

Health effects of electronic cigarettes: A review

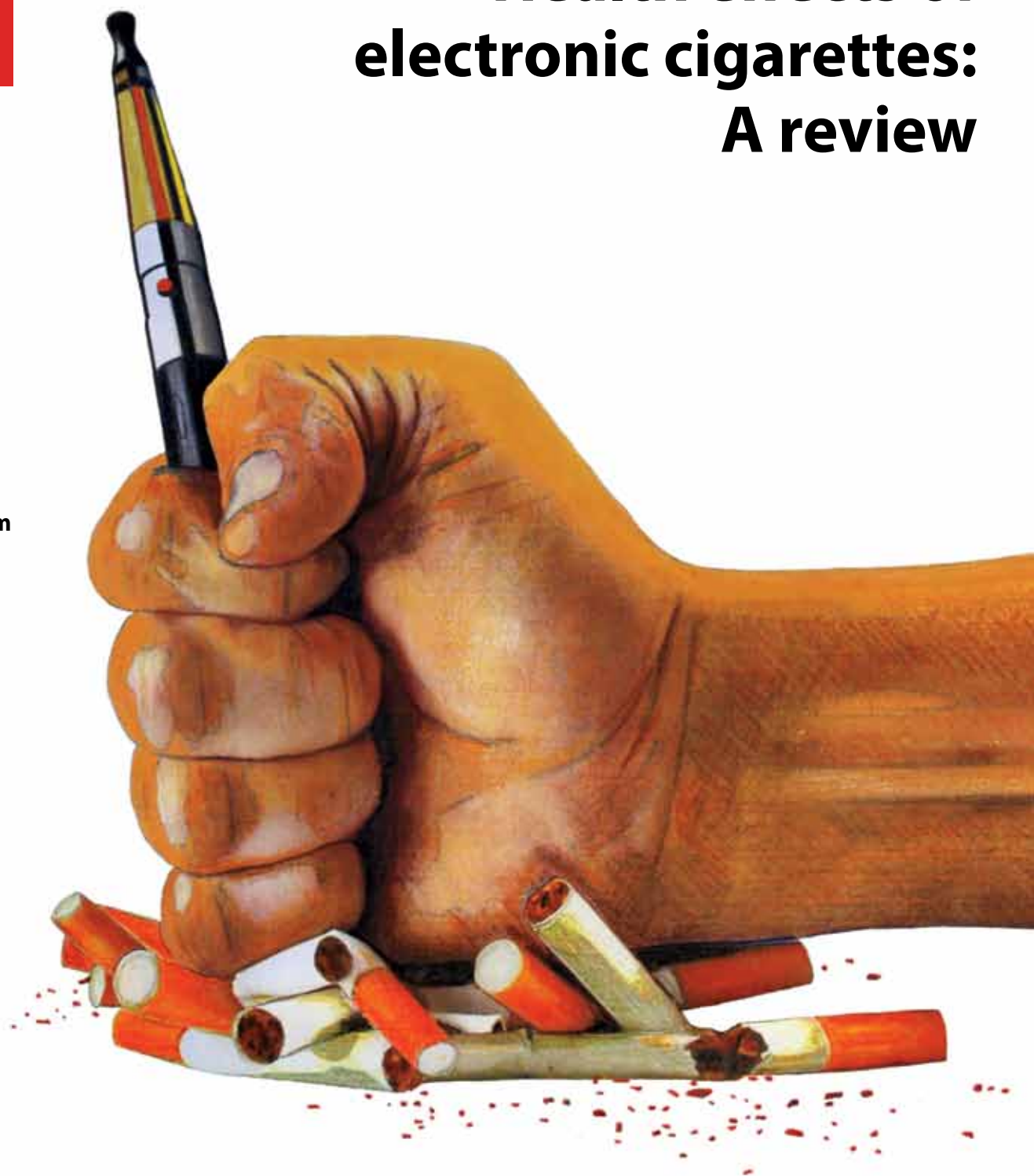
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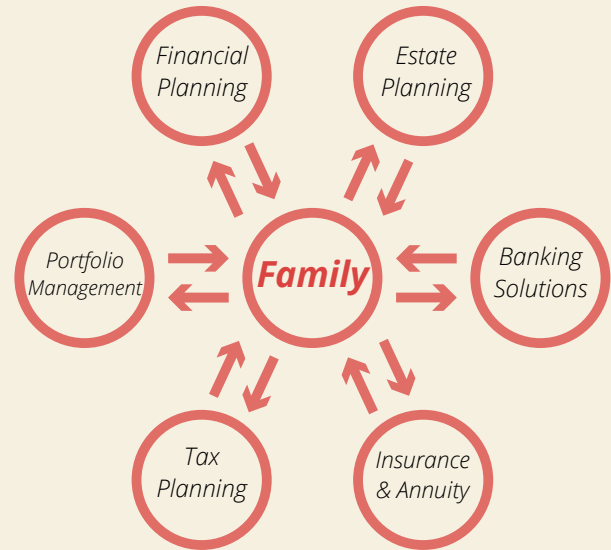
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Huddles provide a scheduled venue for asking questions in real time and verbalizing concerns with colleagues, and have numerous benefits to staff and patients. Article begins on page 256.

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ON THE COVER

Weighing electronic cigarettes' benefit as a smoking cessation tool against their various health risks. Article begins on page 258.

The *BCMJ* is published by Doctors of BC. The journal provides peer-reviewed clinical and review articles written primarily by BC physicians, for BC physicians, along with debate on medicine and medical politics in editorials, letters, and essays; BC medical news; career and CME listings; physician profiles; and regular columns.

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E-cigarettes can be an effective smoking cessation tool for some smokers of combustible cigarettes but may be associated with potential cardiovascular and respiratory morbidity. Article begins on page 258.

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When will they ever learn?

There has been a lot of press and commentary lately about the family medicine crisis in BC, and with good reason. As a full-service family physician, I and many of my colleagues feel this crisis on a daily basis. Although this editorial focuses on the family medicine crisis, I acknowledge that our specialist colleagues, in many cases, are also worried about the future of their disciplines.

As family physicians, we regularly navigate the health care system on behalf of our patients. Every day, I search the Pathways website to find specialists who will be able to see my patients in a timely fashion. It seems that specialists in certain disciplines are also leaving private practice for settings that do not involve them running an office with overhead costs. In my community, there are no psychiatrists in private practice. They all work in the hospital or mental health units funded by the health authority. There are fewer general internal medicine specialists in office-based practices in our community as well. They can be found working hard in our hospital CCU, medical wards, and outpatient clinics at our hospital. We no longer have an office-based dermatologist in our community. In fact, we have no dermatologist in our community, period.

Physician Master Agreement negotiations between Doctors of BC and the BC government are underway at the time of writing. I believe that the crisis in family medicine in BC is going to get much worse unless drastic measures are taken very soon. I have heard that the nurses' and teachers' unions are preparing to strike, which means that the BC government is having to look at the bigger picture. They need to look at the big picture of the health care needs of all their citizens, including their teachers and nurses, who all need family physicians.

