



**CSEP | SCPE**  
THE GOLD STANDARD IN EXERCISE  
SCIENCE AND PERSONAL TRAINING

## 2021 Annual Report

Canadian Society for Exercise Physiology







## Message from the Chair

# CSEP Year in Review

Members of the Canadian Society for Exercise Physiology have a long history of making important contributions to the science and practice of exercise and physical activity. The COVID-19 global pandemic has been difficult both professionally and personally for CSEP members and the CSEP staff. The term ‘resilient’ has been overused during the course of the pandemic but following two years of consistently strong membership renewals and near-zero staff and volunteer turnover, I am at a loss to better describe the character of our society and its members.

I wish to recognize former Chair, Adam Upshaw. With his steady hand along with the hard work from members of the Board, CSEP has been able to thrive under difficult circumstances. I also wish to recognize Mary Duggan and her many contributions to CSEP over the years and the notable role Kathryn Moore has played. The Members of the Board should also be acknowledged for their significant efforts.

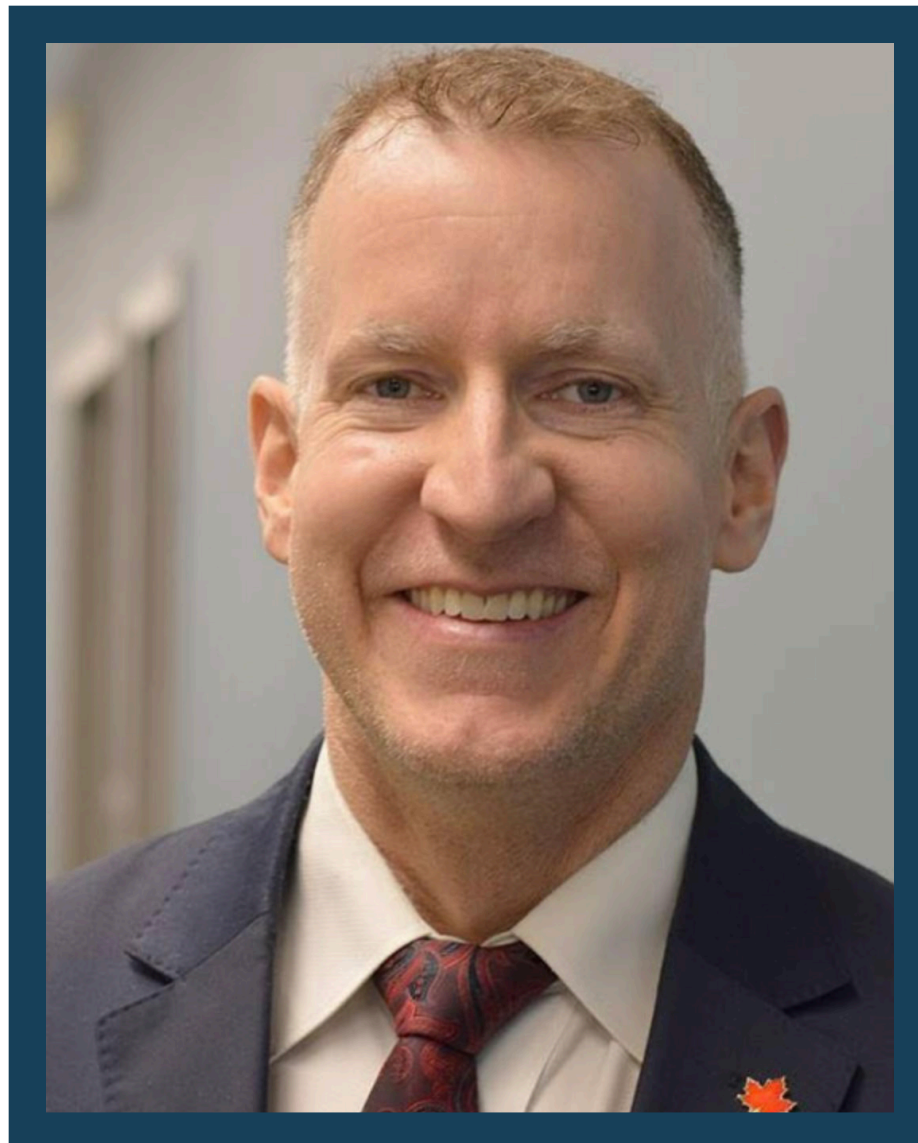
Here I wish to highlight and celebrate CSEP’s several successes from the last year which include:

- Released the much-anticipated Get Active Questionnaire for Pregnancy - the first of its kind, this screening tool has not only made physical activity safer and more accessible for pregnant individuals, it is a testament to the critical work of our members. On behalf of the Board, I would like to offer a huge congratulations to Dr. Margie Davenport and her team for this outstanding achievement.
- Held a successful virtual conference mounted by Dr. Stephen Cheung and his organizing committee. I can still recall the meeting early in 2020 when the Board made the decision to host a virtual conference that fall; surely, this would be the only time in CSEP’s 50+ years! But in 2021 when the future of the pandemic was still very uncertain and the decision to repeat a virtual conference was made, Dr. Cheung and a very dedicated team of students, academics and certified members stepped forward and organized another outstanding conference. While I couldn’t be happier to see everyone in person this fall, I am very proud that so many members chose to attend CSEP Online two years in a row.
- Established an Equity, Diversity and Inclusion committee, Chaired by Dr. Maureen MacDonald. A much needed and relevant priority for CSEP, I want to thank Dr. MacDonald and the members who have volunteered along with her for taking this work on.
- Created the CSEP Scholarship for Persons from Underrepresented Groups and awarded two scholarships
- Hired a new Chief Executive Officer – Zach Weston (February 2022)
- Undertook a strategic planning exercise to formalize initiatives and direction for the coming years - an exercise I very much look forward to sharing with the wider membership in the coming weeks.
- Hosted a number of well-attended online Professional Development events and podcast episodes for both our certified and student members, including a Knowledge Translation writing workshop, and a second successful year of a Summer Student Series knowledge translation lectures.

I am looking forward to working with our members, the Board and the CSEP staff over the next two years to ensure the continued success of CSEP.

William (Bill) Sheel





## Message from Zach Weston

# CEO Report

2021 continued to challenge our collective resolve in both personal and professional perspectives. Navigating the dynamically changing employment environment to respond to public health requirements has strained many sectors including the health, wellness, fitness and performance industries and supporting academic infrastructure. Through this, we have learned new ways to embrace our work, stay connected and create positive impact on the lives of those we serve. We continue to push the science of our organizational foundation to advance policy and guideline development with our academic members and stakeholder partners across the county with a goal to positively improve the health and performance for all Canadians.

Through these waves of COVID, we've seen the outpouring of support and demand for the exercise science, fitness and health sectors and without question recognize the value that CSEP members play in supporting Canadians to achieve their goals. The CSEP Knowledge Translation committee took action to review the impact on exercise while wearing masks to support the businesses within the industry and reassure those seeking professional expertise from CSEP certified members. CSEP also introduced many new online professional development programs and tools including the Mental Health & Exercise Training Module through an Interactive Textbook available on our store and featured in the February 2022 CSEP Podcast.

