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I N R E V I E W

HOSPITAL PHARMACY IN ONTARIO

WINTER ISSUE 2022

Canadian Society of
Hospital Pharmacists



Société canadienne des
pharmaciens d'hôpitaux

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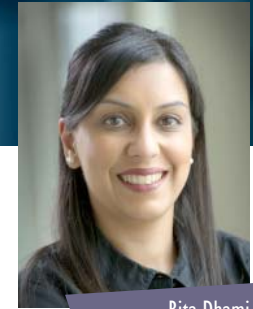
@cshp_ob

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[2021 PRESIDENTIAL ADDRESS]



Rita Dhami

It is an honour to accept the gavel and I'm humbled to serve as Ontario Branch President this year.

Firstly, I want to acknowledge Olivia Ng's leadership and contributions as the branch president this year. She has been integral to the important advances we have made towards operational efficiency through the Branch mergers, financial stability. Congratulations on successfully completing your presidential term and thank you on behalf of the membership!

To our outgoing Council members, I want to

acknowledge your efforts in aligning us with our goals as a Branch. Thank you for your dedication.

I wear a few different hats professionally and like many of others, the pandemic helped me to realize the things I truly value. Connectivity is one of them! Being "connected" in today's world, means something different - less mean face-to-face interactions and more media and technology sometimes blurring the boundaries between social and professional networks. Both online

and offline, being 'connected' facilitates productivity, constant learning, evolving, and sharing that is, for me, the most exciting and rewarding part of being "connected."

So let's continue to stay connected within our membership networks but also let's take some steps towards connecting with those outside our Branch. Suffice it to say that we are heading into a big year, emergence from the pandemic, health care reform, and an election on the horizon. As a Branch, our

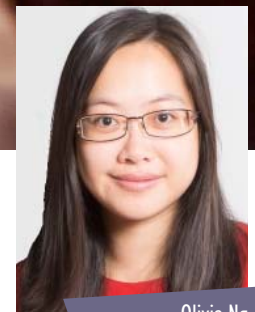
strategic objectives will be taking steps towards sustainability. But as they say, out of chaos comes opportunity. So as we begin to move forward, I am looking forward to leading CSHP-OB in finding our new "opportunities", establishing our "new normal", and connecting!

Thank you for the opportunity to serve as President, and I am welcoming the challenge and opportunity to help CSHP-OB work towards sustainability and thrive!

Rita Dhami
BScPhm, PharmD
President, CSHP-OB



[PAST PRESIDENT ADDRESS]



Olivia Ng

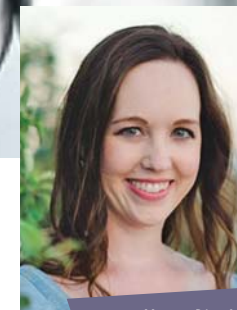
It has been a privilege serving as President for the branch during this time of change. **I would like to thank all outgoing Council members for your contributions and dedication, with special thanks to Megan Riordon, our outgoing Senior National Delegate, who has been such a fantastic link with National that she has been selected to be the Treasurer, and Samantha Yau, our outgoing Past President, for your strong advocacy efforts overseeing the external portfolio and for your mentorship of the exec team, including myself.** I would also like to extend a heartfelt thank you to Rita Dhami, our incoming President, who has been amazing jumping into the role and kindly covering for me when I had my little one. I know that Council is in

good hands with you. Over the last year, the branch continued to provide a vast variety of virtual events for our members, building on input provided in the previous year. We continued to provide educational opportunities, including journal clubs, primary care webinars and residency nights, along with our OHPMS, Annual Conference and Awards Night events. Thank you to all our volunteers for continuing to make these events possible and thank you to all our members for your time attending these events during another busy year. In the advocacy world, the branch was involved in providing the hospital voice regarding the emergency licensure of pharmacy graduates and for various OCP draft policies. Internally, council is restructuring the chapters to align with the rest

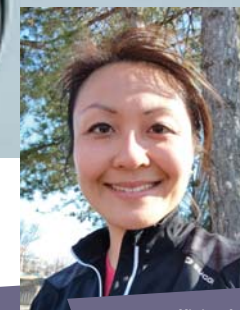
of the country and to improve efficiencies within council (see table for changes). We would not be here if it were not for the leadership and engagement of our outgoing council members. Thank you to Megan Riordon, our outgoing Senior National Delegate, who

has been such a fantastic link with National that she has been selected to be the Treasurer. Thank you to all outgoing Chapter, Committee Chairs and Liaisons for your contributions and dedication to the Ontario Branch Council. I know this is not goodbye – pharmacy is a very small world!

Former chapter	New chapter
Northern	NORTH: Merged Apr 2020
Northwestern	
Ottawa Valley	EAST: Merged Nov 2021
Quinte-St. Lawrence	
Lake Ontario East	
Lake Ontario West	CENTRAL: Merged Nov 2021
Georgian Bay-Simcoe	
Golden Horseshoe	WEST: Planned merger in 2022
Southwestern	
Metro Toronto	No change planned



Megan Riordon



Vivian Lee

[NATIONAL DELEGATES' REPORT]

CSHP IN 2021 - A CRITICAL YEAR OF SUSTAINED MOMENTUM

Throughout the past nearly 2 years of 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. CSHP has adapted to meet its members' needs and has found new opportunities to engage both existing and new members. We were pleased to represent Ontario Branch on the CSHP Board as your National Delegates at the October 2021 virtual Board meetings and National AGM. Here is a closer look at the top 6 national updates from CSHP:

1) **Strategy Towards Sustainability**

In 2019, CSHP announced its strategy towards sustainability with an almost \$1 million co-investment between National and the Branches between 2019 to 2023 to transform into a relevant, thriving and financially sustainable organization. This investment has been focusing on the key strategic areas of Professional Practice, Advocacy and Marketing & Communications. The pandemic has reprioritized some pieces of this strategy, but the fundamental plan remains on track because over the past year, we grew membership, engaged members, and reduced the operating budget.

Membership

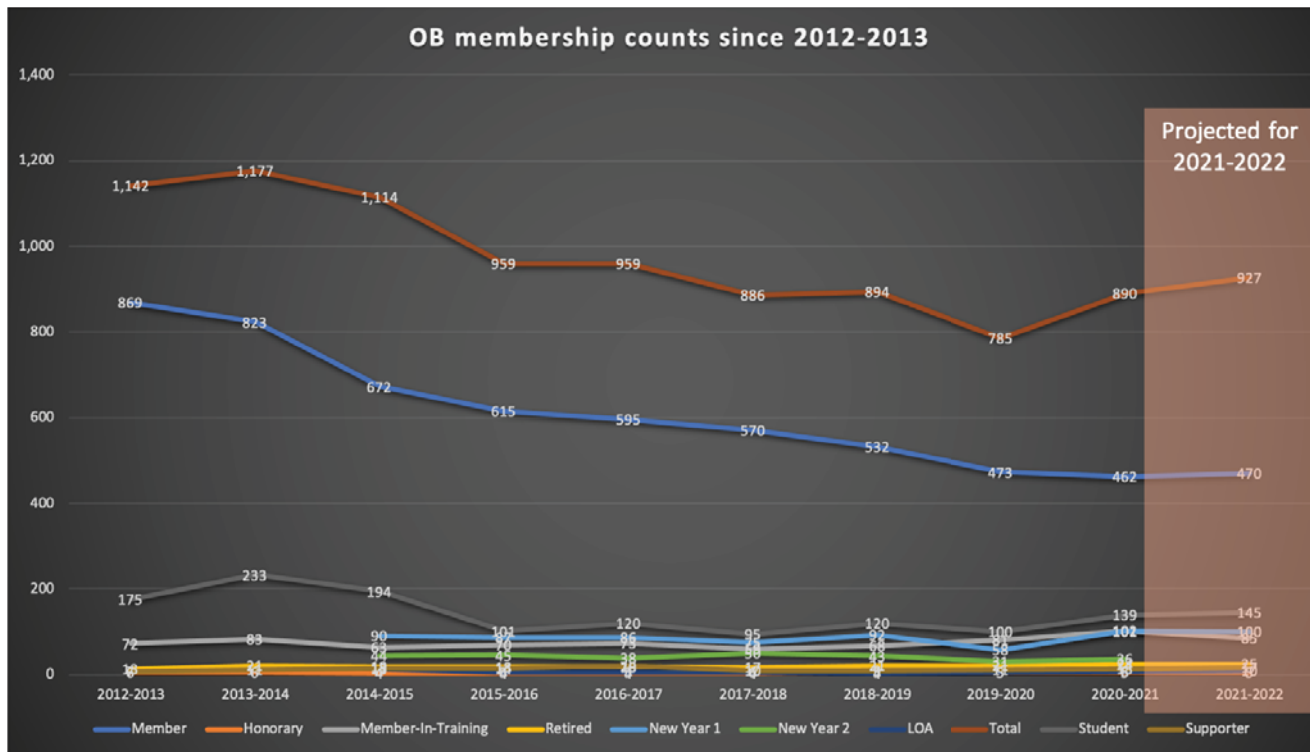
As of October 31, 2021, CSHP has reached 3,488 members, which is 99% of our target for the 2021-2022 membership year. Ontario Branch has reached 877 members thus far and is also on track to meeting and exceeding its target of 927. As seen below, since the 2019-2020 membership year, Ontario has been able to reverse the declining membership trend, with 1000 members within our reach. 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.