Twenty-five years ago, the government introduced something called *prorating*. When expenditures for medical services ran over budget, the government clawed back money from physicians. In response, the then-BC Medical Association introduced reduced activity

days, where family doctors closed their offices, and anesthesiologists did not work on elective surgeries, effectively shutting down operating rooms on those days. There was public outcry, and eventually prorating was stopped.

Twenty years ago, after agreeing to binding arbitration with doctors, the BC government passed a bill in the legislature to cancel the agreement, after a well-reasoned and fair judgment by a retired chief justice of the BC Supreme Court went in favor of doctors. Doctors

I believe that the crisis in family medicine in BC is going to get much worse unless drastic measures are taken very soon.

were incensed, and gradually and increasingly withdrew services (does anybody remember education days?), until another agreement was reached. Today, doctors are again, in effect, withdrawing office-based family medicine services by going to work as hospitalists or UPCC physicians, or retiring earlier than planned, or just working less.

I hope that the government and Doctors of BC realize the magnitude of the problem and can come up with meaningful ways to solve it. I will leave you with a song, sung to the tune of "Where have all the flowers gone," with apologies to Pete Seeger. In case you're not familiar with the tune, here it is: <https://youtu.be/bI3QVsW30j0>.

Where have all the fam docs gone,
long time passing?

Where have all the fam docs gone,
long time ago?

Where have all the fam docs gone?
Clinics picked them, every one.

When will they ever learn? When will
they ever learn?

Where have all the clinic docs gone,
long time passing?

Where have all the clinic docs
gone, long time ago?

Where have all the clinic docs gone?
Work in UPCCs, every one.

When will they ever learn? When will
they ever learn?

Where have all the "oopsy" docs gone,
long time passing?

Where have all the "oopsy" docs
gone, long time ago?

Where have all the "oopsy" docs gone?
Switched to hospitalists, every one.

When will they ever learn? When will
they ever learn?

Where have all the hospitalists gone,
long time passing?

Where have all the hospitalists
gone, long time ago?

Where have all the hospitalists gone?
Seeing orphaned patients, every one.

When will they ever learn? When will
they ever learn?

Where have all the orphaned patients gone,
long time passing?

Where have all the orphaned
patients gone, long time ago?

Where have all the orphaned patients gone?
Still looking for a fam doc, every one.

When will they ever learn? When will
they ever learn? ■

—David Chapman, MBChB

The CMA: Something needs to change

Being just 3 months younger than Canada, the Canadian Medical Association (CMA) is one of our country's oldest societies. The association's first president, Sir Charles Tupper, was a founding father and the first and last physician–prime minister.

Unlike provincial associations, the CMA is not involved in remunerative negotiations. It is free to critique government policies that clash with the needs of patients and health workers without fear of reprisals from its de facto employer.

About 15 years ago, I was elected CMA president. The CMA staff I encountered were extremely impressive and knowledgeable. They and the elected delegates welcomed and supported me in my mission to create a better system for all. My years there were hectic, productive, and filled with optimism.

Canadian doctors lack the political influence that doctors in Britain enjoy. I attended the British Medical Association's 2008 annual meeting in my birth town of Liverpool. Tom Sackville had been a junior health minister under Margaret Thatcher. He revealed that the Iron Lady feared confrontation with doctors, remarking, "She fearlessly took on Gorbachev and the Red Army and asserted her will over Ronald Reagan; she decimated the power of the British trade unions; she ordered the British Navy, with heir to the throne Prince Andrew on board, to the South Atlantic to engage Argentina in war. She drew the line at waging battle against the BMA."

There is no such fear of the CMA by our government.

Governments avoid controversial policy issues. That's why decisions on abortion, same-sex marriage, assisted dying, prisoners' rights, safe-injection sites, and medicare have ended up in the courts.

A 2007 independent study on the costs of waiting for care revealed the economic cost of waiting across just four provinces was \$14.8 billion. Long wait times impose both medical and monetary harms on patients and the economy.

The calculations did not include waiting from GP to specialist consultation, nor the long-term costs of chronic irreversible harms, drug addiction, and depression. Other studies estimated that mental illness cost our economy \$51 billion in just 1 year. We pay to prevent patients from being treated, and shorter wait lists would actually save money. Preventive medicine should not mean preventing patients from being treated.

We also advocated for wait-time guarantees and patient-focused (activity-based) funding (both will soon be policy in Quebec).

Dr Barry Turchen presented a study at the CMA using BC's Freedom of Information and Protection of Privacy Act (despite government opposition). He found that administrative costs in BC's system were 16%, representing 6 to 7 times what was claimed, and over 3 times that of US public Medicare. An earlier report by Commissioner Judi Korbin had pointed out that 80% of all new health care jobs in BC were in middle management.

During my tenure, Dr John Haggie (CMA president, 2011), put forward a motion at the CMA asking that Canada's Auditors General investigate such costs. They did not respond. Dr Haggie later became Newfoundland and Labrador's Minister of Health and, so far, has not ordered such a review in his province.

My time at the CMA taught me a great deal about the health disparities between different communities in Canada. We did succeed in pressuring governments to train more health workers in Canada. That was too little and too late.

Last year I surveyed former CMA leaders on their thoughts on the state of our system and how the CMA was performing. Almost all respondents opined that the CMA had lost influence with doctors and government. It was not reaching out to its grassroots membership and was enjoying its new status as a very wealthy entity after the sale of MD Financial Management to Scotiabank for almost \$3 billion.

The following CMA policy preceded my tenure: "When timely access to care cannot be provided in the public health care system the

patient should be able to utilize private health insurance to reimburse the cost of care obtained in the private sector."

Yet the CMA refused to participate in a constitutional case aimed at making its own policies on health insurance and freedom to practise matters of government policy. Its membership among practising physicians has dropped and, sadly, given the CMA's historical roots in Quebec, the Quebec affiliate has disbanded. Doctors of BC has ended compulsory membership.

For what I believe was the first time in its long history, the CMA recently suspended a member, denying them the chance to stand in a democratic election for nominee as president-elect. The courts overturned the suspension and awarded substantial costs against the CMA. The CMA's action appears to demonstrate a lack of concern for the democratic process and members' assets. Its \$3 billion windfall means it does not need to consider its members, nor does it need their annual dues to remain viable.

Our 1926 BCMA president, Dr J.H. MacDermot, warned: "Our noble tradition that no sick person of any age, sex, race, or religion whatsoever, shall ever suffer for need of medical care . . . should be based on our willingness to give. . . . It should not be exploited: nor should it be assumed as a God-given right. . . . Least of all should it be a right-of-way for needy and penurious governmental and administrative bodies."

Dr MacDermot's warning has become a reality. Patients and their doctors are now controlled and dominated by the state.

I am concerned about the CMA's lack of action and support for doctors, their patients, and the democratic process. Something needs to change, and I see some hope in light of the current impressive elected presidential line. But they need democratic grassroots support and input. Let's give them what they need. ■

—Brian Day, MB

Letters to the editor We welcome original letters of less than 300 words; we may edit them for clarity and length.

Letters may be emailed to journal@doctorsofbc.ca, submitted online at bcmj.org/submit-letter, or sent through the post and must include your mailing address, telephone number, and email address. Please disclose any competing interests.

Re: Where have all the family doctors gone?