CSEP continues to lead in the creation and dissemination of guidelines to advance the application of science to clinical practice and creating positive impact on the lives of Canadians. In recognition of his contributions to Sports Medicine and Exercise Physiology, Dr. Don McKenzie, a long time CSEP academic member, former chair of the Board of Directors, and cross appointed Professor in both the School of Kinesiology and the Faculty of Medicine was appointed to the Order of Canada as an Officer in December 2021. Dr. McKenzie previously received the Meritorious Service Medal from the

Governor General of Canada in 2001 for his contributions toward developing a physical training program as a sports medicine physician and exercise physiologist for breast cancer survivors. Thanks in part to this work, participating in regular physical activity and exercise training is now recognized as a standard of care for those individuals with and recovering from cancer. Naturally, this work supports the scope of practice for the thousands of Clinical Exercise Physiologists across Canada who are leading their clients with Gold Standard treatment and training programs.

As a maturing organization of 55 years, CSEP acknowledges and gives thanks to Mary Duggan for the many decades of leadership she provided to support the operational management and board of directors to achieve great impact. As I have transitioned into my new role, I greatly look forward to meeting as many CSEP members as possible in the years ahead. My objectives certainly include ensuring the continued foundation of this great organization to deliver on the Gold Standard of Exercise Science and Personal Training while embracing the collective and growing strength of our membership to improve the health and fitness for all Canadians.

The future for CSEP is tremendously exciting and I am very pleased to work with you all to realize our goals.

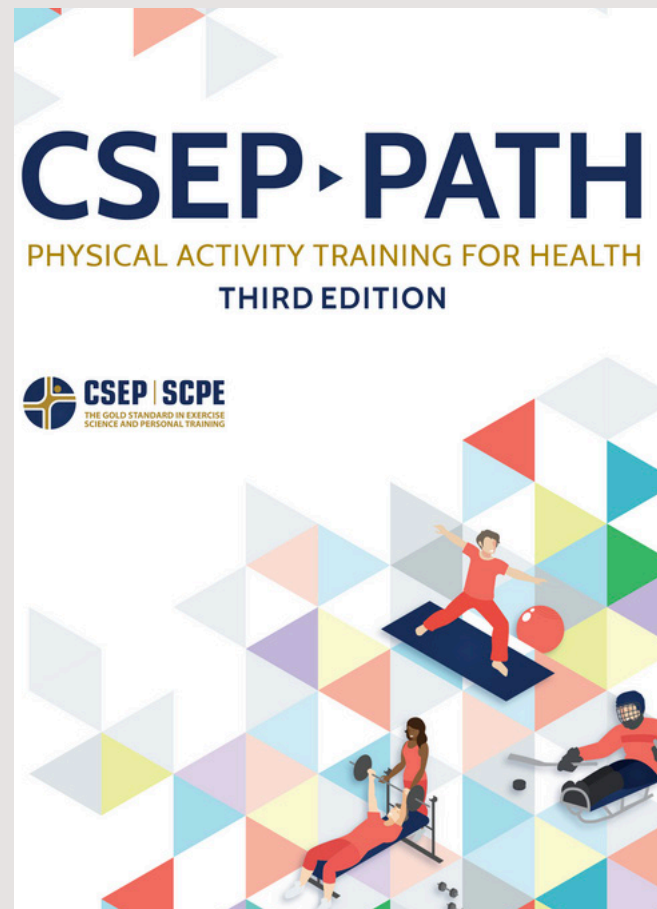
Yours in health,



Zach Weston



# 2021 Spotlight



## The CSEP Physical Activity Training for Health Resource Manual (CSEP-PATH®) Third Edition (2021)

The CSEP Physical Activity Training for Health (CSEP-PATH®) resource manual is an evidence-informed, quality textbook and tool for qualified exercise professionals.

The [Third Edition of the manual](#), released in September 2021, has been updated to reflect the latest research in exercise science including the Canadian 24-Hour Movement Guidelines, the Get Active Questionnaire for Pregnancy, and expanded sections on sedentary behaviour and sleep.

Already have the CSEP-PATH® 3rd Edition? [Click here](#) to get an electronic updated version for \$30



## Third Season of the CSEP Podcast - Equity, Diversity, and Inclusion

Season 3 of the CSEP Podcast focused on equality, diversity, and inclusion. This season the podcast took a different approach to the typical 1-on-1 interview format, instead a different panel of guests hosted a round table discussion.

Episodes featured:

- Keely Shaw, Miranda Weise, and Dr. Jennifer Tomasone discussing para-athletes
- Dr. Madelaine Gierc, Dr. Guy Faulkner, and Joseph Gibbons discussing the importance of mental health
- Dr. Ian Patton and Kari Schneider Discussing body diversity
- And many more!



## CSEP Partners with KINDUCT

In June 2021 CSEP was pleased to announce an official partnership with KINDUCT. The partnership will see Kinduct's Human Performance Platform become the preferred remote programming and monitoring solution for CSEP and its membership of over 5000 professionals.

Kinduct's presence in the healthcare industry dates back to 2010, when they began educating and engaging with patients through patient-centric 3D medical animations and rehab programming. Kinduct's cloud-based system consolidates and visualizes health-related data which then informs action such as timely interventions or adjustments to active rehab programming.

The partnership with CSEP allows health professionals to extend their offering beyond the traditional setting. This is done through a series of remote monitoring tools such as in-app surveys and assessments that monitor pain and emotional wellness, as well as content-rich rehab programming to assist patients in their return to optimal health.





# CSEP 2021

## Zooming into the future: Exercise science in the virtual age

**OCTOBER 13-16 2021**

## CSEP 2021 Online Conference

For the second time, the Canadian Society for Exercise Physiology annual scientific conference was offered in a 100% virtual format. For four days in October 2021, CSEP members came together online to welcome researchers and practitioners in the field of exercise science and personal training from around the globe.

CSEP was proud to offer live sessions during the 2021 Conference which provided audience members the opportunity to interact and ask questions to presenters and other conference attendees.

Keynote lecturers for this conference included: Vicky Tolfrey who spoke about Putting Athletes on the Podium, as part of the Health and Fitness Professionals Annual Lecture in Honour of Gord Sleivert, Steven Boyd, who hosted the John Sutton Memorial Lecture, and Tanja Taivassalo who gave an interesting keynote lecture as part of the APNM President's Lecture.

Over 850 people registered for CSEP 2021 and featured 10 symposia and over 140 abstracts were presented.

## New Awards and Grants

The CSEP Scholarship for Persons From an Underrepresented Group, and the CSEP Certified Members Business Growth Grant were awarded to recipients for the first time at CSEP 2021.