[NATIONAL DELEGATES' REPORT... continued]



from various platforms including:

- Over 800 attendees at CSHP's first ever virtual Together conference held in March 2021
- Nearly 400,000 PSN impressions via the QID platform, with top PSN activity in COVID-19 (Canada), Infectious Disease and Medication Safety
- Over 700 live webinar participants and over 1800 webinar views
- Nearly 10,000 social media followers

These are strong indicators that our members are utilizing the full benefit of engaging with the CSHP community, especially during these unprecedented times.

Engagement

Although the pandemic has

restricted networking opportunities to a virtual format, CSHP continues

to see strong membership engagement over the past year



[NATIONAL DELEGATES' REPORT... continued]

Financial Sustainability

CSHP is on track towards a balanced budget in 2023 and onwards, supported by growing membership numbers, revenue drivers including the Together conference and the new Pharmacy Residency Application Roadmap program (more on this program below), decreased expenses throughout the pandemic, and federal subsidies for COVID-19. We will see a planned deficit in 2021-2022, which is the 3rd year of planned deficit as per the strategic plan for reinvestment in the Society, followed by an anticipated balanced budget starting in 2023.

2) Pharmacy Technicians as Members

CSHP recognizes the integral role of pharmacy technicians in hospital pharmacy, with existing and emerging areas of specialization including drug

shortages, compounding, pharmacy informatics, and medication safety. At the October 2021 National AGM, members voted in favour of registered pharmacy technicians as a new CSHP membership category with full membership privileges. We look forward to engaging with our pharmacy technician colleagues to support their networking, education and advocacy needs. More information on membership categories and fee structures can be found on: <https://cshp.ca/site/mbr/membership-benefits/join?nav=member>



3) Professional Practice

2022 Together Conference

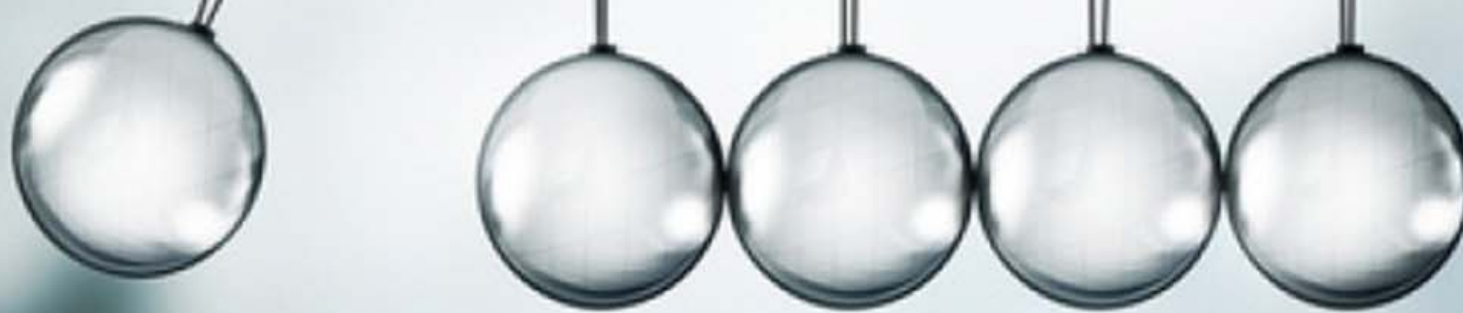
Continuing from the success of CSHP's inaugural Together conference held in March 2021, Together 2022

will be happening virtually from January 29 to February 6, 2022 with an exciting line-up of presentations, panel discussions, posters, exhibit halls, networking sessions and social events. Keynote and plenary speakers include Dr. Vibhuti Arya on structural racism and health equity, Kristin Flanary (also known as 'Lady Glaucomflecken') on supporting patients' families and co-survivors through secondary

trauma, Dr. Jen Gunter on science and misinformation on social media, Dr. Shimi Kang on the science of adaptability and resilience, Dr. James Makokis on addressing indigenous and Two-Spirit healthcare inequities,



Dr. Julia Moore on the science of cultivating trust, and Dr. Ubaka Ogbogu on building anti-racist and equitable health systems through inclusive governance. Registration and conference details can be found at <https://pheedloop.com/Together2022/site/home>. Hope to see you there!



[NATIONAL DELEGATES' REPORT... continued]

Education & Development (E&D) Committee

In late 2019, CSHP created two new committees to reinvigorate the professional practice vision of the Society - Education & Development (E&D) and Pharmacy Practice Vision (PPV). In September 2021, the E&D Committee successfully launched the Pharmacy Residency Application Roadmap, a paid program that provides prospective pharmacy residency candidates additional knowledge and experience needed to competitively apply for Year 1 and Year 2 pharmacy residency programs.

The program included didactic modules, mock interviews and curriculum vitae review sessions. According to post-program survey responses, most participants agreed or strongly agreed that they are prepared to apply to and interview for residency programs,

All times are ET.



- EVENT SCHEDULE -

	SAT, SEP 11	SUN, SEP 12
13:00	Application Process Ambulatory, industry, hospital	Residency Interview Preparation
13:30		
14:00	Break	Break
14:30	CV, Essay, & Letter of Intent	Post-interview Process
15:00		
15:30	Break	
16:00	Personal Branding Includes workshop	
16:30		
	SAT, SEP 25	SUN, SEP 26
08:55 - 17:15	Group Mock Interviews Throughout the day with times assigned by region	Group Mock Interviews Throughout the day with times assigned by region

and that they would recommend the program to others.

Potential future projects the E&D Committee will focus on include

a Hospital Pharmacy 101 module series that teaches foundational knowledge in hospital pharmacy practice, a critical appraisal course tailored for practicing pharmacists, and planning of a joint conference with Association des pharmaciens des établissements de santé du Québec (APES) on lessons learned during the COVID-19 pandemic.

Pharmacy Practice Vision (PPV) Committee

The PPV Committee is currently working on developing a Discharge Medication Management Toolkit that will guide the implementation of discharge-related bundled activities. This toolkit will highlight patient populations for prioritization, description of the activities, and strategies for implementation/development of a business case.