It is with sadness and frustration that I reply to Dr Suzanne Montemuro's letter in the *BCMJ* [2022;64:105-106], "Where have all the family doctors gone?"

She chose to bring up the issue of physician remuneration as one reason there is a shortage of family doctors. On this issue I agree. However, her letter implies that specialists, in particular ophthalmologists, are overpaid. On this issue I completely disagree. I argue that family doctors are underpaid. I don't know of any Canadian physician who feels overpaid. Ever.

Unless Dr Montemuro has experience with a successful application to a specialty residency program, successful completion of a Royal College of Physicians and Surgeons of Canada program, and experience practising as a surgical specialist, then I feel she is in no way qualified to imply that specialists are overpaid. I would be happy to have Dr Montemuro visit my office and surgery day so I may demonstrate to her some of the challenges and stressors, as well as the costs of my equipment and overhead, which are also 40% like hers. If

she then still feels that I am overpaid, so be it.

I acquired my licence to perform family practice during my training and worked walk-in clinic shifts during residency to help pay my way through ophthalmology training. I feel I have enough experience to fairly state that family doctors are underpaid. Period. There is no need to imply that specialists are overpaid. This creates animosity among physicians. Exactly what some politicians want. Instead, we need to support the areas of family practice that require help, including remuneration.

—Robert Semeniuk, MD, FRCSC
Ophthalmologist, Penticton

Re: The subspecialty of adult infectious diseases

It was a pleasure to read Dr Chow's perspective on the subspecialty of adult infectious diseases in British Columbia [*BCMJ* 2022;64:155-159]. I met him as a trainee in 1986 and I can attest to the fact that he is one of the founding fathers of our specialty in Canada and a mentor to many of us.

In his Table 2, I would like to point out an omission to his summary of the geographic

distribution of adult infectious diseases services in BC. I am the medical director of the Vancouver Infectious Diseases Centre in downtown Vancouver. Our three physicians and three nurses (and other support staff) are dedicated to the development and evaluation of systems of care for inner-city residents living with HIV, HCV, and other chronic medical conditions, including cellulitis, endocarditis, and osteomyelitis, to name a few. We offer services in both French and English. We also have a novel "community pop-up clinic" model, conducted once a week at selected single-room-occupancy buildings in the inner city, interacting with men and women (many with untreated HIV and/or HCV infection) who are often disengaged from care.

Our team congratulates the *BC Medical Journal* for highlighting the importance of the infectious diseases community in our province. Following in the footsteps of Dr Chow's pioneering work to develop our specialty, it is a privilege to have developed our centre to serve the most vulnerable among us.

—Brian Conway, MD, FRCPC
Vancouver Infectious Diseases Centre



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Courageous leadership

As we reflect on all that has happened over the past few years—a pandemic, the war in Ukraine, the opioid crisis, multiple other coinciding crises—it can feel heavy, and it can be hard to see the many opportunities that exist for us to be unified in a harmonious way. While there will always be conflict and people who disagree, imagine a world with more awareness, consonance, and trust. Imagine a world where we lead with courage.

As humans and as physicians, we have a daily choice in how we show up in our clinical environments, our personal lives, and the world in general. Our internal compass, emotional regulation, and cognizance can remarkably alter our course and the way in which we participate in life. Equally, our environment can influence our ability to choose how we engage. If we regularly face conflict, adversarial approaches, and toxic environments, it can hinder our progress. On the

flip side, if we are surrounded by support, irrespective of the adversity of the landscape, odds are that we will survive, perhaps even flourish.

Fostering daily commitments to be collegial, to lead with love and responsibility, to engage with like-minded individuals, and to respect those with differing opinions are all examples of how many of you choose to show up every day. They are also actions that require courageous leadership. I am not ignorant to the environment or culture we are confronted with; however, if we embody a mindset that allows us to show up differently, perhaps others will have the courage to do the same.

It takes a consistent, conscious effort to cultivate, shape, or co-create a harmonious culture. But it is possible. It requires us to self-reflect and to challenge ourselves and our understanding of our intentions. It requires us to be authentic, resilient, emotionally intelligent, self-disciplined, and committed. And it requires

us to lead with courage. All of these things we are capable of doing. Each of you shows up for your patients this way every day. We are at a critical juncture; while the world around us may seem like it is falling apart, I see an opportunity to look within and come together. An evolution of courageous leadership into a collective consciousness could liberate our profession and create revolutionary positive impact.

As William James said, “Act as if what you do makes a difference. It does.” What we do makes a difference to our patients, to each other, and to our health care system. And today we have the power to make a real difference, to be part of the systemic change we have been asking for. Today we have the power to lead with courage, to make positive change a reality, and to create a system—a world—with more humanity. ■

—Ramneek Dosanjh, MD
Doctors of BC President

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Tips for billing Initial Expedited Comprehensive Consultations (19911)

Some physicians report significant delays or denial of payment for their Initial Expedited Comprehensive Consultations (19911). According to recent data from WorkSafeBC, a top reason for this is missing or illegible consult reports.

When your 19911 is submitted to WorkSafeBC, the system automatically searches for proof of a consult report. If the system is unable to find such a report, the 19911 is reviewed manually by WorkSafeBC, which may result in payment delays. If WorkSafeBC is unable to find the appropriate consult report, it may result in a payment rejection.

When to bill a 19911 fee

The Initial Expedited Comprehensive Consultation (19911) fee may be billed when:

- The physician has received a new referral for consultation from a referring physician or from WorkSafeBC (on behalf of the referring community physician), including when the consultation occurs as a result of an emergency.
- More than 6 months have lapsed since the physician last saw the injured worker *and* the physician has received a new referral.

The Initial Expedited Comprehensive Consultation report must be received by WorkSafeBC within 15 business days from the referral.

Details on billing Initial Expedited Comprehensive Consultations can be found in the Physicians and Surgeons' WorkSafeBC Services Reference Guide at www.worksafebc.com/en/health-care-providers/provider-types/physicians.

This article is the opinion of WorkSafeBC and has not been peer reviewed by the BCMJ Editorial Board.

Please note that physicians with a Royal College specialty, apart from anesthesiologists, should bill fee code 19911. Anesthesiologists should use fee code 19934 for the initial expedited consult, and family physicians with areas of expertise (e.g., sports medicine, diving medicine, addictions medicine, family practice anesthesia) should use fee code 19945.

Billing 19911 tips

- A new WorkSafeBC Physician Consult Report Fax Cover Sheet (Form 83D556) can be found on WorkSafeBC's website to fax with your consult report to WorkSafeBC at 1 888 922-8807. Physicians can use this cover sheet to submit their consult reports—this is voluntary and is meant to help physicians reduce their related payment rejections and delays.
 - The new fax cover sheet tags and identifies your report for easier payment.
 - The consult report should be sent as soon as possible and must be sent before your billing for 19911.
 - Clearly document the worker's claim number on all pages of your report.
- If you choose not to use the new fax cover sheet:
 - Clearly note "Consult Report" and the worker's claim number on your fax cover sheet.
 - The consult report should be sent as soon as possible and must be sent before your billing for 19911.
 - Clearly document the worker's claim number on all pages of your report.
- Ensure your documentation is legible; typed reports are recommended.
- Consult reports must be comprehensive and must be documented in keeping with professional standards (according to the

College of Physicians and Surgeons of British Columbia's practice standard on medical records documentation).