The objective of the CSEP Scholarship for Persons from Underrepresented Groups is to increase participation in research that aligns with the goals of CSEP by recruiting and retaining persons who belong to underrepresented minority groups as identified by the Tri-Agency Equity, Diversity and Inclusion (EDI) Action Plan. This purpose aligns with CSEP's position on EDI. In 2021 Jaqueline Hay and Chloe Athaide received the award for the first time in CSEP history.

The objective of the CSEP Certified Members Business Growth Grant is to provide direct support to CSEP Certified members efforts and activities that will broaden or grow their practice. In 2021 Katie Beck was the recipient of the grant.

## Award Recipients:

Graduate Student Award - Oral Presentation:  
**Olivia Sanders**

Graduate Student Award - Poster Presentation - PhD:  
**Jennifer Williams**

Graduate Student Award - Poster Presentation - MSc:  
**Matthew Fliss**

Undergraduate Student Award:  
**Brooke Thompson, Sarah Bedard, Emily Fultz, Ben Rittenberg, Kennedy Hamilton, Matthew Tobis, Amy Graham, Amirarsalan Rahimian, Samantha Ables, Joshua Summers, Erica Loenen, Blessing Adeagbo, Alana Worth, Philippe St-Martin, Nick Pike**

CSEP Young Investigator Award:  
**Valerie Carson**

CSEP Professional Standards Program Recognition Award:  
**Bart Arnold**

CSEP Certified Member Presentation Award:  
**Nick Bray**

CSEP Mentorship Award in Honour of Enzo Cafarelli:  
**William (Bill) Sheel**

CSEP Seed Grant  
**Joyce Obeid**

CSEP Certified Member Business Growth Grant:  
**Katie Beck**

CSEP Scholarship for Persons from Underrepresented Groups:  
**Jacqueline Hay, Chloe Athaide**



# Events & Professional Development

In 2021 CSEP was proud to offer [numerous online events](#) and [professional development opportunities](#). Some of the sessions offered in 2021 were:

## **Summer Student Series:**

In the summer of 2021 CSEP was proud to once again offer the Summer Student Series. Presentations from CSEP Student members ran throughout the summer and featured lectures on topics like:

- The Impact of the COVID-19 Pandemic on Diet, Fitness, and Sedentary Behaviour of Elite Para-Athletes
- Time Efficient Exercise
- Exercise Snacks and Research
- High Performance Contexts in Adults and Master's Athletes



## **Peer to Peer Learning Series:**

Throughout 2021 CSEP continued the Peer to Peer Learning Series initially introduced in 2020. These sessions were attended virtually by members and non-members across Canada and were hosted live to allow for host-to-attendee interactions. Hosts included Dr. Marla Beauchamp, Dr. Tanja Janaudis-Ferreira, Sarah Zahab, Dr. Guillaume Millet, Hannah Flahr, Kelly McKenzie, Dr. Phil Chilibeck, Dr. Stephen Cornish, and many more! Recordings of these sessions were also made available to CSEP members through the [CSEP Online Learning Store](#).





# CSEP Professional Standards Program®



Exercise During  
**THE PRENATAL  
& POSTPARTUM**  
Periods

**CSEP**  
**PRE & POSTNATAL**  
**EXERCISE SPECIALIZATION™**

**GET ACTIVE QUESTIONNAIRE  
FOR PREGNANCY**

NAME (I, NAME OF PARENT/GUARDIAN IF APPLICABLE) (PLEASE PRINT): \_\_\_\_\_

TODAY'S DATE (DD/MM/YYYY): \_\_\_\_\_ YOUR DUE DATE (DD/MM/YYYY): \_\_\_\_\_ NO. OF WEEKS PREGNANT: \_\_\_\_\_ AGE: \_\_\_\_\_

Physical activity during pregnancy has many health benefits and is generally not risky for you and your baby. But for some conditions, physical activity is not recommended. This questionnaire is to help decide whether you should speak to your Obstetric Health Care Provider (e.g., your physician or midwife) before you begin or continue to be physically active.

Please answer 'YES' or 'NO' to each question to the best of your ability. If your health changes as your pregnancy progresses you should fill in this questionnaire again.

1. In this pregnancy, do you have:	Y	N
a. Mild, moderate or severe respiratory or cardiovascular diseases (e.g., chronic bronchitis)?	Y	N
b. Epilepsy that is not stable?	Y	N
c. Type 1 diabetes that is not stable or your blood sugar is outside of target ranges?	Y	N
d. Thyroid disease that is not stable or your thyroid function is outside of target ranges?	Y	N
e. An eating disorder(s) or malnutrition?	Y	N
f. Twins (28 weeks pregnant or later)? Or are you expecting triplets or higher multiple births?	Y	N
g. Low red blood cell number (anemia) with high levels of fatigue and/or lightheadedness?	Y	N
h. High blood pressure (preeclampsia, gestational hypertension, or chronic hypertension that is not stable)?	Y	N
i. A baby that is growing slowly (intrauterine growth restriction)?	Y	N
j. Unexplained bleeding, ruptured membranes or labour before 37 weeks?	Y	N
k. A placenta that is partially or completely covering the cervix (placenta previa)?	Y	N
l. Weak cervical tissue (incompetent cervix)?	Y	N
m. A stitch or tape to reinforce your cervix (cerclage)?	Y	N
2. In previous pregnancies, have you had:	Y	N
a. Recurrent miscarriages (loss of your baby before 20 weeks gestation two or more times)?	Y	N
b. Early delivery (before 37 weeks gestation)?	Y	N
3. Do you have any other medical condition that may affect your ability to be physically active during pregnancy? What is the condition? Specify:	Y	N
4. Is there any other reason you are concerned about physical activity during pregnancy?		

Go to Page 2 Describe Your Physical Activity Level

© Canadian Society for Exercise Physiology (CSEP) Page 1

## CSEP Get Active Questionnaire for Pregnancy

In April 2021 CSEP was proud to release the Get Active Questionnaire for Preganacy. Designed to be a self-administered pre-screening tool to empower individuals to be responsible for their own health and wellbeing during their pregnancy. The Get Active Questionnaire for Pregnancy and companion Health Care Provider Consultation Form for Prenatal Physical Activity helps health care providers have a meaningful conversation about the benefits of physical activity with their pregnant patients.

## CSEP Pre & Postnatal Specialization™

The CSEP Pre & Postnatal Exercise Specialization™ provides Qualified Exercise Professionals with the background knowledge and practical considerations necessary for working with individuals during the perinatal period.

The evidence-informed content of the Specialization will support Qualified Exercise Professionals to actively encourage a physically active lifestyle in their clients prior to conception, throughout pregnancy, and into the postpartum period. Recognizing that exercise prescription in the postpartum period is distinct from both pregnancy and the general non-pregnant population, the CSEP Pre & Postnatal Exercise Specialization™ online course and comprehensive manual will guide the Qualified Exercise Professional through tailored recommendations specific to this population.