[NATIONAL DELEGATES' REPORT... continued]

4) National Membership Survey

Thank you to the 915 members and supporters across Canada who participated in the 2021 National Membership Survey. The feedback collected is crucial in helping CSHP tailor future programming and strategic planning to best meet the needs of members. Similar to

last year's survey results, most respondents were from Ontario (26%) and most practiced in tertiary (39%) and community (32%) hospital settings. Most respondents continue to completely or somewhat agree that CSHP provides good value for money, and a combined 96% of respondents rated their overall

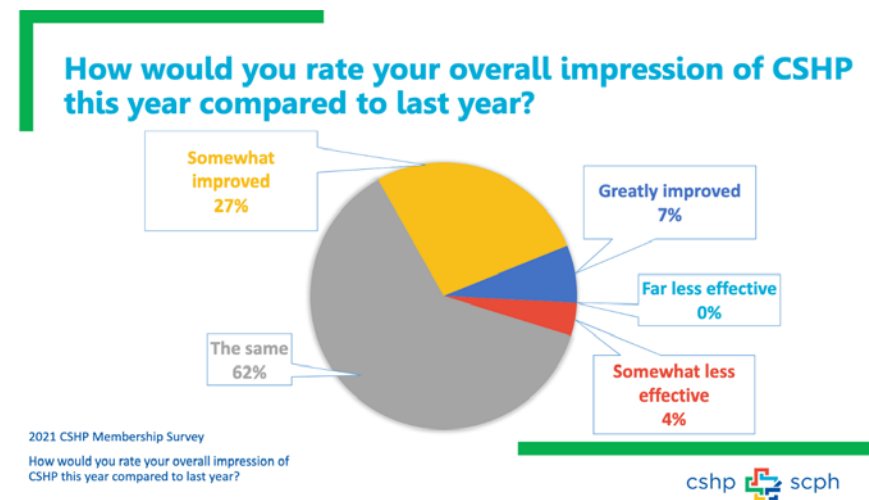
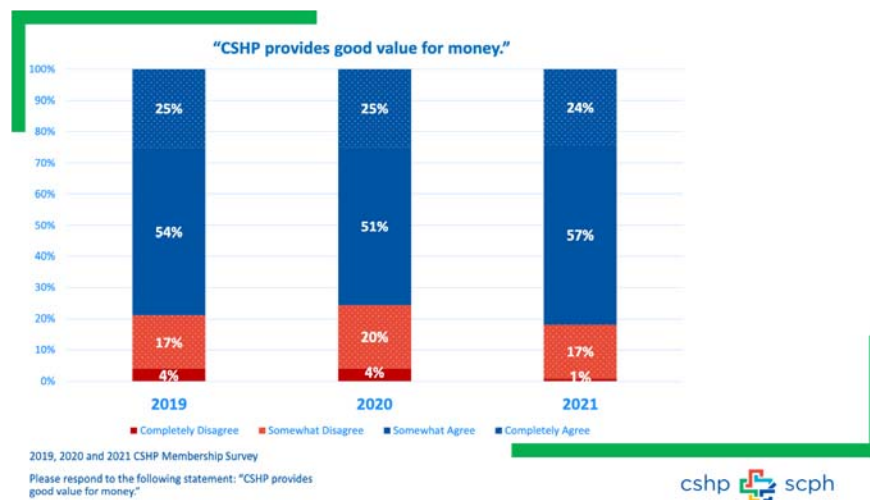
impression of CSHP as the same or improved compared to last year.

Highlights from Ontario Branch-specific survey results include:

- The top 3 preferred CE programs (excluding clinical topics):
 - Deprescribing
 - Leadership
 - Research topics

• The top 3 practice tools/resources CSHP should develop to support daily practice:

- Patient resources
- Hospital pharmacy promotion and education
- Drug information subscriptions discounts





[NATIONAL DELEGATES' REPORT... continued]

- The top advocacy issues that CSHP should address:
 - Pharmacist scope of practice
 - Drug shortages
 - Opioid crisis
 - Staffing ratios in hospital pharmacies

CSHP is conducting more detailed analyses of these survey results as they will help shape our strategic priorities over the next year.

5) Advocacy Initiatives

BPS recognition of CPRB Year 1 Residencies

Effective January 1, 2022, the Board of Pharmacy Specialties (BPS) will recognize Year 1 residencies accredited by the Canadian Pharmacy Residency Board (CPRB) as meeting part of their practice experience eligibility requirements for writing



CPRB | RB News

BPS to recognize Year 1 residencies accredited by the Canadian Pharmacy Residency Board

July 27, 2021

[Read More](#)

the BPS certification examination. This marks an important advocacy milestone for CSHP as CPRB's accreditation standards are the first from a non-American organization to be recognized as meeting BPS's eligibility pathways.

Health Canada Consultations

From April to September 2021, CSHP Chief Pharmacy Officer Christina Adams and the Professional Practice Team have responded to several consultations from Health Canada on:

- Commercial compounding
- Development of the Health Canada Biosimilars Handbook
- Drug-Device combination products
- National Strategy for Drugs for Rare Diseases
- Natural Health Products Labeling
- Medical Assistance in Dying

Further to this, the team is involved in ongoing drug shortage-related discussions with the Multi-Stakeholder Steering Committee on Drug Shortages and the Tier Assignment Committee on various

products including sarilumab, magnesium sulfate, and propofol.

CSHP was also invited to provide input into the McMaster Antibiotic Awareness and Capacity project, looking at ways to overcome barriers to adoption of newer antimicrobials on the Canadian market.

The professional practice team anticipates ongoing engagement with advocacy initiatives, especially as they pertain to drug shortages and the role of the hospital pharmacy in informing supply chain management.



[NATIONAL DELEGATES' REPORT... continued]

6) 2021-2022 Executive Committee

Please join us in welcoming the 2021-2022 Executive Committee:

President: Zack Dumont
President Elect: Sean Spina
Past President: Tania Mysak
Treasurer: Megan Riordon
Chief Executive Officer: Jody Ciufu

As Megan moves on to her new role at National as Treasurer, Vivian looks forward to continuing to represent Ontario Branch on the Board over the next year. Please reach out to Vivian with any questions or feedback on any of CSHP's ongoing programming and initiatives.
Best regards,

Megan Riordon

Treasurer, Former Ontario Branch Delegate

megan.riordon@kingstonhsc.ca

Vivian Lee

Ontario Branch Delegate

vivian.kt.lee@gmail.com



#CSHPTogether2022

Canada's Hospital Pharmacy Conference

Online: Jan 29 - Feb 6

ADVOCACY



COVID-19 VACCINATION

As Canada confronted increasingly contagious COVID-19 variants, CSHP [called for mandatory vaccination for all healthcare workers](#). CSHP argued that rigorous vaccination policies are a common-sense way to listen to the evidence and to protect patients and colleagues. "We stand in solidarity with all frontline healthcare workers and with the most vulnerable populations in our communities who will be disproportionately impacted by the ongoing health crisis," commented CEO Jody Ciufu.



RESPONSE TO HOSPITAL PROTESTS

In September 2021, protests against mandatory vaccinations took place outside hospitals across Canada. CSHP [spoke out against these disruptions](#) to the lifesaving services hospitals provide, stating: "Not only do these disruptions hinder patients from accessing care, they are deeply disheartening for healthcare workers, including pharmacy professionals, who have continuously put themselves at risk to serve the public throughout the pandemic. Patients and healthcare workers deserve safety and respect when they enter hospitals, not intimidation."



DRUG SHORTAGES

Drug shortages impact our members' practice every day, and CSHP continues to speak out against proposed policies that would exacerbate these shortages and put our patients at risk. This year Chief Pharmacy Officer Christina Adams [testified before the North Dakota State Legislature](#) to oppose drug importation from Canada. She also joined several panels of experts from both sides of the border, hosted by the Partnership for Safe Medicines, to educate American audiences about the potential impacts of importation on Canadian patient care.

HEALTH CANADA

CSHP continues to enjoy a strong relationship with Health Canada. This year we participated in numerous consultations on behalf of members, including discussions on commercial compounding, drugs for rare diseases, medical assistance in dying, natural health product labelling, and the *Food and Drug Regulations* and *Medical Devices Regulations*. CSHP also collaborated with Health Canada's Biosimilars Handbook Working Group to provide input on the production of a Biosimilar Biologic Drug Handbook for Health Care Professionals. CSHP remains committed to ensuring that hospital pharmacy voices shape policy at the federal level.



EQUITY AND ANTI-RACISM

This year CSHP strengthened our advocacy for equity and anti-racism. In our 2021 member survey, 27% of respondents indicated that they identify as part of an equity-seeking group, and CSHP is committed to speaking out along with our members not only as professionals but as people. Observing events such as Pride Month and the first official National Day for Truth and Reconciliation, CSHP's communications amplified members' voices and shared educational resources. The CSHP Executive Commentary in the *Canadian Journal of Hospital Pharmacy*, endorsed by the Board, acknowledges systemic racism in healthcare and calls on members to commit to addressing these inequities. We also called for the elimination of the racist term "Red Man Syndrome," used to describe the syndrome of histamine release caused by rapid infusion of vancomycin and the erythematous flushing that results in patients with light skin.

We also began the conversation to create meaningful land acknowledgement practices for the Society, CSHP members, branches, and the Board see truth and reconciliation as an important priority. Equally important is understanding that forging genuine, safe, and transformative relationships and communication channels take time. Next year we'll work to bring together CSHP, the Canadian Pharmacists Association, and the Association of Faculties of Pharmacy of Canada to approach the Truth and Reconciliation Commission's Calls to Action from a profession-wide perspective. We also plan to convene a working group, with Indigenous leadership at the centre, to advise on CSHP's next steps; this group will be guided by responses to the 2021 national membership survey's questions regarding members' needs for resources and educational opportunities on health and Indigenous cultures.