- Label your consult reports, and fax them separately from OR reports.
- Ensure any consult report transcribed by the hospital has been faxed to WorkSafeBC at 1 888 922-8807.
- While a claim is pending acceptance by WorkSafeBC, physicians do not need to wait for approval from WorkSafeBC to expedite the initial consult.
 - Please see the patient as soon as possible to ensure the consultation and report are completed and received by WorkSafeBC within 15 business days to meet timelines for payment.
 - However, for pending claims, subsequent visits beyond the initial consultation may not be covered by WorkSafeBC.
 - Please obtain the claim number from the worker or from the referring physician and mark it on your consult report and fax cover sheet.

If you have any questions, contact Doctors of BC at worksafebc@doctorsofbc.ca. ■

—Patrick Wong

Quality Assurance Supervisor, WorkSafeBC

—Dana Chmelnitsky

Program Manager, WorkSafeBC

—Farnaz Ferdowsi

Senior Analyst, Doctors of BC

Hamish Hwang, MD, FRCSC, FACS, Sharadh Sampath, MD, FRCSC, S. Morad Hameed, MD, MPH, FRCSC, FACS

General Surgeons of British Columbia launches province-wide peer mentorship program

The UBC Reticulum website was launched in May 2019 to help connect general surgeons in British Columbia. Now with the help of industry funding, General Surgeons of BC has launched a province-wide peer mentorship grant program.

In May 2019, a secure, interactive, multifunctional website (www.ubcreticulum.com) was launched to create a virtual network of general surgeons, both community and academic, across British Columbia. Funded by a grant from the UBC Strategic Investment Fund, the website was created to provide a knowledge hub to support the clinical care of patients, research, and education. It became an invaluable tool for province-wide communication during the initial phase of the COVID-19 pandemic.¹ The utility of the virtual surgical network is exemplified by a popular new video feature through which surgeons can share strategies, techniques, and innovations in surgical care seamlessly across the province [Figure 1].

Buoyed by the success of UBC Reticulum, the UBC Division of General Surgery adapted the website as a platform for a new

province-wide mentorship grant program, which launched in January 2022. Surgeons can self-declare interest in mentoring their peers on a procedure-specific basis, on a searchable section of the site [Figure 2]. The intent of the mentorship program is to universally improve access to and quality of surgical care across the province by creating opportunities for peer mentoring and coaching.

Barriers to peer mentorship include loss of clinical time, travel expenses, and administrative costs. The mentorship grant aims to remove these barriers for any general surgeon in the province

who identifies a willing mentor or wishes to undertake a mentorship project as a mentee. Funding comes from General Surgeons of BC, a Section of Doctors of BC, as well as from industry sponsors. At the time the program launched, sponsors included BD, Ethicon, Medtronic, Pendopharm, and Stryker. Surgeons approved for a grant receive funding equivalent to the Doctors of BC specialist sessional rate for administrative preparation, such as applying for temporary privileges, nonclinical meetings between mentor and mentee, travel costs, accommodation, and weekday time away from clinical practice.

Dr Hwang is a clinical associate professor at the University of British Columbia and associate head of the UBC Division of General Surgery. Dr Sampath is a clinical assistant professor at UBC and head of the Division of General Surgery at Richmond Hospital. Dr Morad Hameed is an associate professor of surgery and critical care medicine at UBC and head of the UBC Division of General Surgery.

This article has been peer reviewed.

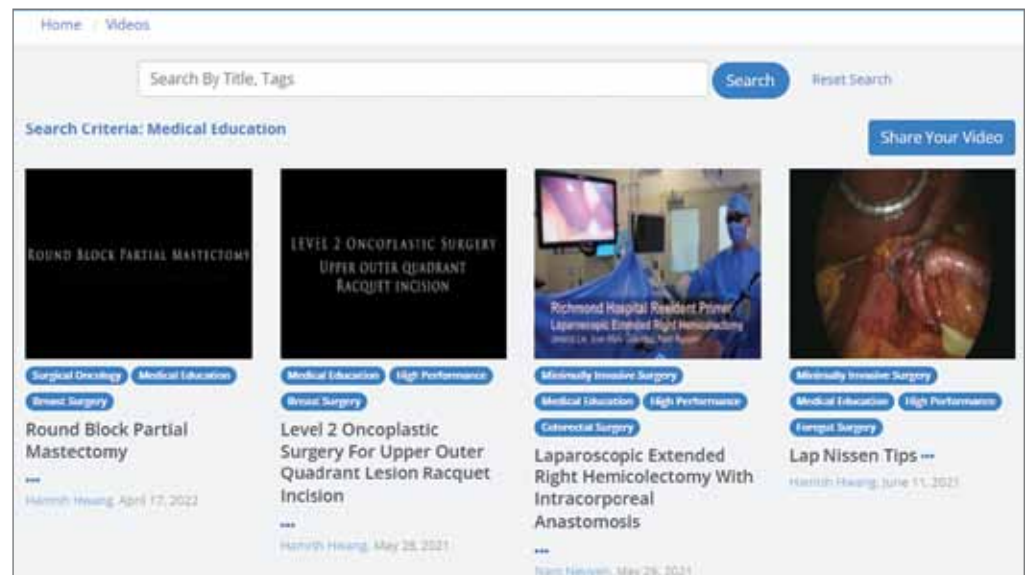


FIGURE 1. Screenshot of the searchable repository of user-posted videos on the UBC Reticulum website.

Examples of mentorships include one surgeon visiting another to see how a surgical procedure is done or having a mentor visit to give feedback on how a procedure could be improved. Other possibilities include review of recorded videos for surgical coaching or live feedback during broadcasted intraoperative videos. The Royal College of Physicians and Surgeons has a framework in which both mentor and mentee surgeons can obtain Maintenance of Certification credits for these activities.

The first recipient of a UBC Reticulum Mentorship Grant was Dr Nicole Robbins, a general surgeon in Williams Lake. She spent a week with the colorectal surgery team at St. Paul's Hospital. Here are some of her comments about the program:

“The access to the program in terms of low administrative burden is great. In many programs or grants for physicians the paperwork burden is onerous and becomes a disincentive to apply.

“Access to CME has been especially challenging since COVID. I really appreciated the chance to be hands-on in the OR and present to listen to the discussion and teaching of senior learners such as fellows.

“The chance to work again with surgical profs from residency was wonderful. Everyone was welcoming. I thought often of how isolated rural surgeons can be in the OR. I was envious at times of the five or so surgeons and trainees who were all contributing or learning from some of the more complex cases.

“When I was completing my residency (finished in 2010) the number of laparoscopic bowel resections being done was minimal, and as a senior resident we did not receive much training as it was reserved for staff or fellows. It was, therefore, helpful to focus on these procedures and ask questions again.

“I can see how doing a mentorship like this could be a way of helping with rural surgeon burnout and help with recruitment and retention in community sites. Also, inviting subspecialized surgeons to community ORs would then become easier and less intimidating.”

Surgeons from around the province have already begun to follow Dr Robbins' lead in exploring a diversity of mentorship and technical coaching opportunities.