# Knowledge Translation

In 2021, the CSEP Knowledge Translation Committee was proud to once again be featured in CSEP’s monthly member communiqué. The Knowledge Translation Committee introduced a new format for 2021 knowledge translation articles with an emphasis on how current research may impact practitioners. Some of the topics covered in the Communiqué in 2021 included:

- [Cold temperatures can reduce muscle strength and speed but increase muscle activity](#)  
Mathew Debenham, PhD candidate
- [Snacking on sprints to boost fitness and improve exercise performance](#)  
Hashim Islam, PhD
- [The Get Active Questionnaire for Pregnancy” Breaking down barriers to prenatal exercise](#)  
Brittany Ward, CSEP-CEP
- [Elite paracyclists show resilience regarding diet, training, and fitness during COVID-19](#)  
Keely Shaw, PhD candidate
- [Is performance eccentric exercise optimal for strength and function in older adults?](#)  
Ashley Gluchowski, PhD
- [Use of a surgical or cloth mask does not impede high intensity cycling performance](#)  
Conan Shing
- [Tinkering after Tokyo 2020: Heat acclimation can improve performance in sweltering Summer Games, but does it take woman longer to adapt to the heat compared to men?](#)  
Kate Wickham, PhD candidate
- [Fighting declining brain function through exercise](#)  
Nick Bray, PhD
- [The need for speed: Quadriceps muscle fatigue is linked to walking and balance ability in older adults,](#)  
Phuong “Lisa” Ha, PhD
- [Exercise for people living with advanced cancer: Recommendations from an international panel of healthcare and exercise professionals](#)  
Kendra Zadravec, MSc, PhD candidate





Applied Physiology, Nutrition, and Metabolism is a proud CSEP affiliate and publishes original research articles, reviews, and commentaries that focus on the application of physiology, nutrition, and metabolism to the study of human health, physical activity, and fitness. The following figures were submitted to CSEP for publication in the 2021 Annual Report.

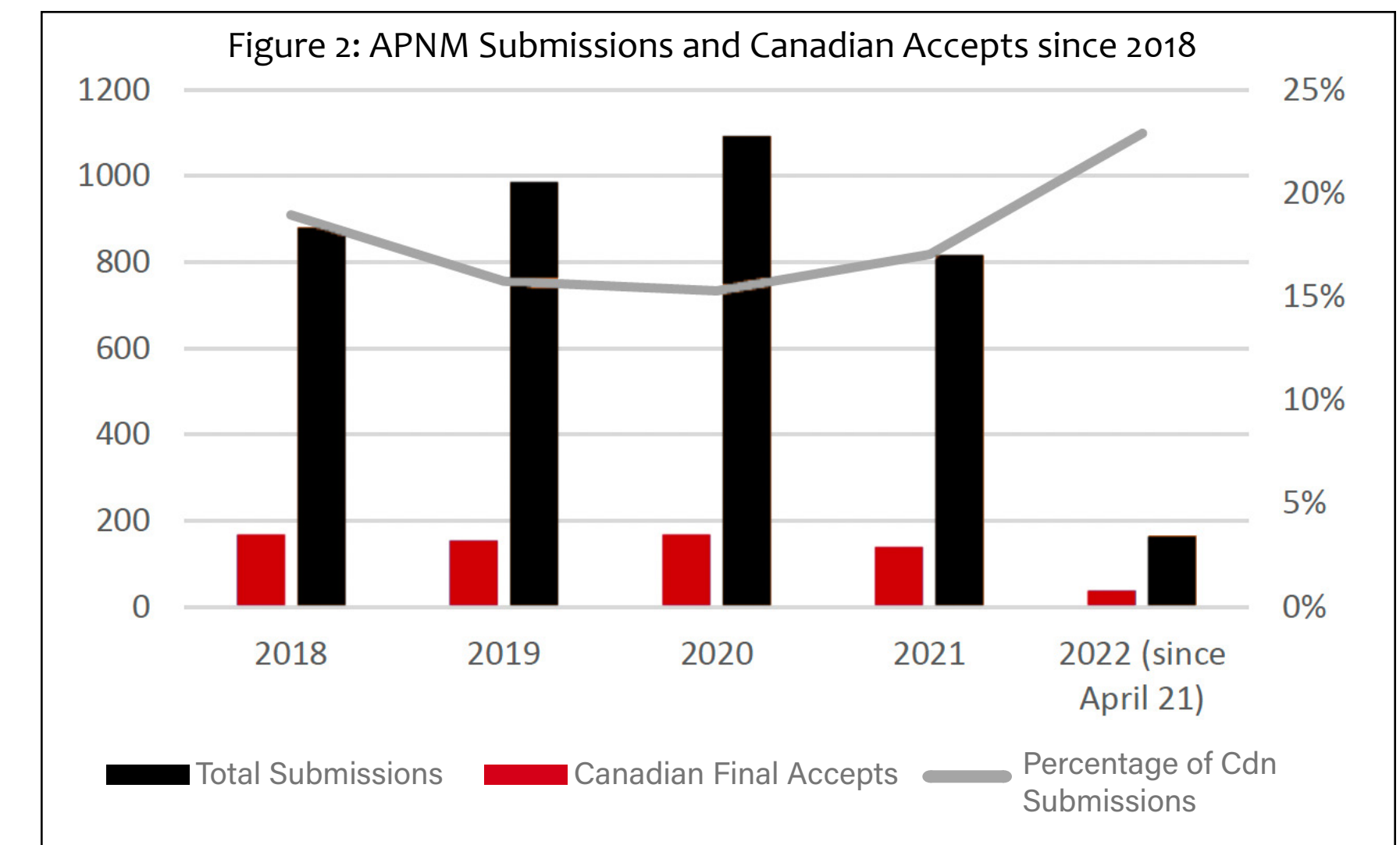
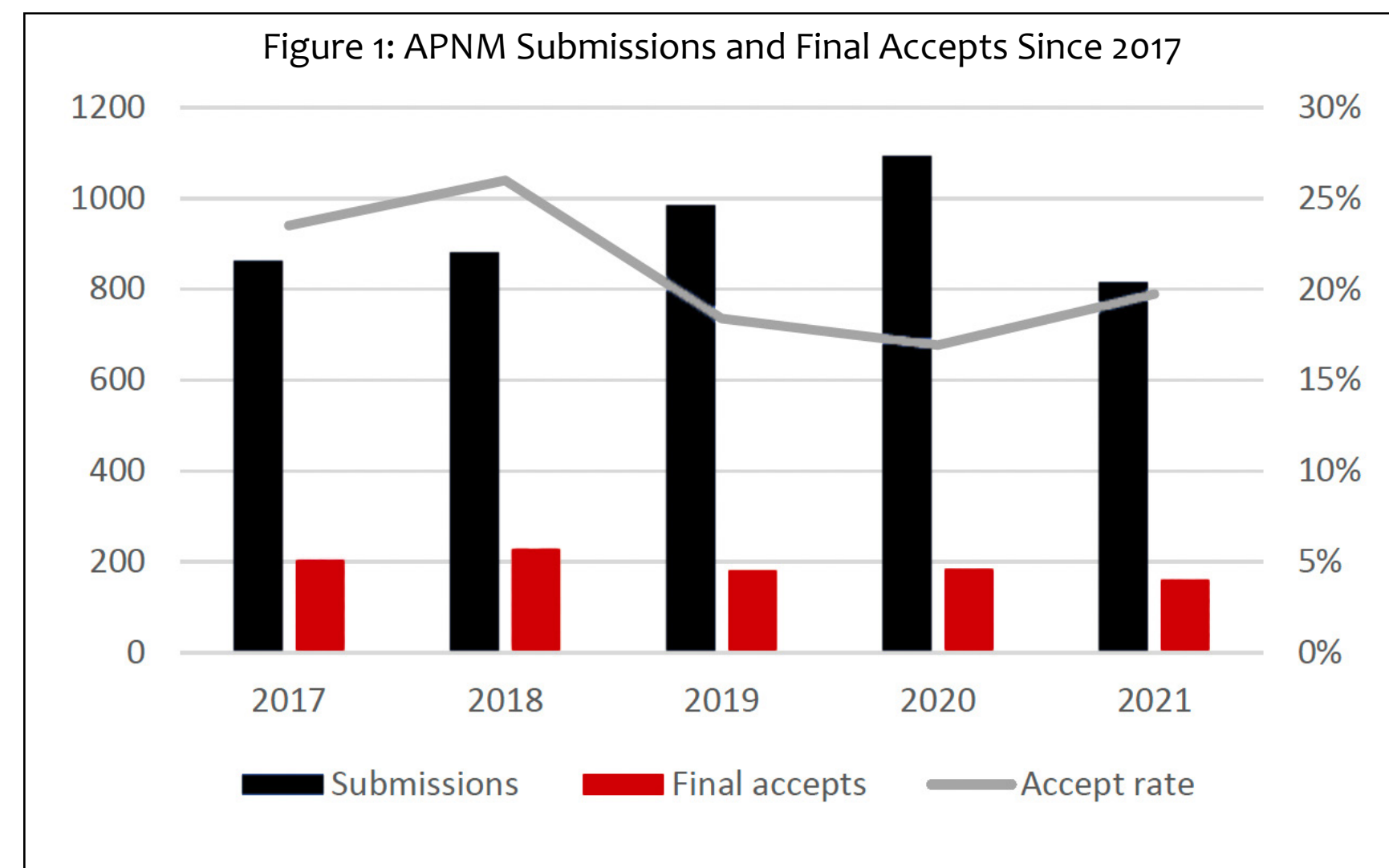