As a body of healthcare professionals, CSHP sees the grave harms the Canadian healthcare system has caused and continues to cause Indigenous peoples and people of colour. We recognize that we are accountable for changing the systems and institutions in which we work. The racism in our workplaces is unacceptable—the trauma, abuse, and indignity must stop. The Board calls on CSHP members to join us in committing to fight systemic racism wherever we encounter it... Together, our community is well-equipped to fight for equity, and each one of us has a role to play in making racism in health care a relic of the past."

CSHP Executive Commentary in the *Canadian Journal of Hospital Pharmacy*

PROFESSIONAL PRACTICE



PRACTICE GUIDANCE

This year CSHP published the *Compounding Briefing Series* and the *Cannabis for the Hospitalized Patient: Best Practices Document*. These publications provide concrete recommendations for members seeking excellence in patient care, drawing on the collective knowledge of our community to advance pharmacy practice across Canada.

PHARMACY SPECIALTY NETWORKS (PSNs)

Members describe PSNs as a "collective brain". They're excellent resources for asking practice questions, seeking and sharing advice, and learning about practice across the country. Our 30 PSNs, including the open-access COVID-19 PSN, continue to be thriving forums for knowledge exchange and community support.

TOTAL CSHP MEMBERS REGISTERED IN PSNS
1,904

TOTAL PSN ENGAGEMENTS
34,839

WEBINARS

In the early days of the COVID-19 pandemic, CSHP launched a series of webinars to respond to the need for timely and up-to-date information. These webinars proved so popular that CSHP has continued to organize regular opportunities for members to share their expertise on a wide range of clinical topics. In the 2021 national membership survey, 85% of respondents indicated that webinars highlighting success stories or innovative practices are a primary way CSHP can support information-sharing. Webinars support practice excellence while keeping our community connected from coast to coast to coast.

CSHP STUDENTS

This year, CSHP welcomed six pharmacy students to the national office on non-clinical rotations, co-op terms, and internships. With the Professional Practice Team's mentorship, our students participated in CSHP's advocacy and research activities to enhance their knowledge of pharmacy at the national level. From providing the Board with research briefings on land acknowledgements to writing popular biweekly "Clinical Pearls" and "Resource Spotlight" articles for the Interactions newsletter (on topics such as deprescribing, gender-affirming therapy, and Vaccine-Induced Immune Thrombotic Thrombocytopenia), students' contributions have directly benefitted CSHP members.



In the CSHP office, I have networking and mentorship opportunities at every interaction. I work closely with professional practice specialists who have years of experience working as hospital pharmacists, so every day I receive feedback from a hospital pharmacist's lens. In my opinion, this is one of the best mentorship opportunities a student can receive outside of the classroom."

Mariam Imran, Professional Practice intern 2021



TOP PSN ACTIVITY:

October 2020 to September 2021

OPEN-ACCESS COVID-19 PSN

111,872 impressions and **4,614** members

INFECTIOUS DISEASE PSN

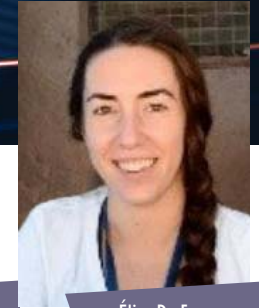
19,288 impressions and **585** members

MEDICATION SAFETY PSN

10,567 impressions and **395** members



Cheyenne Matinnia



Élise De Francesco

EDUCATION SESSION SUMMARY

In November 2021, we held our 73rd Annual CSHP Ontario Education Conference. We continued the format of weekly virtual sessions, which was a continued success! Each weekly session included two different talks on a variety of topics. The talks encompassed hospital practice, primary care, and leadership practices. The online platform once again allowed participants from across the province to join the sessions.

We would like to begin by thanking all of the speakers for sharing their time and expertise and providing valuable education to the attendees. We would like to thank Anne Stacy for her administrative support in making this event possible.

The education sessions this year included:

- Management of Heart Failure; Update from the 2021 CCS/CHFS Heart Failure Guidelines (Joey Champigny)
- Pharmacists' Expanded Scope of Practice and clinical services (Allan Mills, Megan Riordon, Connie Lukinuk, Winnie Seto)
- How to manage drugs in special populations when there is limited/no data (Bassem Hamandi)
- Neurodevelopmental considerations of analgesics and sedatives in a pediatric population (Rana Khafagy)
- CAMH Guidance for Pharmacists in Managing Opioid Agonist Treatment during the COVID-19 Pandemic & Post-Pandemic Implications (Beth Sproule, Roshina Babaei-Rad)
- Practice tool: Stress management/mitigating burnout in pharmacists (Maria Zhang)
- Antifungal spectrum/review [MOA, PK/PD, ADRs] (Jennifer Curran)
- Management of asthma [new CTS guidelines on mild asthma in 2021 and 2020 GINA guidelines] (Christine Truong)

We would also like to thank our sponsors this year. It is only with their support that the conference is made possible each year:

- Ontario College of Pharmacists (Gold Sponsor)
- Sterinova (Gold Sponsor)
- Sanofi (Gold Sponsor)
- BD (Gold Sponsor)
- Teva (Conference Supporter)
- Pfizer (Conference Supporter)
- HealthPro (Conference Supporter)

Last, but not least, we would like to thank all of our student volunteers and the members of the Education Committee for all their hard work:

- Helen Huynh
- Elaine Shang
- Celine Huab
- Randilynne Urslak
- Rana Khafagy
- Sammu Dhaliwall
- Ida Famiyeh
- Fulbert Fu
- Marie-France Gauthier
- Debbie Merrill
- Christopher Chiu

Sincerely,
Cheyenne Matinnia and
Élise De Francesco
Education Committee Co-Chairs

CSHP ONTARIO BRANCH 2021 AWARD WINNERS

Canadian Society of
Hospital Pharmacists



Société canadienne des
pharmaciens d'hôpitaux



73rd CSHP ONTARIO BRANCH AWARDS CEREMONY 2021



E. AMY ECK AWARD

Hospital/Outpatient Pharmacy-Based Project

Julie Choudhury, PharmD
Sunnybrook Health Sciences Centre



Improvement Project in an Organization NICU Antimicrobial Stewardship.



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ONTARIO BRANCH LITERARY AWARD

Therapeutic Review or Case Report

Dr. Denise Kreutzwiser, BScPhm, PharmD, ACPR
St. Joseph's Hospital, London



Methadone for Pain Management: A Pharmacotherapeutic Review.



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ONTARIO BRANCH LITERARY AWARD

Original Research

Marisa Battistella, PharmD
University Health Network - Toronto General Hospital



Development and Validation of Nine Deprescribing Algorithms for Patients on Hemodialysis to Decrease Polypharmacy.

APOTEX
Innovating for
patient affordability

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CSHP ONTARIO BRANCH 2021 AWARD WINNERS continued

BILL WILSON PATIENT SAFETY AWARD



Dr. Danette Beechinor, BScPharm, PharmD, CHPE,
Dr. Patti Madorin, BScPhm, & **Dr. Becky Wright**, BSc, PharmD
Sunnybrook Health Sciences Centre



IV Drug Therapy Library for Pumps: Quality Improvement Approach, Using Patient Data to Reduce Nuisance Alerts.



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INNOVATIVE INFORMATION TECHNOLOGY AWARD



Chole Campbell, RPh, ACPR & **Dr. Joyce Totton**, PharmD, ACPR
North West Telepharmacy Solutions



Implementing a new Medication Order Management platform to facilitate expanded pharmacy service hours in rural Ontario Hospitals.

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DOUGLAS J. STEWART AWARD



Jennifer Smith, BScPhm, RPh
Trillium Health Partners



Inpatient COVID-19 Vaccination Program



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GORDON MURRAY ONTARIO BRANCH CONTRIBUTION AWARD



Vivian Lee, BScPhm
The Ottawa Hospital



Long-term outstanding contributions to the Branch.



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CSHP ONTARIO BRANCH 2021 AWARD WINNERS continued

DAN DASKO PHARMACY ADMINISTRATOR AWARD



Régis Vaillancourt, RPh
Children's Hospital of Eastern Ontario



Recognizing outstanding hospital pharmacy administrators.



