Two electives that I took during this time were Special Topics in Pharmaceutical Sciences (Knowledge Synthesis) and Introductory Biostatistics. I found the courses useful as the assignments were practical for my professional work. As part of the knowledge synthesis course, I wrote a protocol for a scoping review, and for Biostatistics, I completed an analysis that served as a poster abstract at two conferences. The final elective course I took in the fall 2020 term was Introduction to Qualitative Research Methods in the Health Sciences. Taught by a leading qualitative researcher and past Dean, Dr. Heather Boon, this course helped me develop and refine my MScPhm research project using qualitative methods.

(Jessica) My first elective was Multidisciplinary Aspects in

Addictions (taught by Dr. Hayley Hamilton and Dr. Michael Chaiton) within the CoPAS program. Similar to Maria, my second elective was Introduction to Qualitative Research Methods in the Health Sciences. For my final elective, I took advantage of the opportunity to enroll in Corruption in the Health Sector and Anti-corruption Policies and Tools (taught by Dr. Jillian Kohler). This was a fascinating course to take during the COVID-19 pandemic and the numerous opportunities for corruption it presents for the health sector.

How has the pandemic affected your learning?

(Jessica) Our classes at the Faculty ended in March and it was unfortunate that we could not complete those fundamental courses in a very interactive and engaging environment. However,

both professors ensured that our curriculum and learning was not reduced as we continued to have guest lecturers and our remaining classes via Zoom synchronously. While unexpected, I believe the pandemic has resulted in the following opportunities:

- Asynchronous and synchronous classes, which allowed for flexibility during an otherwise challenging and stressful time.

- Allowed me to explore creating online lectures during my various teaching opportunities.

I have been on site for my clinical practicum since August without interruption.





REFLECTIONS ON THE MScPhm PROGRAM continued

What else is new for the MScPhm program in the future?

The MScPhm program is now being offered on a part-time basis! Candidates are able to take up to 4 years to complete the requirements. Tracy Zhang is a pharmacist currently working at Baycrest Health Sciences. She will be completing her clinical practicum at the ambulatory hemodialysis clinic at the University Health Network. Her research interests include exploring the pharmacist's role and effective interdisciplinary collaboration in ambulatory care.

"As the program's first part-time student, I feel honoured to be afforded the opportunity to put into practice what I learn in real-time as I work alongside studying. While I haven't formally started classes yet,

I have started to plan my research project and I'm excited for what's to come!"

Final thoughts from current students

It would be remiss if we did not acknowledge the opportunities this program has presented so far. Our affiliation with the Faculty has allowed us to gain teaching experience as Teaching Assistants, present at events such as the Centre for Practice Excellence (CPE) and attend biweekly seminar sessions on student research projects. In addition, it has been valuable to engage with the other Pharmaceutical Sciences graduate students (as virtual allows) as Jessica and I are both on the Graduate Research in Progress (GRIP) student conference planning committee. The Faculty has been very supportive, and it has been rewarding to work

directly with the leaders in this profession on an academic level.

Looking back on where we have grown the most, it is gaining confidence in how to conduct research when faced with a clinical practice problem, or to address a research gap. By nature of the work, we have gained project management skills, are more effective presenters, and are more efficient with searching and interpreting the vast literature.

For more information about the MScPhm program, visit <https://www.pharmacy.utoronto.ca/programs/graduate-department-pharmaceutical-sciences/master-science-pharmacy-mscphm>

With thanks to Tracy Zhang





Andrea Beaman

CAREER CORNER – STERILE COMPOUNDING PHARMACIST

IN THIS NEW ARTICLE SERIES TO CONTINUE IN EACH ISSUE OF HPO WE WILL EXPLORE THE DIVERSITY OF INTERESTING PRACTICE AREAS OF PHARMACISTS AND PHARMACY TECHNICIAN MEMBERS ACROSS ONTARIO. PHARMACISTS AND PHARMACY TECHNICIANS WILL OFFER INSIGHT INTO THEIR ROLES AND ADVICE TO OTHERS INTERESTED IN DEVELOPING THEIR CAREERS. SEND SUGGESTIONS FOR A POSITION YOU WOULD LIKE TO SEE HIGHLIGHTED, OR NOMINATING COLLEAGUE FOR INTERVIEW, TO CSHP.OB.COMMUNICATIONS@GMAIL.COM.

Name:

Vivian Lee

Training:

B.Sc.Pharm at University of Waterloo (2012).
Certificate programs in sterile compounding (ASHP), anticoagulation (University of Florida) and knowledge translation (Sick Kids).