Figure 1 above highlights the total number of articles submitted to APNM globally since 2017 and the total number of articles accepted for publication. In figure 2, Canadian accepted articles are highlighted in comparison to total articles submitted from Canada and internationally. In 2020 COVID-19 brought a surge of submissions, since then submission numbers have declined, however, the acceptance rate for submitted articles, from Canada and abroad, is trending upward.



A publication's journal impact factor (JIF) is calculated based on the citations on papers published in the previous 2 year period. Citable items include original research papers, reviews, articles, informed commentaries, essays, and discussions. Figure 3 below illustrated how APNM's journal impact factor has risen 6% according to data from ScholarOne (APNM's submission and peer review platform).

In 2020 APNM's website underwent a revamp and Figures 4 and 5 illustrate that both the number of downloads (Figure 4) and the number of citations (Figure 3) have been trending upward since the site change.

Figure 3: APNM 2-year and 5-year JIF, Since 2017

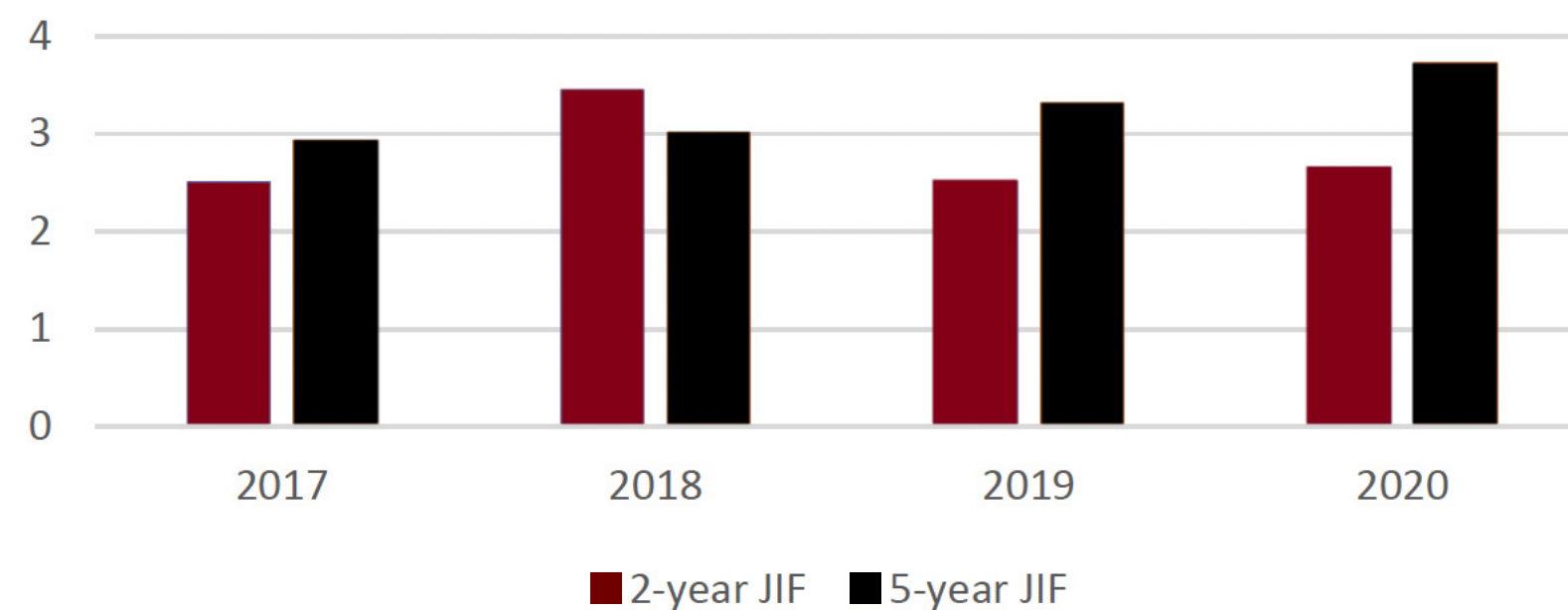


Figure 4: APNM Website Downloads Since 2018

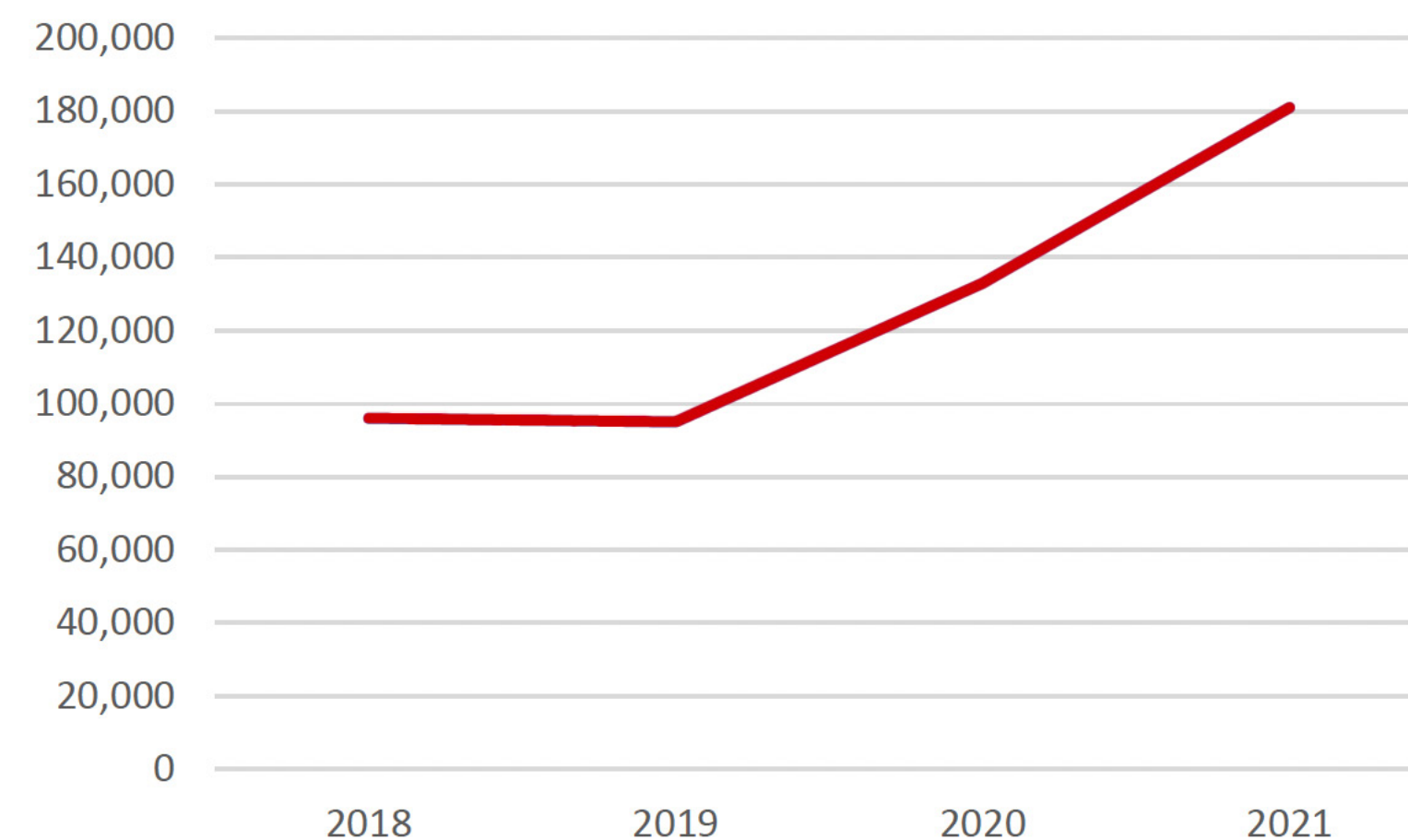
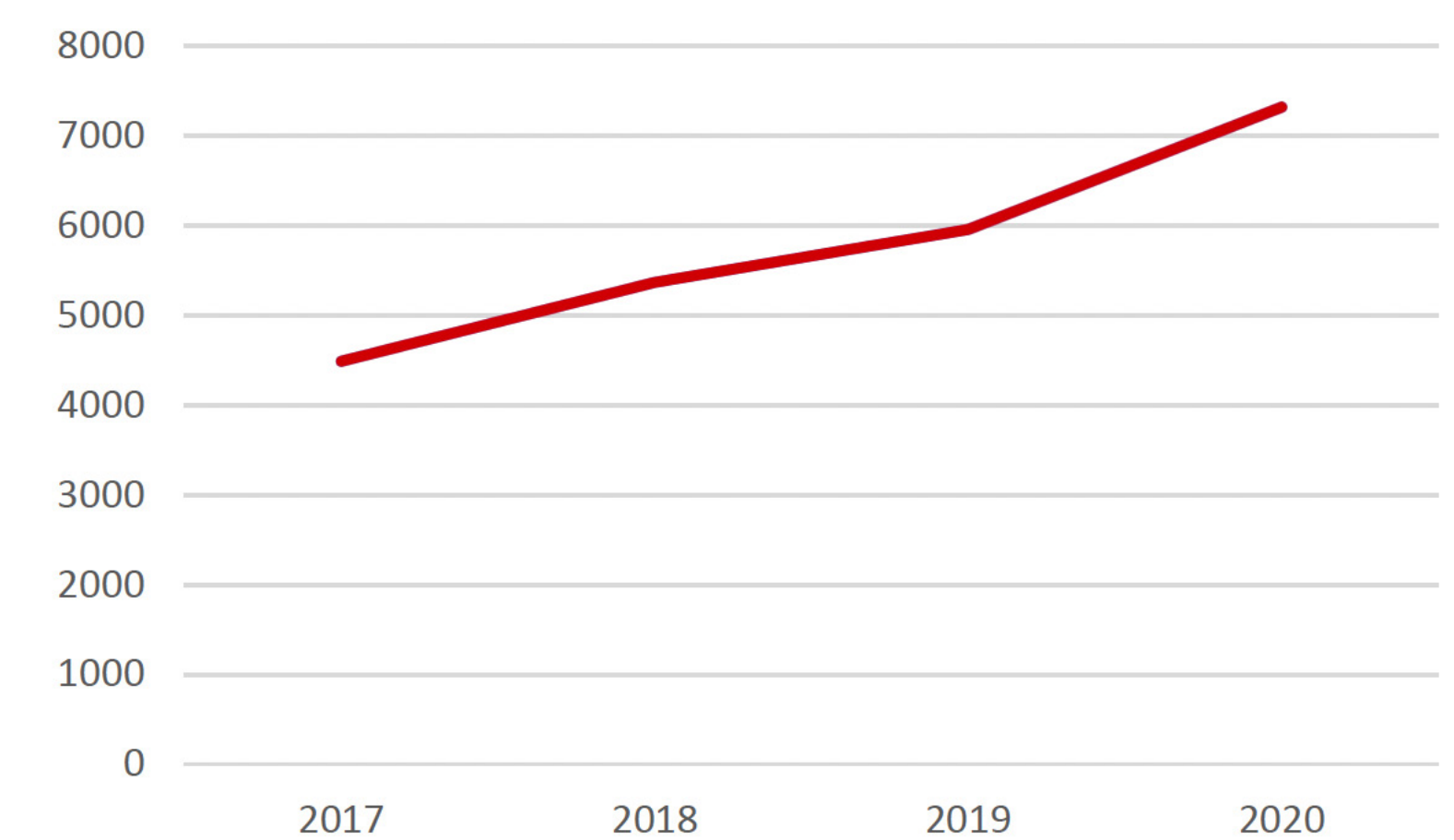


Figure 5: APNM Citations Since 2017



## Additional information:

- APNM's turnaround time for both reviewed and non-reviewed items was within Canadian Science Publishing and industry targets for 2021.
- Since October 2021 the [abstracts published in APNM from CSEP 2021](#) have been downloaded more than 300 times.
- [The CSEP Special Supplement publication](#) on the Canadian 24-Hour Movement Guidelines for Adults Aged 18-65 years and Adults aged 65 years or older (published in October 2020), has been downloaded 566 times.