Expert Mentors on **Transanal TME (TaTME)** (3)

Expert Peers on **Transanal TME (TaTME)** (9)

🎓 Graduation cap icon indicates that you are a mentor!
















 <p>Aslani, Nava Full Time Surgeon Lions Gate Hospital</p>	 <p> Brown, Carl Full Time Surgeon St. Paul's Hospital</p>	 <p>Chiu, Chieh Jack Full Time Surgeon Vancouver General Hospital U.B.C. Health Sciences Centre Hospital</p>
 <p>Jenkin, Daniel Full Time Surgeon Nanaimo Regional General Hospital</p>	 <p>Karimuddin, Ahmer Full Time Surgeon St. Paul's Hospital Mount Saint Joseph Hospital</p>	 <p>Meneghetti, Adam Full Time Surgeon Vancouver General Hospital</p>
 <p>Parapini, Marina Resident</p>	 <p> Raval, Marina Full Time Surgeon St. Paul's Hospital</p>	 <p>Recsky, Magdalena Full Time Surgeon Kelowna General Hospital</p>
 <p>Schneidreit, Nathan Full Time Surgeon Nanaimo Regional General Hospital</p>	 <p>Wallace, Tom Full Time Surgeon Royal Inland Hospital</p>	 <p> Vikis, Elena Full Time Surgeon Royal Columbian Hospital Eagle Ridge Hospital & Health Care Centre</p>

FIGURE 2. Screenshot of a sample search for mentors by procedure.

The UBC Reticulum Mentorship Grant is an innovative new program that will capitalize on the collegiality that exists among general surgeons in BC and will support a culture of coaching and lifelong learning, improving access to high-quality surgical care across the province. The application process is simple; general surgeons with ideas for mentorship projects are encouraged to contact the Division at general.surgery@ubc.ca. ■

Competing interests

None declared.

Reference

- Hwang H, Manoharan S, Zabolotniuk T, Morad Hameed S. UBC Reticulum: A novel website connecting general surgeons in BC during the COVID-19 crisis. *BCMJ* 2020;62:172-173.

News

We welcome news items of less than 300 words; we may edit them for clarity and length. News items should be emailed to journal@doctorsofbc.ca and must include your mailing address, telephone number, and email address. All writers should disclose any competing interests.

Book review: *Your inside guide to the emergency department: And how to prevent having to go!*



By Dr Fred Voon. FriesenPress, 2021. ISBN: 978-1-7776034-0-3. Paperback, 142 pages.

This 142-page book with a self-explanatory title has been written with Canadian patients in mind. The author is an emergency physician in Victoria, BC. Part 1 lays out what patients should expect to encounter if they've decided to attend the emergency department. Part 2 outlines frequent patient frustrations, including wait times, and offers guidance about when to visit the emergency department and how to decide if a visit is required. Part 3 delves into an emergency department's physical layout and describes the professionals who work there. Part 4, the bulk of the book, is devoted to home remedies for common symptoms and conditions. Appendices and glossaries define terms

used in the book, and references are included.

Dr Voon, using easily understood language in conversational form, has done a commendable job of advising patients how a Canadian emergency department functions and what to expect, and not expect, when visiting. While the book's title suggests that readers may discover strategies to prevent a visit, less than three pages are devoted to a discussion of alternatives to an emergency-department visit, and while health information phone lines (e.g., 811) are discussed, there is no discussion of common alternatives such as walk-in or urgent care clinics, or telemedicine. Additionally, undermining the hopeful tenor of the title is the following disclaimer in the foreword: "Even if the information in this book suggests medical attention is not needed, readers who think they have an emergency medical concern can and should go their nearest Emergency Department (ED) or call an ambulance. If in doubt, get checked out!" This medicolegal disclaimer reflects an important truth understood by all emergency-department personnel: it is tough to know which patients really need the services of the emergency department prior to workup.

Of course, a 142-page paperback cannot be exhaustive; authors of concise guides must make the hard choice to exclude certain material if critical topics are to receive adequate treatment. In this regard, it is intriguing to note that while two pages are devoted to the home diagnosis and reduction of nursemaid's elbow, there is no discussion of the critical role of the emergency department in assisting patients with mental-health crises. Nor is there guidance as to how patients living in proximity to more than one hospital should decide which one to visit, or a discussion of the charges facing uninsured or out-of-province patients.

Setting those concerns aside, Dr Voon has written a book that is fun to read and offers an insider's perspective that patients will appreciate. In particular, I see it as a useful addition to clinic or emergency-department waiting rooms, where our long-suffering patients wait their turn and ponder why it is taking so long.

—David Esler, MD, CCFP(EM)

Dr Esler has practised emergency medicine in and around Vancouver for 34 years. He is a clinical associate professor of emergency medicine at the University of British Columbia and a member of the BCMJ Editorial Board.

Updates to the *BCMJ's* student writing prizes

The *British Columbia Medical Journal* welcomes article submissions from BC medical students and offers two writing prizes for the best submissions accepted for publication. Recently, the prizes have been updated to distinguish between student articles written with and without physician coauthors. The blog-post prize has been discontinued.

The J.H. MacDermot Prize for Excellence in Medical Journalism (Independent) recognizes a BC medical student's significant

achievement in writing an article without any physician coauthors. The J.H. MacDermot Prize for Excellence in Medical Journalism (Mentored) recognizes a BC medical student's significant achievement in medical writing as part of an author team that includes physicians.

A winning article for each prize is selected from all eligible articles published in the *BCMJ* in a calendar year. There is no need to apply or be nominated. Each winner receives

\$750 and recognition in the *BCMJ* and at the Doctors of BC annual awards ceremony.

If a winning entry in either category is written by more than one student, the prize is divided equally among the student authors.

For more information about the prizes, visit <https://bcmj.org/submit-article-award>.

BCMJ
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BC Cancer Lung Screening Program—first of its kind in Canada

BC Cancer has launched the Lung Screening Program, the first organized province-wide lung-screening program for high-risk individuals in the country. Lung cancer is the leading cause of cancer death in Canada and worldwide. In BC, seven people die of lung cancer every day. With 70% of all cases currently diagnosed at an advanced stage, the Lung Screening Program aims to detect lung cancer at an earlier stage, when treatment is more effective.

Lung screening involves a low-dose computed tomography (LDCT) scan of the lungs. A network of lung-screening sites has been established across BC within each health authority using existing CT equipment within hospitals. The scan takes less than 10 seconds and is not painful. Patients do not need to take any medications or receive any needles for this test. After a patient's LDCT scan, a radiologist with expertise in early diagnosis will review the images taken at a designated reading site located within the patient's health authority. A computer-assisted diagnostic tool and standardized reporting format will be used to improve consistency and accuracy of reading and recommendation. Results of the patient's lung scan will be sent to the patient and their primary care provider.

Who is eligible for lung screening?

Lung screening is best for those who are at high risk for lung cancer and who are not experiencing any symptoms. This includes people who:

- Are 55 to 74 years of age.
- Currently smoke or have previously smoked.
- Have a smoking history of 20 years or more.

Interested individuals can self-refer directly to the screening program. Primary care providers can encourage eligible patients to call the Lung Screening Program (1 877 717-5864) to complete a risk assessment over the phone to confirm their screening eligibility. A fax referral option is also available (referral form accessible through the Health Professionals link below).