CSHP member since:
2011



What is your current position?

I recently started a new position as a Pharmacist at The Ottawa Hospital covering Medicine and Surgery, and will be starting a Drug Information position with the Ottawa Valley Regional Drug Information Service (OVRDIS).

Previously, I was the CIVA Pharmacist Lead at the Peterborough Regional Health Centre (PRHC) where I provided oversight on sterile compounding practices and ensured our practice site complied with NAPRA and USP compounding standards. In this role, I was responsible for:

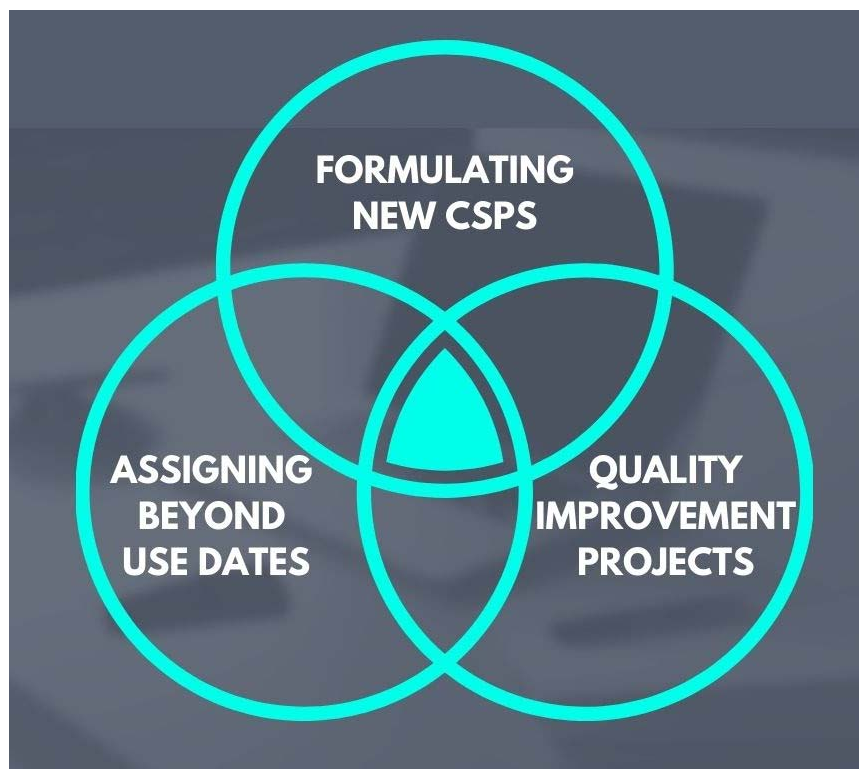
- **assigning beyond-use dates** to compounded sterile products (CSPs) based on review of stability literature and drug compendia
- **formulating new CSPs** during drug shortages or to support emerging clinical indications - examples include propofol pooling, replacement of commercially available IV heparin when it was backordered, and high concentration insulin for calcium channel blocker overdose in the ICU
- **quality improvement projects** – examples include working with pharmacy and the NICU nurses



[CAREER CORNER continued]

to improve sterility of pharmacy-prepared dextrose-saline IV fluids, developing practice standards around handling of multidose and single use vials for pharmacy and nursing, and educating peers about global standards for syringe volumetric accuracy in context of the small volume COVID-19 vaccines

The role of a sterile compounding pharmacist involves an understanding of the interplay between chemistry (drug stability), microbiology/microbial risk (sterility), operational standards (NAPRA, USP, clean room practices), medication safety, IV drug library considerations and patient care needs.



What led you to this role?