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STERIMAX INC.

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ARTEMIS DIAMANTOUROS MENTORSHIP AWARD



Karen Cameron, BScPhm, ACPR
Leslie Dan Faculty of Pharmacy - University of Toronto
North Simcoe Muskoka Specialized Geriatric Services



For significant contributions to the profession of pharmacy through teaching or mentorship.

 **HEALTHPRO**

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teva

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HOSPITAL PRACTICE IN A RURAL SETTING AWARD



Nasim Daraeifar, BSc, BScPhm
Middlesex Hospital Alliance



Recognizing a candidate who has made a demonstrated impact on the safety and quality of pharmacy services provided in a geographically isolated or rural practice setting.

NEW HOSPITAL PHARMACY PRACTITIONER AWARD



Superna Ramesh, PharmD, RPh, ACPR
Sunnybrook Health Sciences Centre



Recognizing a newly practicing pharmacist who has made an exceptional contribution to hospital pharmacy through patient care innovation, education, publications, or participation in CSHP activities.

CSHP ONTARIO BRANCH 2021 AWARD WINNERS continued

WILLIAM MCLEAN CLINICAL PHARMACIST AWARD



Sharon Yamashita, BScPhm, ACPR, PharmD, FCSHP
Sunnybrook Health Sciences Centre



Recognizing a CSHP Member who has demonstrated outstanding skills in clinical practice and education.



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ONTARIO BRANCH PATIENT CARE GRANT



Chris Fan-Lun, BScPhm, ACPR, BCGP & **Superna Ramesh**, PharmD, RPh, ACPR
Sunnybrook Health Sciences Centre



Evaluating a Quality Improvement Initiative of Pharmacist-Led Prescribing of Zoledronic Acid for Secondary Prevention of Osteoporotic Fractures.

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SCOTT WALKER RESEARCH AWARD



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Reflects the dedication, discipline, determination, and enthusiasm that Mr. Halligan brought to our profession and all that he was involved with.



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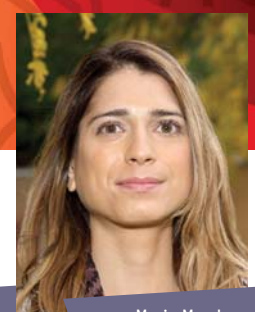
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JOURNAL CLUB

HPO JOURNAL CLUB 2021 YEAR IN REVIEW



Vivian Lee



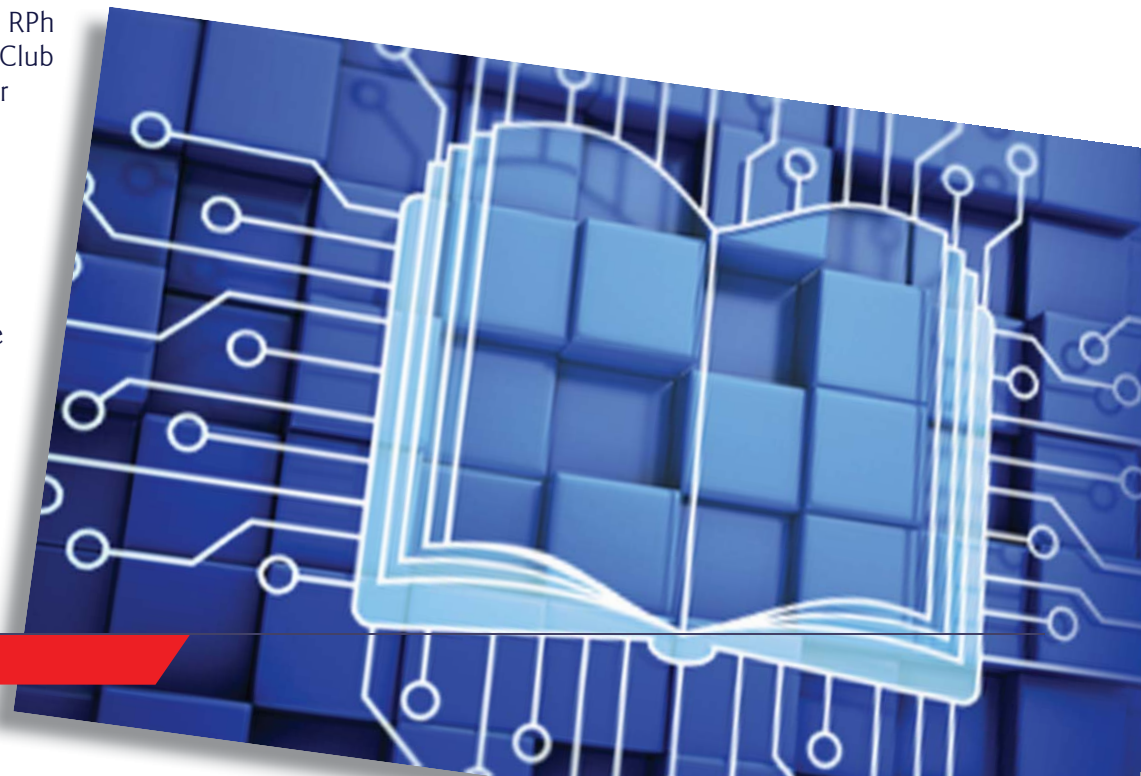
Maria Marchese

C SHP Ontario Branch Journal Club has had another year of great success. Much thanks to all presenters for your knowledge, passion and dedication to effective, safe and evidence-based patient care, and to all participants for your insightful and engaging discussions. Our sessions were attended by up to 100 participants each month including CSHP members from other provinces. Milestones reached in 2021 include having speakers present on their own publication, innovative topics such as knowledge translation, and topics on rapidly evolving science such as COVID-19 infections and vaccines.

Pharmacists and pharmacy technicians, what would you like to learn about in 2022? We look forward to hearing from you. Contact Vivian Lee (vivian.kt.lee@gmail.com) and Maria Marchese (maria.marchese@mail.utoronto.ca) with any questions, feedback or topic suggestions for our journal club. Previous topics can be found at: <https://cshp-scph.ca/ontario-journal-club>.

Vivian Lee, B.Sc.Pharm., RPh
Ontario Branch Journal Club
Founder & Co-Facilitator
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Maria Marchese,
PharmD ACPR RPh
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JOURNAL CLUB

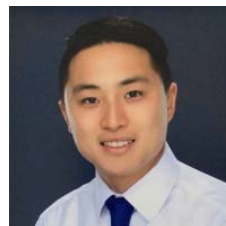
February

Efficacy and safety of the mRNA-1273 SARS-CoV-2 (Moderna) Vaccine
(Members of the COVID-19 Drug Evidence Initiative – CDEI)



Sameera Toenjes, PharmD, RPh

“Thank you to the CSHP audience for bringing excellent questions and comments to the discussion of COVID-19 vaccines!”



Avery Loi, PharmD, RPh

“I’m grateful we were able to help share the latest evidence on COVID-19 vaccines and generate discussion!”



Roshni Patel, PharmD, RPh

“It was a pleasure to present COVID-19 vaccine evidence to such an engaged audience, thank you CSHP!”

March

Bacterial co-infection and secondary infection in patients with COVID-19

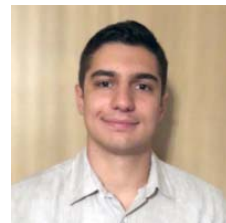


Bradley Langford, BScPhm, ACPR, PharmD, BCIDP

“It was great to present on this timely topic - I hope it provided insights that pharmacists can apply throughout the pandemic.”

April

SGLT-2 Inhibitors – New indications and diabetic ketoacidosis



Peter Carducci, PharmD

“It was an awesome experience to present to a highly engaged group of professionals!”



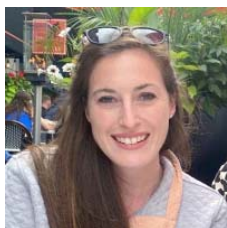
Clarence Lam, PharmD

“It was a rewarding opportunity to speak to a diverse audience passionate about pharmacy practice. Thank you for the engaging and thoughtful discussions!”