Role of primary care providers

Primary care providers play an important role in the Lung Screening Program, including:

- Supporting patients with their decision making and recommending lung screening when appropriate.
- Providing smoking cessation pharmacotherapy support.
- Providing follow-up for additional findings and support for abnormal results.

To learn more about the Lung Screening Program and to access helpful program resources, visit the Health Professionals page on BC Cancer's website: www.screeningbc.ca/health-professionals.

—Sandy Zhang, MPH

Promotion Specialist, Prevention, Screening, Hereditary Cancer Program, BC Cancer

New season of DocTalks: A Doctors of BC podcast production

On the first episode of DocTalks season 2, we speak with experts Julie Jones and Carl Prophet about how doctors can optimize their physical and online safety (www.doctorsofbc.ca/news/doctalks-podcast-physical-and-online-violence-how-protect-yourself). We're hearing more and more reports of violent threats—either physical, verbal, or digital—directed toward physicians, triggered specifically by tension created by the COVID-19 pandemic.

Guests Jones and Prophet speak to the current political climate and its effect on violence for BC doctors. They share how, through prevention planning and informed response strategies, doctors can equip themselves with a plan and the tools to increase personal and cyber security.

Jones and Prophet also lead live webinars, hosted by Doctors of BC's new Business Pathways program (www.doctorsofbc.ca/managing-your-practice/business-pathways), where doctors can learn even more about this topic and participate in live Q&A sessions. More webinar dates will be announced soon. For now, a recording of a past webinar and a downloadable tip sheet, which summarizes the key takeaways, are available online (webinar recording: www.youtube.com/watch?v=YAu3Akxs7yQ; tip sheet: www.doctorsofbc.ca/sites/default/files/human_safety_optimization_tip_sheet.pdf).

BC College of Family Physicians 2022 award recipients

Congratulations to this year's BC College of Family Physicians award winners.

My Family Doctor Award (patient nominated)

The My Family Doctor Award is a way for patients to recognize their own family physician. The following five family doctors, one from each health region, received this year's award:

- Dr Anis Lakha (Vancouver Coastal)
- Dr Marylu Loewen (Fraser Health)
- Dr Allison Ferg (Island Health)
- Dr Linda O'Neill (Interior Health)
- Dr Jaco Strydom (Northern Health)

Peer-nominated awards of excellence

BC Family Physician of the Year:

Dr Karin Kausky (Whistler)

This award recognizes a family physician who provides exemplary care and contributes to excellence in family medicine.

First Five Years of Practice Award:

Dr Sasha Langille-Rowe (Terrace)

This award is designed to recognize an exceptional family physician in the early stage of their career.

R2 Resident Award:

Dr Kimberley Chang (Nanaimo), Dr Romina Moradi (North Vancouver), and Dr Ramita Verma (Victoria)

This award is given to three R2s graduating from the UBC Family Practice Residency Program.

Dr Manoo and Jean Gurjar Resident Award:

Dr Emma Jackson (Victoria) and Dr Hannah Gibson (Kelowna)

This award is given to two resident physicians in the UBC Family Practice Residency Program.

For more information about the recipients, visit <https://bccfp.bc.ca/bccfp-awards/2022-award-recipients>.

Monkeypox: Information for health care providers and the public

The BCCDC has developed online information about monkeypox for health care professionals as well as the public. The information includes an update on the current situation, clinical presentation of cases, transmission, management of suspected cases, infection prevention and control measures, and prevention and vaccination.

Information for health care providers: www.bccdc.ca/health-professionals/clinical-resources/monkeypox.

Information for the public (including translated content): www.bccdc.ca/monkeypox.

Communication products and services

As a Doctors of BC member, you are eligible for substantial savings compared with consumer pricing on current mobility devices and data plans, as well as home and business services.

Mobility services

Through our partnership with Telus's Exclusive Partner Program, Doctors of BC members are offered special savings on mobile devices and cellphone rate plans. We are able to provide member-only discounts of up to 30%. Best of all, Doctors of BC's "unlimited" mobility plans include unlimited nationwide talk and text, including picture and video messaging, meaning no more overage fees! Choose your monthly allotment of full-speed data, with reduced-speed access for the rest of your billing cycle at no additional cost. Alternatively, if you're frequently calling or traveling to the United States, we offer unlimited Canada-US talk and text plans.

Interested in devices and data for your family? Doctors of BC's mobility plan allows users to add up to nine family members under your own account. Data is shareable between devices on your account, meaning even more data for your entire family.

Home and business services

You can access potential cost savings on home services, including home Internet, Optik TV, and security. After a few years' hiatus, we are pleased to have member offers available for office phone and Internet services such as Business Connect and Voice over Internet Protocol.

All of the above services are available via your Telus account, meaning you can access and amend the services as required 24/7. Our friendly team is also here to assist along the way. Contact the Doctors of BC office to learn more at telusinfo@doctorsofbc.ca, 604 638-2898, or www.doctorsofbc.ca/telus (login required).

—Chris Bankonin

Member Services Manager, Members' Products & Services

Considerations for insurance at retirement

Many members have entrusted Doctors of BC with their insurance needs over their careers. If you are nearing retirement, there are some things to know about your Doctors of BC insurance.

Physicians' Disability Insurance (PDI): PDI remains in effect as long as you have more than \$10 000 of eligible income in a calendar year; however, it terminates at age 70 regardless of

your income. Cancel your coverage once you retire. If you forget, PDI automatically cancels after a period of no income.

Member Disability (INCOMEprotect): INCOMEprotect expires the 1st of May following your 70th birthday, regardless of your working status. Disability benefits replace your earned income if you cannot work due to illness or injury. Cancel your coverage once you retire, as the plan is no longer applicable. Changes in membership status or reported earned income will not trigger an automatic cancellation.

Professional Expense Insurance (PEI): PEI expires the 1st of May following your 80th birthday. Benefits are payable only if you are incurring business or professional expenses. Cancel your coverage once you retire, as the plan is no longer applicable.

Accidental Death and Dismemberment (AD&D): AD&D expires the 1st of May following your 75th birthday. Since premiums remain level and are relatively inexpensive, we encourage keeping coverage until expiry.

Life insurance: Life insurance expires the 1st of May following your 75th birthday. Generally, you can consider reducing or canceling term life insurance if you have no debts or financial dependants and are in good health. Evaluate your life insurance needs before canceling or reducing coverage.

Health Benefits Trust Fund (HBTf): HBTf can cover you and your family for life. Currently, there is no expiry age, although the plan benefits change after your 70th birthday. Contact us if you are winding up your corporation or if you are retiring and you have the Core Plus plan. If you have the Cost-Plus feature on your plan, speak to your accountant about whether it is useful to maintain in retirement.

Critical Illness Insurance (CI): CI expires the 1st of May following your 75th birthday. Premiums tend to rise substantially in older ages. You may reduce or cancel coverage if your retirement is well funded and you no longer require additional financial support during a critical illness event.

Contact insurance@doctorsofbc.ca for more information.