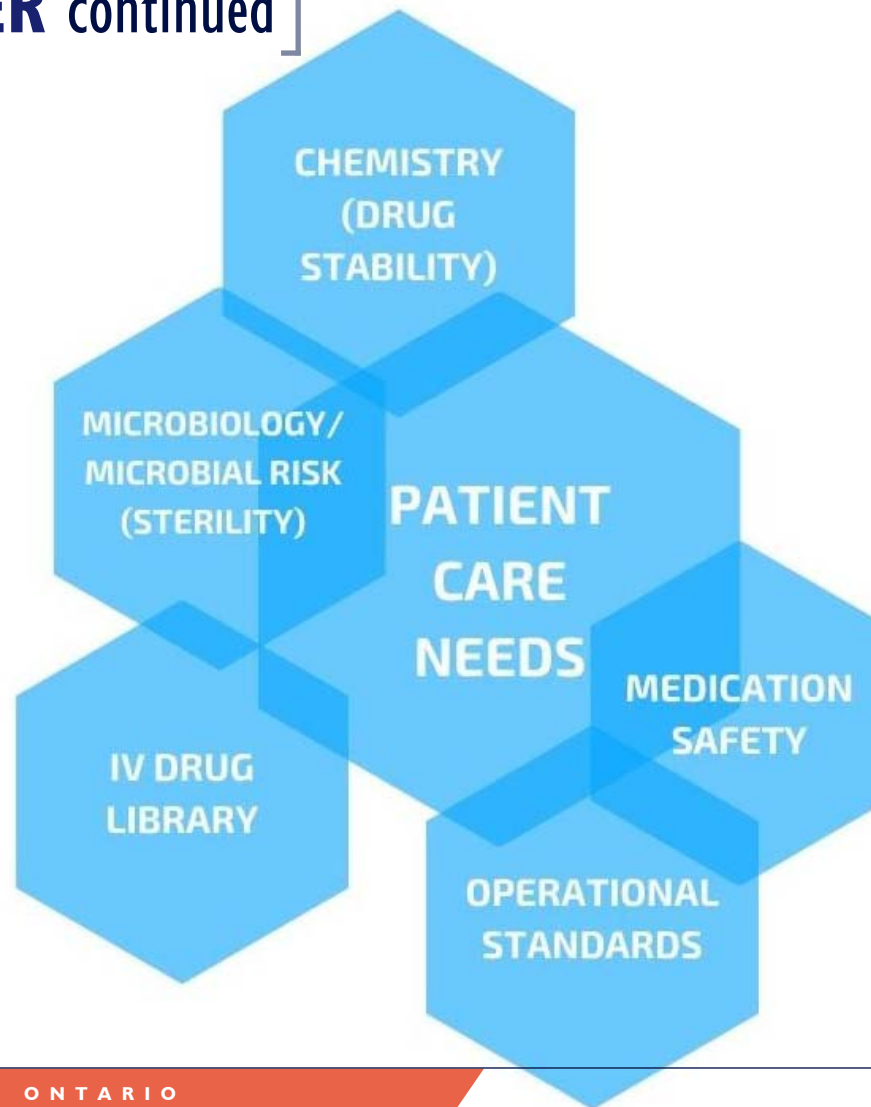
The CIVA Pharmacist Lead role was not a formal title when I started at PRHC in 2012. The publication of the NAPRA Standards for Sterile and Non-Sterile Compounding, as well as the Thiessen Report, caused increased scrutiny of compounding practices. My passion for utilizing the literature as an important tool to problem-solving led me to dig deeper into various issues and access resources as they became available. Over time my involvement in sterile compounding at PRHC evolved to become more formalized. At some organizations the CIVA lead role is performed by a Pharmacy Technician.



[CAREER CORNER continued]

Is this where you saw yourself when you started? Any thoughts on your career journey?

I recall that my expectations of clinical practice after graduation mimicked the practice backgrounds of faculty and preceptors I learned from. This could have looked like a Clinical Specialist role or other specialized clinical practice environment. Looking back, I would not have imagined myself in a sterile compounding role – let alone realize it existed. I've come to realize that every career path is different, and that path need not be defined by a single job title. Discovering that path can take years because it requires a good understanding of our authentic selves – the types of problems we enjoy solving that motivate us and pique our curiosity to learn more, and the ones we don't necessarily feel this way with. Letting our curiosities pave the way can lead to



new, unexpected opportunities to learn new things, develop new skills, and contribute meaningfully to the profession.

What resources would you recommend to someone interested in increasing their knowledge in this area?

- NAPRA Sterile and Non-Sterile Compounding standards - freely available online
- USP Standards – subscription-based
- Trissels IV Compatibility – subscription-based
- [USP COVID-19 Vaccine toolkit page](#) – a relevant living example of the important implications of compounding on patient care
- OCP
- [CSHP Compounding resources](#)
- ISMP Canada and U.S.
- Critical Point



[CAREER CORNER continued]

- Access experts in the field
 - I reached out to a presenter of an ASHP Sterile Compounding Course I attended and established a valuable connection for exchange of learning and ideas
 - I advocated for and chair the CSHP Compounding PSN on QID.io to share information and promote conversations among CSHP members with similar interests