JOURNAL CLUB

June

A Clot Conundrum: A pharmacist approach to Vaccine-Induced Thrombotic Thrombocytopenia (VITT)

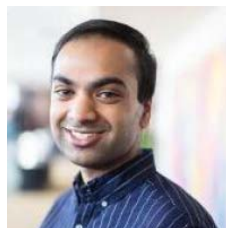


Jennifer Pitman, BSc Pharm, ACPR

"I'm glad to have "hit" it off with such an engaging group for my VITT journal club!"

July

Colchicine the Chameleon: A critical appraisal of its utility in secondary prevention of coronary artery disease



Narthaanan Srimurugathan, PharmD

"It was wonderful to connect with old friends and colleagues after they attended my talk!"

August

Opioid agonist therapy – what 'mu' need to know



Nicole Seymour, PharmD, ACPR

"I was inspired to see such a great turnout for a topic I'm passionate about."

September

Knowledge translation for the busy clinician | Using a review on alcohol and antibiotic interactions as a case study



Mira Maximos, PharmD, MSc, ACPR, PhD Student

"Acquiring new knowledge is wonderful, applying it to practice in a collaborative manner is even better."

October

Prescription modification by pharmacists in a hospital setting: Are Ontario pharmacists ready? A review of a recent provincial survey and its practice implications



Vincent Vuong, PharmD, BSc, ACPR

"It was great seeing the amount of interest and enthusiasm for such an important topic for our profession!"

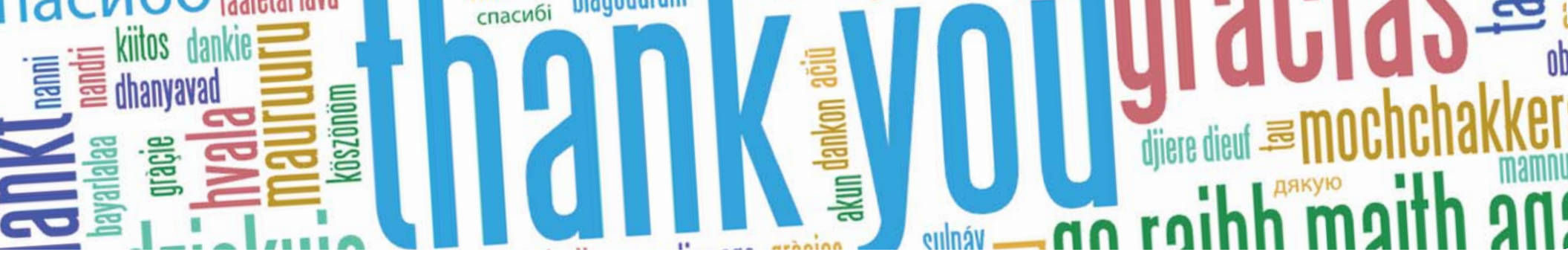
November

Integrating the PEN-FAST allergy assessment tool into practice



Tara Farquharson, RPh, ACPR

"I really enjoyed the experience of presenting at Journal Club. Vivian and Maria were very supportive and it inspired me to dig deeper on my topic which ultimately helped me learn more than I would have on my own."



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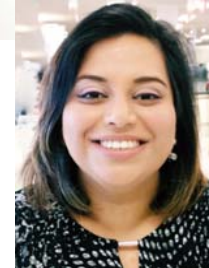
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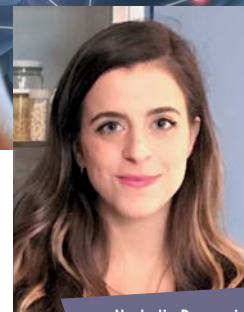
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INCORPORATING TECHNOLOGY IN PHARMACY EDUCATION



Nathalie Dagenais



Sophie Gao



William Lu

WRITTEN BY NATHALIE DAGENAIS PHARM.D, SOPHIE GAO PHARM.D, WILLIAM LU PHARM.D
PHARMACY RESIDENTS, HAMILTON HEALTH SCIENCES

Introduction

Pharmacy education is delivered through both lecture-based large group teaching and a variety of small group activities, such as facilitated peer-to-peer discussions and simulated/mock patient interviews (Nakhla, 2021). The framework for teaching and learning is often based on Bloom’s taxonomy of cognitive domains. While lecture-based teaching is used to deliver information and explain concepts, small group activities are used to develop more advanced cognitive domains, such as application and analysis, as well as to evaluate a learner’s knowledge and comprehension. The use of technology in pharmacy education

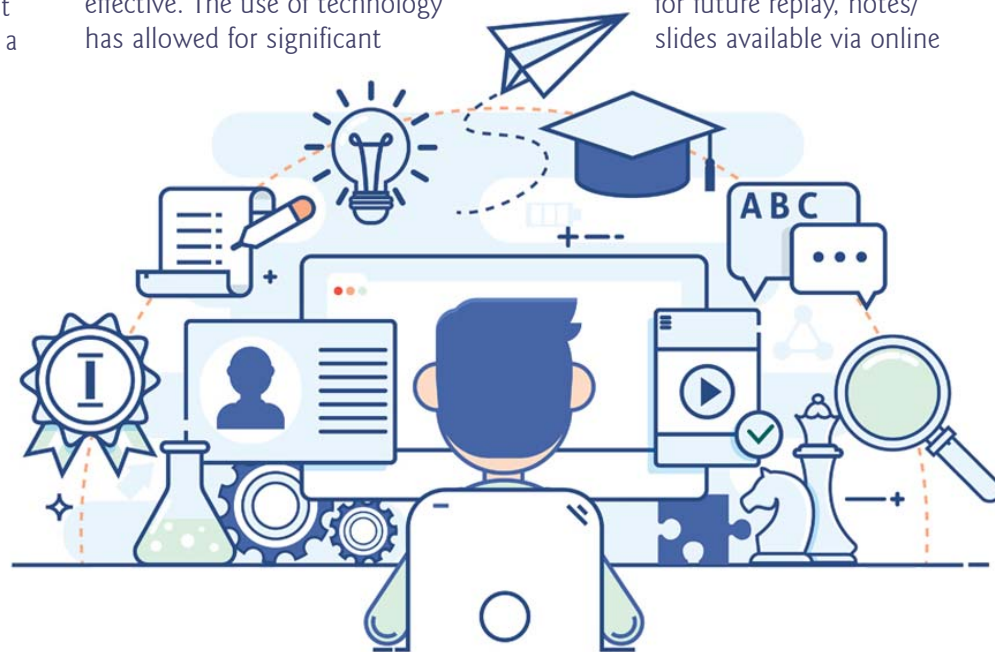
can increase opportunities for active learning across these educational domains, improving learner knowledge and skills development in a way that is individualized to a learner’s needs.

Delivering Knowledge and Assessing Comprehension: Adaptive Learning

Lecture-based teaching comes with many challenges: lectures have limited opportunities for engagement, they tend to be teacher-centred in that they do not bring students in to ask questions or discuss ideas, and they do not accommodate for differences in either baseline knowledge or learning styles. Despite the limitations of

lecture-based teaching, lectures are often used because they are controlled, efficient and cost-effective. The use of technology has allowed for significant

strides in lecture-based teaching, such as: allowing for full lecture recordings to be readily available for future replay, notes/slides available via online