—Julie Kwan

Business Development Manager, Insurance

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Correction: Sexually transmitted infections in British Columbia

The authors of “Sexually transmitted infections in British Columbia: An update” [*BCMJ* 2022;64:174-178] have provided a postpublication revision to the following sentence, as marked: “In on-demand PrEP, patients take ~~one~~ two emtricitabine/tenofovir disoproxil fumarate combination pills 2 hours prior to sexual intercourse, a ~~second~~ third pill 24 hours later, and a ~~third~~ fourth pill 48 hours after the first dose.” The article has been revised online.


Update to *BCMJ* July/August online pdf issue

3 August 2022


We have removed an article by MD Financial that some readers found inappropriate for the journal. We appreciate receiving feedback about the content we publish.

Attn: BC Doctors

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John van Bockxmeer, MBBS

A reflection on daily huddles in BC primary care teams

Huddling helps focus staff and improves teamwork, patient safety, job satisfaction, and leadership.

ABSTRACT: British Columbia's primary care landscape is increasingly focused on using blended virtual teams to coordinate and integrate patient journeys. Simply bringing multidisciplinary colleagues together does not guarantee effective team communication. With potentially depersonalized remote working environments, physicians need tools to support collaboration and enable staff to achieve a shared vision. Adapting daily huddle practices by using visual management tools during the COVID-19 pandemic has the potential to unite primary care staff. Reflecting on practice changes in my local clinical context, huddling has improved patient safety behaviors, job satisfaction, and leadership perception. Contextually targeted huddles are vital because there is no single approach that best suits all disciplines, rosters, and teams. Ideal huddle length, timing, and content must be adaptive and are of increasing importance due to the accelerated pace of health care change.

Across British Columbia, the primary care landscape continues to evolve as governments seek to establish effective models for the prevention of illness in pandemic and postpandemic environments. There is an increasing focus on using teams to support complex chronic conditions and coordinate and integrate care.¹ As many physicians will be aware, simply bringing professionals together in teams does not guarantee collaboration. Iterative

change to support collaboration is needed to enable staff to achieve their objectives.²

The literature suggests that primary care staff can increase their situational awareness, decision making, workplace satisfaction, and access to care, and reduce human errors by huddling regularly.² Huddles provide a scheduled venue for asking questions in real time and verbalizing concerns with colleagues. Despite little empirical evidence in Canadian practice, it is hypothesized that the introduction of huddles leads to increased staff efficiency, improved information sharing, increased accountability, feelings of empowerment, and a culture of collaboration.³

The Institute for Healthcare Improvement studied 10 high-performing systems and noted that regular, standardized huddles involving frontline and mid-level managers were part of an excellent health care management system. In 2017, 3412 huddles were observed to evaluate their effect on team problem solving and information sharing over 3 months.⁴ Due to increased staff accountability, more than 92% of problems identified were resolved through the huddle process.⁴ But has this been our experience in BC?

Research has shown that a whiteboard outlining a small number of visual performance measures updated daily is a key tool in supporting team success and strengthening a culture of patient safety.^{5,6} This has been translated into practice in some community health centres across the Lower Mainland.

Why huddle?

Huddles are short 5- to 15-minute briefings designed to give staff opportunities to plan daily

tasks and roles, stay informed, review events, and share plans to ensure well-coordinated patient care. The huddles can function as a venue for highlighting patient concerns, sharing information, celebrating success, and reinforcing common goals.^{2,3,5,7,8}

Prior to the outbreak of COVID-19, my primary care community health centre team began a project on developing updated, relevant daily huddle content and capturing it on a large whiteboard in a high-traffic area. The purpose of this was to help better support mandated complex clients via brief multidisciplinary intervention planning. This created a psychologically safe space, improved daily visibility regarding workflow and equipment concerns, and allowed teams to keep abreast of health authority policy changes. Staff could anonymously submit kudos and “client voices” to celebrate examples of aspirational teamwork and patient journeys, and to connect meaning to daily work.

When COVID-19 arrived in Vancouver, the team pivoted huddling in a number of ways to help improve staff well-being and patient safety. Virtual conference technology was installed at the huddle board to allow providers working from home to remain engaged. Nursing staff improved pharmacovigilance and opioid agonist therapy processes by seeking team input at daily huddles. When combined with pandemic prescribing, this helped prevent overdose deaths and the spread of respiratory viruses. Performance indicators evolved, and useful clinical metrics were updated to reflect shifting workflows and staffing levels. Intensive housing outreach intakes opened, and new teams were created. As time progressed, daily

Dr van Bockxmeer is a family physician working across a number of community and hospital sites.

This article has been peer reviewed.

huddles continued as a pivotal communication tool. Staff have taken ownership of the huddles and continually review their content.

Other successful huddling techniques include building clinical themes across a defined period. This encourages reflective practice, re-orientates groups to unseen biases, and builds new strategic capabilities. One example of a theme has been a weekly focus on exploring underused electronic medical record functionality, which has led to improved group practice entering interventions such as cervical screening recalls.

If staff experience uncertainty about specific, high-relevance topics, such as the use and availability of personal protective equipment during COVID-19, huddling is a perfect vehicle for immediately highlighting concerns. We found that direct clinician feedback was more likely to be heard and operationalized through interactive daily huddles than through large policy documents. This style of engagement provides local leaders with multiple touch points with staff, which fosters reliability and trust if done well.

Benefits

In my practice, daily visual huddles throughout the pandemic have improved care team perception and understanding of the clinic's shifting priority goals. Staff connections with each other, including those in remote arrangements, have also improved. This has allowed for deeper understanding and analysis of relevant issues. Staff have noted improved self-reflective practice, job satisfaction, and reduced burnout as a result of peer-led daily visual huddles.

There have also been numerous care benefits for patients, including prevention of emergency department presentations, successful outreach to de-escalate social and medical crises, a reduction in missed doses of opioid agonist therapy and mental health medications, coordinated recalls of at-risk patients, and improved communication with inpatient teams while community health centre patients are admitted.

Challenges and areas of growth

Optimizing huddle length remains a challenge, but there is no single approach that best suits all disciplines, rosters, and teams. Staff suggested that huddling twice a day would help our team

remain patient focused during discussions but have found this challenging in practice.

Creating effective meaning for all staff remains challenging because it is easy for group discussions to get derailed. Knowing how to appropriately scale and close the loop on complicated open action items remains difficult. By potentially minimizing opportunities to fully explore issues, there is a risk of some staff feeling unsupported or psychologically unsafe. This is best dealt with by investment in communication and leadership training.

Rotation of voluntary huddle lead roles helps individuals gain an understanding of how side conversations and time delays can reduce the effectiveness of huddles. We found that taking important detailed discussions offline into smaller focus groups for a few minutes immediately after huddling was an effective way to maintain flow during the formal team engagement time.

Expectations

With the adoption of virtual primary care environments and with workforce shortages, the importance of teamwork, goal setting, and job satisfaction will increase. Facilitating digital huddles requires the provision and adoption of compliant confidential technology solutions. An even greater focus on making daily briefings time appropriate to produce meaning for all disciplines is needed with virtual or hybrid huddling. Keeping to time is more important than ever, and virtual breakout rooms can be useful tools for smaller discussions. However, as privacy regulations evolve, a burden may be placed on smaller fee-for-service clinics that are required to self-fund videoconferencing solutions.⁹ This may prohibit huddling and the various benefits it confers in these environments.