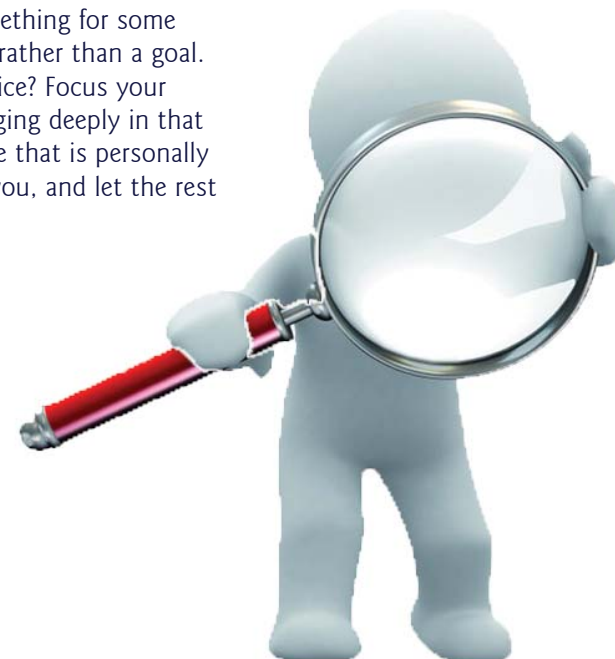
What advice or tips do you have for others interested in a new role?

1. Offering to help solve problems that interested me have led to new opportunities and responsibilities. Take the time to understand what is going on in your environment and explore how you can help, even when it may not be part of your defined job duties. By doing this, you are building your performance currency.
2. Participating in compounding discussions on the CSHP QIDs and ASHP forums have made me new Canadian and American friends – awesome! Take the time to build meaningful connections and relationships with those who share your interests. By doing this, you are building your relationship currency.

Optimize both, and leaders will naturally be interested to explore what you have to offer.

And as a final note, don't be caught up about 'finding your passion' in pharmacy. Passion is sometimes an outcome that is realized after working at something for some period of time, rather than a goal. So my best advice? Focus your efforts on engaging deeply in that project/initiative that is personally meaningful to you, and let the rest take its course.

Interviewed by
Andrea Beaman,
Hospital Pharmacy in Ontario
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Recommendations in this document apply to patients >18 years of age. Click the medication names in the table to view the associated [science briefs](#).



Recommendations are based on the best available data and may change as additional data becomes available.



Infectious diseases consultation (where available) is recommended before any investigational treatment is offered to a patient with COVID-19 outside of a clinical trial.



Click for [dosing and pharmacologic considerations](#) for medications approved or under investigation for management of COVID-19.

SEVERITY OF ILLNESS

RECOMMENDATIONS

Critically Ill Patients

Patients requiring ventilatory and/or circulatory support, including high-flow nasal oxygen, non-invasive ventilation, invasive mechanical ventilation, or ECMO. These patients are usually managed in an intensive care setting.

- **Dexamethasone** 6 mg PO/IV daily for 10 days (or until discharge if sooner) is **recommended** for critically ill patients.
- **Tocilizumab** is **recommended** for patients who are critically ill with suspected or confirmed COVID-19, who: are on optimal dexamethasone therapy; AND are within 14 days of hospital admission (or within 14 days of a new COVID-19 diagnosis if nosocomially acquired).
 - In light of ongoing drug shortages, a fixed dose of 400 mg should be used for all eligible patients.
 - In light of ongoing drug shortages, a second dose of tocilizumab should not be given to any patient.
- **Remdesivir** is **not recommended** for critically ill patients with COVID-19 receiving mechanical ventilation.
- ▲ In patients with suspected or confirmed COVID-19 requiring high-flow oxygen (i.e., oxygen by mask, oxygen by high-flow nasal cannula, or non-invasive ventilation), **remdesivir** 200 mg IV on day 1, then 100 mg IV daily for 4 days **may be considered**.
- ◆ **Bamlanivimab** is **not recommended outside of clinical trials**.

- ◆ **Ivermectin**: There is **insufficient evidence** to support the use of ivermectin in the treatment of critically ill patients with COVID-19 outside of clinical trials or where other indications would justify its use. Individuals who require ivermectin for other established non-COVID indications may use it if they develop COVID-19.
- ◆ **Vitamin D**: There is **insufficient evidence** to support the use of vitamin D in the treatment of critically ill patients with COVID-19 outside of clinical trials. Individuals who are taking vitamin D for other established, non-COVID indications may continue using it if they develop COVID-19.
- ◆ **COVID-19 convalescent plasma** is currently **unavailable** in Canada in critically ill patients and is unavailable outside of clinical trials.
- ◆ **Interferon** (with or without combination of lopinavir-ritonavir and ribavirin) is **not recommended outside of clinical trials**.
- Bacterial co-infection is uncommon in COVID-19 pneumonia at presentation. **Do not add empiric antibiotics for bacterial pneumonia** unless bacterial infection is strongly suspected. Continue empiric antibiotics for no more than 5 days, and de-escalate on the basis of microbiology results and clinical judgment.