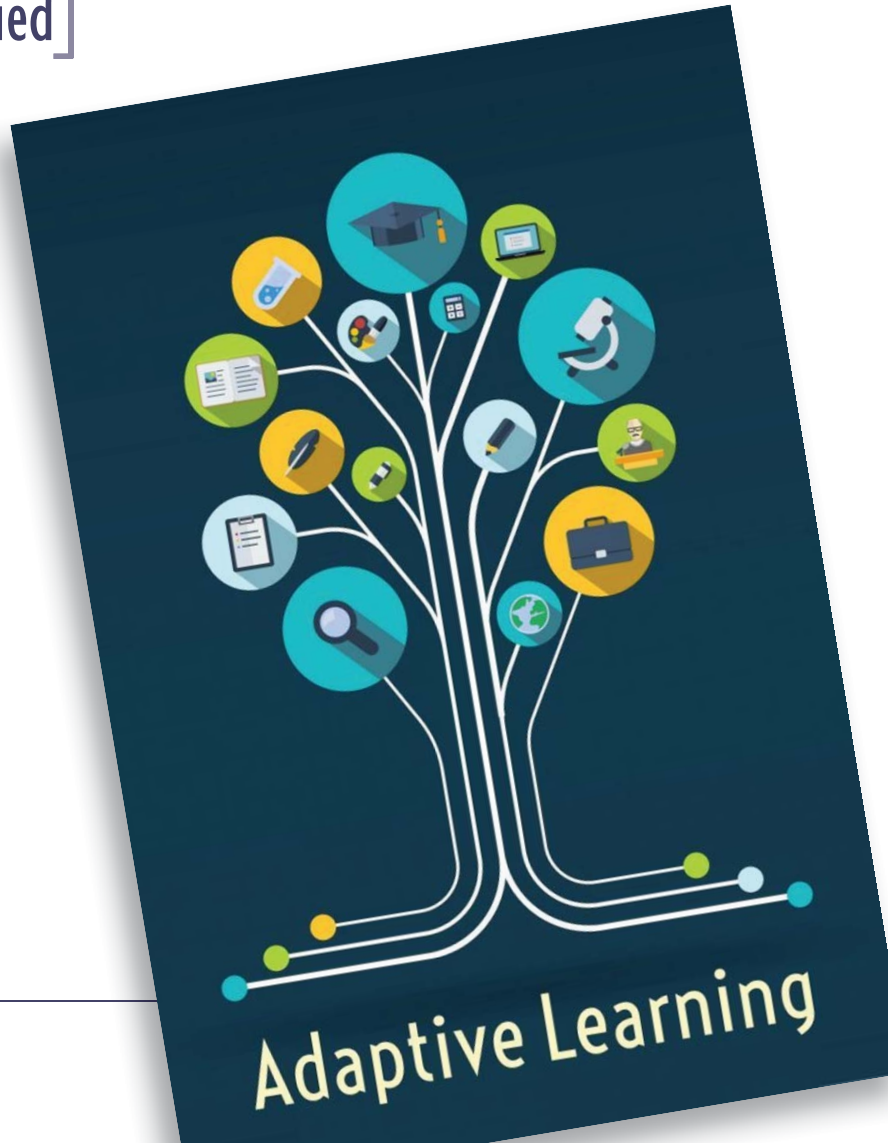




INCORPORATING TECHNOLOGY IN PHARMACY EDUCATION... continued

portals, and the use of student-participation technologies, such as iClickers, to engage and assess learners (Albon, 2020). To further bolster engagement, there have been attempts to implement “inverted” or “flipped” classrooms, where students prepare ahead of time and attend class for discussions (Tolks, 2016), however, there are several issues with the way it is often implemented. Firstly, the preparatory material is not tailored to the baseline knowledge of the individual student; this often results in large amounts of assigned readings, which may be too simple for some and too advanced for others (Tolks, 2016). Secondly, there is insufficient feedback for teachers to prepare for the upcoming classroom session to address confusion or misconceptions unless post-preparation quizzes or assessments are performed prior to the in-class

meeting. Adaptive learning technology is a potential solution to this dilemma, in that it can address a learner’s knowledge gaps and provide teachers with the feedback to address misunderstandings. Adaptive learning with analytical technology can be used to create individualized learning plans for each student, just as pharmacists are expected to create individualized patient care plans (Sharma, 2017). Firstly, pre-recorded lectures used to deliver content can be separated into each specific objective or “chunks” (Humphries, 2021). For example, a topic such as hypertension can be separated into a number of short videos each addressing a single learning objective. This allows students to watch, and focus on, the content that they need to accomplish their learning goals and minimizes any loss in engagement that





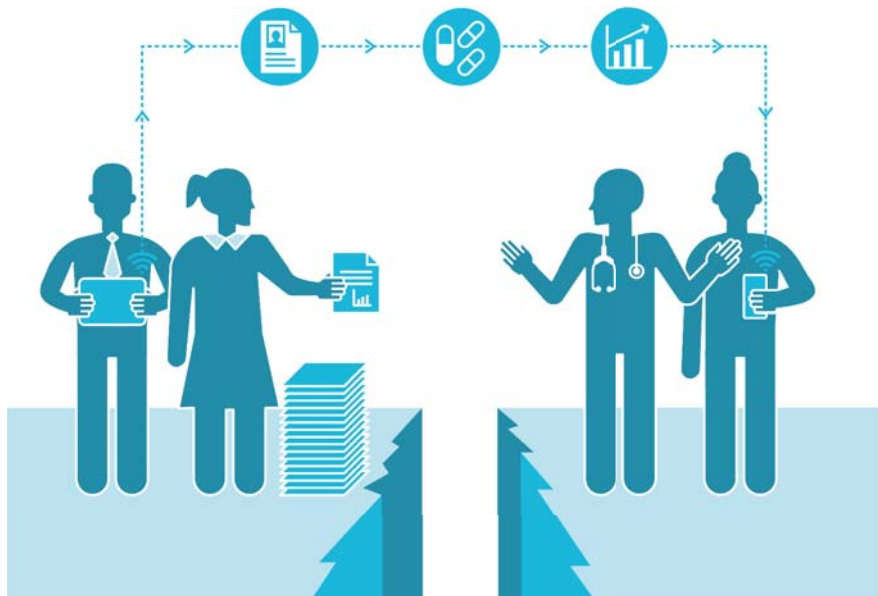
INCORPORATING TECHNOLOGY IN PHARMACY EDUCATION... continued

may occur by listening through parts of the video which they already have sufficient knowledge of. Prior to watching the video, students' baseline knowledge can be assessed using a quiz to determine misconceptions and direct future learning to each individual student, after which, the relevant videos are suggested for viewing. This process can be done iteratively using a process known as computerized adaptive testing (Cecilio-Fernandes, 2019). For example, if a student scores poorly in their baseline understanding of the pathophysiology of heart failure, but scores highly in the therapeutic options and their roles in therapy, this would prompt the system to suggest the student review the short video on pathophysiology. The computerized adaptive testing system might also suggest additional articles or

readings and then give another set of questions which then may identify other knowledge gaps and present opportunities for additional clarification. Virtual cases could be used after students feel they have met all the learning objectives for the specified topic to assess both their new knowledge acquisition,

and their past knowledge recall. Returning to the previous example: a student who has performed well on the pre-test in all areas except for pathophysiology of heart failure would be suggested to watch a video on pathophysiology and afterwards, feeling they have

acquired knowledge, could attempt the virtual case. This case could then assess their knowledge of heart failure: such as pathophysiology, therapeutics, monitoring, etc. but could also assess their prior learning of other topics like diabetes or hypertension. If, for example, the student fails to recall their diabetes knowledge, then adaptive learning could suggest that they watch the diabetes videos once again. Additionally, the scenario in the virtual case can be a spring-board for discussions during in-class time (Bravo, 2019). This continuous and repeated assessment and learning provides the student and the teacher with the tools they need to both identify knowledge gaps and deliver content needed to fill those gaps. In-class time can then be used to discuss and address misconceptions to help reinforce knowledge and improve comprehension.





INCORPORATING TECHNOLOGY IN PHARMACY EDUCATION... continued

Audio-visual Technology

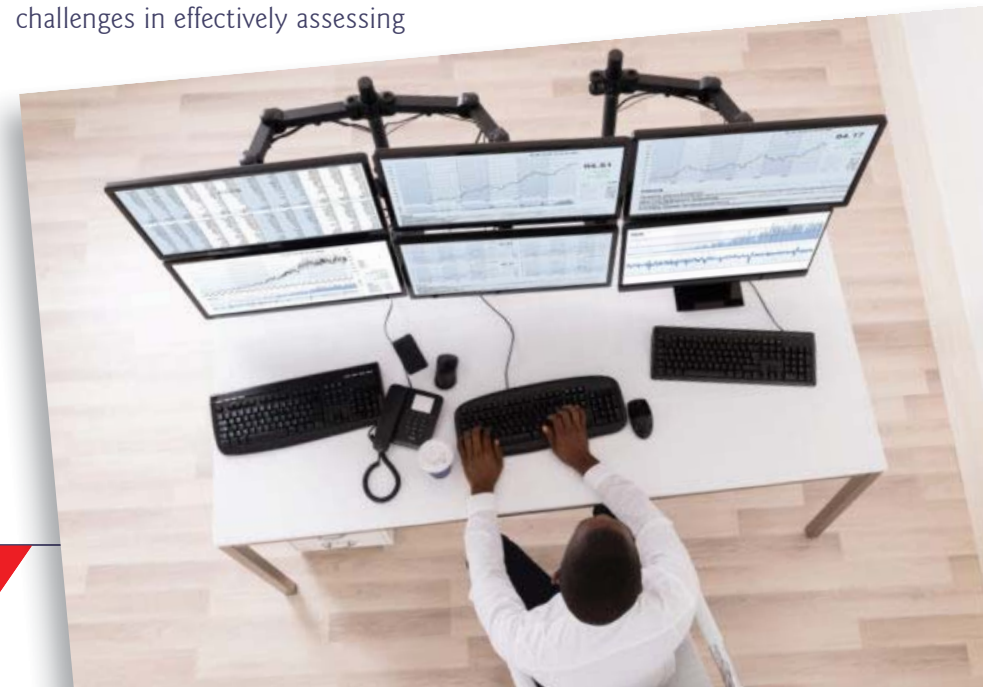
The use of video and audio technology such as web-based platforms can enable a remote preceptor to supervise a learner. This was recently adopted into pharmacy experiential education in response to social distancing requirements during the COVID-19 pandemic and allowed for entirely virtual rotations (Allison, 2021, McCready, 2021). Virtual precepting may also be delivered through tools embedded in the electronic medical record (Frank, 2017). Real-time or after the fact analysis of the audiovisual footage allows preceptors to deliver accurate feedback (Mankowski, 2021). Feedback may be done in person or via email or virtual interactions. Virtual precepting may be of further value in situations where the presence of the preceptor may negatively impact the relationship