# Board of Directors



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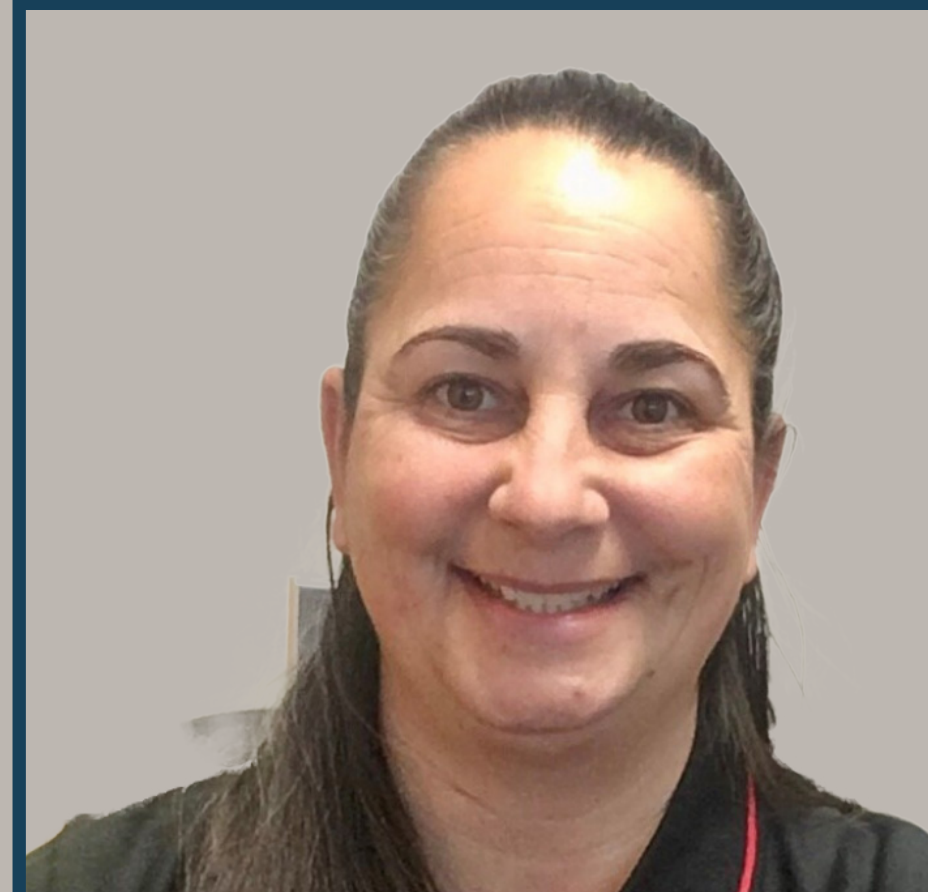
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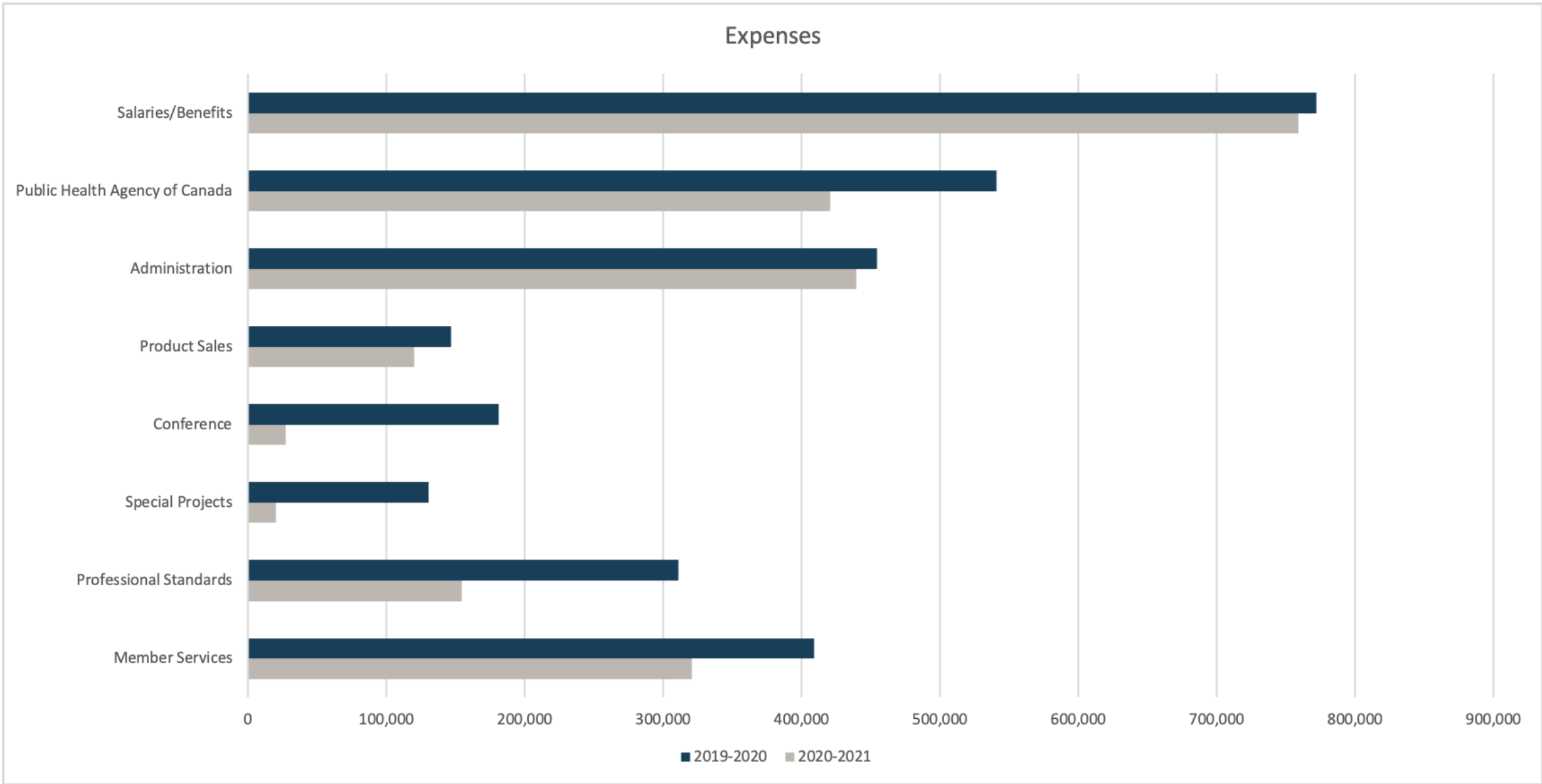
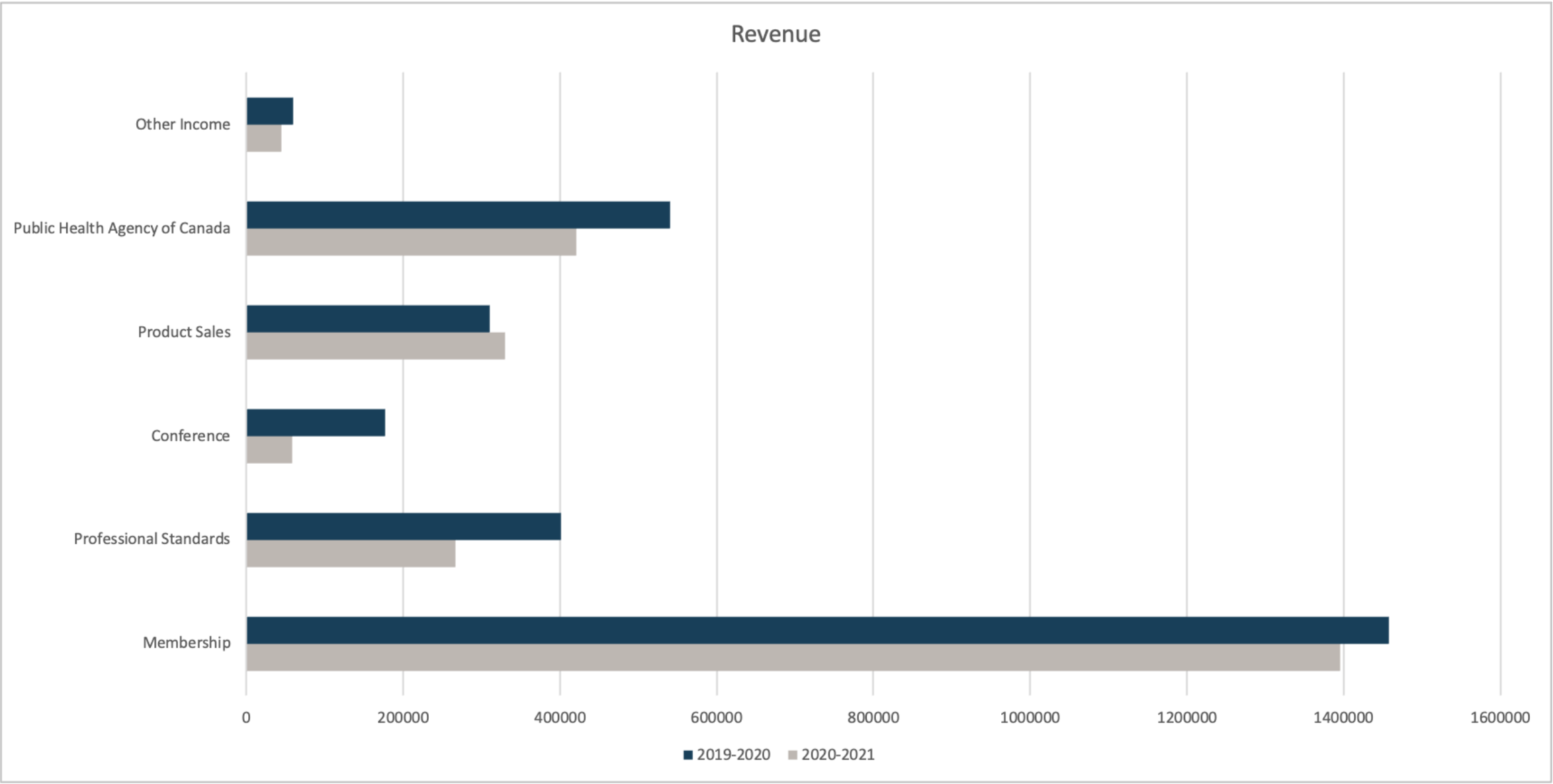