Moderately Ill Patients

Patients newly requiring low-flow supplemental oxygen. These patients are usually managed in hospital wards.

- **Dexamethasone** 6 mg PO/IV daily for 10 days (or until discharge if sooner) is **recommended** for moderately ill patients.
- **Tocilizumab** is **recommended** for patients who are moderately ill with suspected or confirmed COVID-19, who: have evidence of systemic inflammation, defined as a CRP 75 mg/L or higher; AND have evidence of disease progression (i.e., increasing oxygen or ventilatory requirements) despite 24-48 hours of optimal dexamethasone therapy; AND are within 14 days of hospital admission (or within 14 days of a new COVID-19 diagnosis if nosocomially acquired).
 - In light of ongoing drug shortages, a fixed dose of 400 mg should be used for all eligible patients.
 - In light of ongoing drug shortages, a second dose of tocilizumab should not be given to any patient.
- **Remdesivir** 200 mg IV on day 1, then 100 mg IV daily for 4 days is **recommended** for patients who are moderately ill with suspected or confirmed COVID-19.
- ◆ **Bamlanivimab** is **not recommended outside of clinical trials**.

- ◆ **Ivermectin**: There is **insufficient evidence** to support the use of ivermectin in the treatment of moderately ill patients with COVID-19 outside of clinical trials or where other indications would justify its use. Individuals who require ivermectin for other established non-COVID indications may use it if they develop COVID-19.
- ◆ **Vitamin D**: There is **insufficient evidence** to support the use of vitamin D in the treatment of moderately ill patients with COVID-19 outside of clinical trials. Individuals who are taking vitamin D for other established, non-COVID indications may continue using it if they develop COVID-19.
- ◆ **COVID-19 convalescent plasma** is **not recommended outside of clinical trials** (unavailable outside of clinical trials).
- ◆ **Interferon** (with or without combination of lopinavir-ritonavir and ribavirin) is **not recommended outside of clinical trials**.
- ◆ **Antibacterial therapy** is **not routinely recommended outside of clinical trials** or where other indications would justify its use.

Mildly Ill Patients

Patients who do not require new or additional supplemental oxygen from their baseline status, intravenous fluids, or other physiological support. These patients are usually managed in an ambulatory/outpatient setting.

- **Dexamethasone** is **not recommended** for mildly ill patients.
- **Tocilizumab** is **not recommended outside of clinical trials** for patients who are mildly ill with suspected or confirmed COVID-19.
- **Remdesivir** is **not recommended** for patients who are mildly ill patients with suspected or confirmed COVID-19.
- ◆ **Bamlanivimab** is **not recommended outside of clinical trials**.

- ◆ **Ivermectin**: There is **insufficient evidence** to support the use of ivermectin in the treatment of mildly ill patients with COVID-19 outside of clinical trials or where other indications would justify its use. Individuals who require ivermectin for other established non-COVID indications may use it if they develop COVID-19.
- ◆ **Vitamin D**: There is **insufficient evidence** to support the use of vitamin D in the treatment of mildly ill patients with COVID-19 outside of clinical trials. Individuals who are taking vitamin D for other established, non-COVID indications may continue using it if they develop COVID-19.
- ◆ **COVID-19 convalescent plasma** is **not recommended outside of clinical trials** (unavailable outside of clinical trials).
- ◆ **Interferon** (with or without combination of lopinavir-ritonavir and ribavirin) is **not recommended outside of clinical trials**.
- ◆ **Antibacterial therapy** is **not routinely recommended outside of clinical trials** or where other indications would justify its use.

NOT RECOMMENDED for any patient severity: ■ Hydroxychloroquine or chloroquine ■ Lopinavir/ritonavir

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<https://doi.org/10.47326/ocsat.cpg.2021.2.0>

<https://covid19-sciencetable.ca/sciencebrief/clinical-practice-guideline-summary-recommended-drugs-and-biologics-in-adult-patients-with-covid-19-version-2-0/>

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Congratulations to the following CSHP Ontario Branch members who reached the 25-year milestone at the end of the 2019/20 membership year. Thank you for your contributions to the profession and your continued support of CSHP OB!

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