between the learner and the patient or the learner and the team (Allison, 2021).

Audiovisual recording may also occur as its own dedicated learning activity. For example, pharmacy learners at the University of British Columbia recorded and then reviewed learner-led patient consultations for self-assessment. Through this activity, learners were able to develop awareness of areas for improvement and felt that the activity improved their patient consultation skills (Hefford, 2021). Use of audiovisual technology in experiential education allows for freedom and flexibility on the part of both the learner and the preceptor. Virtual rotations may also help students access experiential education in

remote areas without the need for relocation, thereby eliminating geographic and financing barriers to accessing experiential learning opportunities. However, it is important to note that the lack of face-to-face contact may affect rapport-building and informal communication (Allison, 2021). Further, the nature of the remote preceptorship may lead to challenges in effectively assessing

professionalism or oral presentation skills and requires internet access for both the learner and the preceptor (Allison, 2021). The relationship between the preceptor and the student may be maintained with regular check-ins, scheduled feedback sessions, and a virtual open-door policy for addressing learner concerns and questions.





INCORPORATING TECHNOLOGY IN PHARMACY EDUCATION... continued

Gamification of Learning

Gamification, also known as game-based learning, is the incorporation of game mechanics into collaborative learning environments to engage learners and improve learner enjoyment (Sera, 2016). This can be achieved through digital game-based learning (with the development of serious games) or through incorporating mechanics like 'motivators' and 'roleplay' (Sera, 2016). Motivators such as rankings, levels, or badges can be used to incentivize learners to achieve different objectives (Sera, 2016). Game mechanics can help tailor the learning experience to the learner by recognizing diverse learning needs, offering various difficulty levels, and allowing learners the freedom to choose different learning options. (Sera, 2016). Learning objectives can be met through completing quests

that divide tasks into manageable chunks of information and offer timely feedback (Chooi, 2018). The game environment can also allow for roleplay and allow patients to make decisions from different perspectives (Yap, 2021).

Gamification strategies, such as the development of serious games, help learners engage with serious subject matter and translate in-game learning into knowledge applicable to real-life situations. A

systematic review by Shawaqfeh et al included 11 studies examining the implementation of online educational games into pharmacy curricula and found that learners felt games improved student preparedness for real life scenarios and also improved classroom engagement (Shawaqfeh, 2015). Studies of gamification found that incorporation of games in medical education have positive results on student enjoyment and perceptions of learning but

do not uniformly assess or report impact on students' knowledge and skills (Sera, 2016). In addition, developing or adapting an existing game for pharmacy education requires substantial time and investment which may be a barrier to implementation. Examples of educators adapting games for classroom use in the literature include Lee et al who adapted an existing game template to develop an online game that awarded students scores for completing quiz questions on cardiac pharmacology (Lee, 2018). This game was found by students to be an engaging and innovative way to learn lecture material. Yap et al similarly reported development of an in-house game that allowed players to collaboratively work in a "choose-your-own-adventure" format set in a post-apocalyptic fantasy world to practice pharmacy professional





INCORPORATING TECHNOLOGY IN PHARMACY EDUCATION... continued

skills such as patient counselling (Yap, 2021). Other examples of gamification include “Microbe Invaders” where the user plays as a busy clinician who diagnoses patients by matching cases to the causative bacteria (Tufts, 2019). Gamification promotes active learning and may be used in addition to other strategies to enhance adaptive learning and reinforce principles.

Virtual Reality and Virtual Cases

Virtual reality has been used in pharmacy education in situations such as preclinical education to better prepare pharmacy learners for experiential rotations (Lucas, 2019) or to simulate real patient cases (Coyne, 2019, Ventola, 2019).

Technology involving virtual patients can be in the form of software and

be delivered through virtual reality headsets, computer laboratories, Web-based resources or the students’ personal computers. This can take place in forms of augmented, virtual reality or simply through virtual patient cases (Kyaw, 2019, Richardson, 2020). Simulated cases can improve student engagement compared to paper cases. Computer-generated simulated patients could replace standardized actors and its increased portability would allow students to tailor their learner and flexibly and repeatedly practice key skills such as medication counselling on their own schedule (Coyne, 2019). This allows learners to build on their existing skills and develop their confidence and self-efficacy (Lucas, 2019).

Virtual patients can also simulate different situations such as patient non-adherence and anxious or angry patients to allow learners to practice skills such as motivational interviewing without compromising actual pharmacist-patient relationships (Richardson, 2020). In addition, the standard nature of virtual patients allows

for easy and effective assessment of learners (Coyne, 2019). Virtual reality programs have been shown to accurately and realistically simulate real-world patient scenarios. For example, Lucas et al found that incorporating an intensive virtual placement program for first-year





INCORPORATING TECHNOLOGY IN PHARMACY EDUCATION... continued

Australian Master of Pharmacy students improved student confidence and learning leading up to their clinical placements (Lucas, 2019). Web-based patient cases can be further incorporated into both facilitator-led small group sessions or individual learning.

Other applications of virtual reality include the University of Toronto pharmacy school's development of a virtual reality experience to simulate the process of high-stakes test environments such as the objective structured clinical examination (OSCE) to help reduce student anxiety and benefit students with different learning styles or those who may require accommodations (Hoftzyer, 2020).

Virtual reality is typically delivered through proprietary software and equipment that may pose financial

barriers to programs. Interestingly, professors at the University of Texas incorporated "choose-your-own adventure" virtual patient cases built using "Google Forms" into an ambulatory care flipped-classroom session on hypertension (Stewart, 2021). There is a paucity of high quality published research assessing the efficacy of virtual cases. In addition, students may require orientation to effectively use the technology and require preceptor guidance to debrief and receive feedback on virtual scenarios. There is also concern that non-verbal communication skills may be lost in virtual patient cases (Coyne, 2019).

Conclusion
Recent changes to the pharmacy curriculum place increased emphasis on active learning and skills development. There are many ways technology

can assist educators with this crucial transition. If implemented appropriately, technology can be used to reduce the reliance on large scale lectures, and instead be paced to the individual learner, improving learner engagement and enhancing communication skills in both pre-clinical and clinical years. Adoption of additional technology can augment the assessments and in depth discussions typically gained through small group teaching.

The COVID-19 pandemic has likely accelerated pre-existing trends of incorporating technology into learning. Institutions should embrace this opportunity to experiment and implement novel ways to integrate technology into teaching.





INCORPORATING TECHNOLOGY IN PHARMACY EDUCATION... continued

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[MEMBER MILESTONES]

25-YEAR MEMBERS

Congratulations to the following individuals for attaining 25-years of membership with CSHP. This list recognizes members who reached this milestone during the 2020-2021 year.

Ontario

Michelle Buxton
Joyce Chan
Lisa Fernandes
Janice Ma
Christopher Ritskes
Elaine Tom

10-YEAR MEMBERS

Congratulations to these individuals who reached 10-years of membership during the 2020-2021 year:

Ontario

Monique Bergenwall
Peter Delanghe
Lauren Garratt
Pui Yu Lau
Marta Malkinska
Reanne Marchioni



Interactions

News from CSHP

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