**Director, Conference**  
Jamie Burr, PhD  
University of Guelph



# 2021 Financials

The Charts below outline the actual revenues and expenses of the organization for the previous 2 years. Audited statements are available to all CSEP members annually at the CSEP Annual General Meeting, taking place this year in Fredericton, NB.






## Thank You to All CSEP Volunteers!

Kristi Adamo, Kristal Anderson, Kate Andrews, Justin Andrushko, Raul Artal, Nicole Beamish, Gordon Bell, Kevin Boldt, Danielle Bouchard, Jamie Burr, Radha Chari, Phil Chilibeck, Hannah Connon, Jennifer Copeland, David A. Cunningham, Brian Dalton, Margie Davenport, Darren Delorey, David Docherty, Paolo Dominelli, Janine Dreger, Greg DuManoir, David Dyck, Milena Forte, Alex Game, Phil Gardiner, Martin Gibala, Normand Gionet, Kristine Godziuk, Howard Green, Tom Hazell, George J.F. Heigenhauser, Joris Hoeks, Krista Howarth, Rhiannon Jacek, Jennifer Jakobi, Denis Joannis, Tim Just, Jayne Kalmar, Mojtaba Kaviani, Karen Kendall, Glenn Kenny, John Kowalchuk, Jennifer Kuk, Ginger Lamoureux, Kirstin Lane, Yves Le Gal, Sojung Lee, Luc Léger, Jonathan Little, Maureen MacDonald, Kelly Mackenzie-Rife, Ralph Manders, Linda May, Victoria Meah, Michelle Mottola, Coral Murrant, Sarah Neil-Sztramko, Catherine Notarius, Gianni Parise, Greg Pearcey, François Péronnet, Christopher Perry, Stu Phillips, Jessica Power-Cyr, Joe Quadrilatero, Jennifer Roue, Stephanie-May Ruchat, Digby Sale, Ayesha Saleem, James Sexsmith, Jane Shearer, Bill Sheel, Tim Snijders, Derek Stouth, Sherry Swanburg, Peter Tiidus, Thomas Tripp, Nolan Turnbull, Rhea Vaags-Olafson, Jani Vogell, Brittany Ward, Janna Wentzell, Jean Wessel, Jennifer Williams, Jeff Zahavich, Ashley Zahavich, Earle F. Zeigler, Christina Ziebart.

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