Bottom line

Primary care huddles have an increasing role to play in developing strong, purposeful teams that provide quality patient care. As busy physicians, our time with colleagues is extremely precious. It is more important than ever for us to connect despite barriers faced in implementing and assessing huddles. There is evidence that these brief daily professional connections provide positive communication, patient safety, and

teamwork and leadership benefits. As in many aspects of clinical practice, we must remain flexible and adaptive when we huddle. There is no one-size-fits-all solution, and it is up to us to support and facilitate these meaningful multidisciplinary encounters.

Summary

BC health authorities are investing in team-based primary care; tools to support staff collaboration are needed. Huddling is most useful when the process is peer designed and led. Visual huddling tools help focus staff and improve teamwork, patient safety behaviors, job satisfaction, and leadership perception. Optimizing huddles requires a targeted approach using videoconferencing technology for remote workers and focusing on the most important topics, performance metrics, and themes that are directly relevant to current daily clinical practice. ■

Competing interests

None declared.

References

1. Levesque J-F, Harris MF, Scott C, et al. Dimensions and intensity of inter-professional teamwork in primary care: Evidence from five international jurisdictions. *Fam Pract* 2018;35:285-294.
2. Walsh A, Moore A, Everson J, DeCaire K. Gathering, strategizing, motivating and celebrating: The team huddle in a teaching general practice. *Educ Prim Care* 2018;29:94-99.
3. Goldenhar LM, Brady PW, Sutcliffe KM, Muething SE. Huddling for high reliability and situation awareness. *BMJ Qual Saf* 2013;22:899-906.
4. Melton L, Lengerich A, Collins M, et al. Evaluation of huddles: A multisite study. *Health Care Manag (Frederick)* 2017;36:282-287.
5. Scoville R, Little K, Rakover J, et al. Sustaining improvement [IHI white paper]. Cambridge, MA: Institute for Healthcare Improvement; 2016. Accessed 3 February 2021. www.ihio.org/resources/Pages/IHIWhitePapers/Sustaining-Improvement.aspx.
6. Provost SM, Lanham HJ, Leykum LK, et al. Health care huddles: Managing complexity to achieve high reliability. *Health Care Manage Rev* 2015;40:2-12.
7. Fogarty CT, Schultz S. Team huddles: The role of the primary care educator. *Clin Teach* 2010;7:157-160.
8. Mate K, Rakover K. The answer to culture change: Everyday management tactics. *NEJM Catalyst* 2019. Accessed 3 February 2021. <https://catalyst.nejm.org/doi/abs/10.1056/CAT.19.0004>.
9. Canadian Medical Protective Association. Telehealth and virtual care. Accessed 2 March 2022. www.cmpa-acpm.ca/en/covid19/telehealth-and-virtual-care.

Omar Arshad, MD, Carolyn M. Taylor, MD, MPH, Milan Khara, MBChB, Thomas M. Roston, MD, PhD, Jonathan Athayde, MD, Krishnan Ramanathan, MBChB

Health effects of electronic cigarettes: A review

E-cigarettes can be an effective smoking cessation tool for some smokers of combustible cigarettes but may be associated with potential cardiovascular and respiratory morbidity.

ABSTRACT: The use of electronic cigarettes (e-cigarettes) is rapidly growing. Recent surveys demonstrate particularly high uptake among young never-smokers and a possible association with increased uptake of combustible cigarette smoking. E-cigarettes may be associated with increased risk of cardiovascular disease, including myocardial infarction, stroke, coronary artery disease, hypertension, and elevated heart rate. However, there is a paucity of long-term clinical data to show the cardiovascular disease implications of these changes. With regard to pulmonary disease, e-cigarettes appear to be strongly implicated in the recent outbreak of acute e-cigarette, or vaping, product use–associated lung injury. The

relationship between e-cigarettes and chronic pulmonary disease is less clear, though possible associations with obstructive spirometric changes, chronic obstructive pulmonary disease, asthma, and chronic cough have been demonstrated. Nonetheless, the literature suggests that e-cigarettes are likely less harmful to the cardiovascular and respiratory systems than combustible cigarettes, and emerging evidence suggests that e-cigarettes can be an effective smoking cessation aid for smokers who are motivated to quit.

Electronic cigarettes (e-cigarettes), or vapes, are devices that use a battery-powered metal resistance coil to heat and aerosolize e-cigarette liquid (e-liquid), which is composed mainly of nicotine, propylene glycol, and vegetable glycerin, which is then inhaled by the user. E-cigarettes have been advertised as a safer way to consume nicotine compared with traditional combustible cigarettes.¹ However, emerging evidence is demonstrating detrimental health consequences related to e-cigarette use. This, coupled with the rapid uptake of e-cigarettes among youth,²⁻⁴ is cause for concern and warrants further research. Our aim is to review the epidemiology of e-cigarette use, discuss the evidence for e-cigarettes as a smoking cessation aid, and examine the known cardiovascular and respiratory effects of e-cigarette use.

There are four types of e-cigarettes: pods, tanks (also known as mods), vape pens, and cig-a-likes.⁵ The most recent trend in e-cigarette use involves the use of pods;⁶ they use disposable cartridges that contain e-liquids with

nicotine benzoate salt, which have a much higher nicotine concentration than e-liquids with freebase nicotine.³ Tanks, or mods, have an e-liquid storage tank attached to the main body, which contains a battery. Vape pens are similar but are slimmer and more easily portable. Cig-a-likes look similar to combustible cigarettes.⁷

In addition to nicotine, propylene glycol, and vegetable glycerin, e-liquids contain benzyl alcohol, terpenes, pyrazines, formaldehyde, acetaldehyde, acrolein, and toluene.⁸ The inhalational safety of these compounds is unknown.⁹ The presence of diacetyl in e-liquids is a concern because it is a known pulmonary toxin and has a propensity for causing bronchiolitis obliterans, also known as “popcorn lung.”⁹ Of particular concern is the addition of vitamin E acetate in tetrahydrocannabinol-containing e-liquids purchased on the black market because it appears to be associated with the recent outbreak of acute e-cigarette, or vaping, product use–associated lung injury (EVALI).¹⁰⁻¹² Further research is necessary to better characterize the inhalational health risks of these compounds.

Epidemiology

E-cigarette use is a common and rapidly spreading phenomenon, particularly among youth. The 2017 Canadian Tobacco, Alcohol and Drugs Survey (which included all ages) found that 15.4% of Canadians reported ever trying an e-cigarette, while 2.9% had used an e-cigarette in the past 30 days.² Ever use of e-cigarettes was significantly higher among adolescents (15 to 19 years old) and young adults (20 to 24

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This article has been peer reviewed.

years old) at 22.8% and 29.3%, respectively, compared with older individuals.² Furthermore, e-cigarette use is increasing at an alarming rate among young people. Hammond and colleagues found that in their longitudinal study sample, ever use of e-cigarettes among Canadian adolescents (16 to 19 years old) increased from 29.3% in 2017 to 37.0% in 2018.³ Similarly, the 2018–19 Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS), which included only students, found that past 30-day e-cigarette use among Canadian grade 7 to 12 students doubled (20% versus 10%) compared with the 2016–17 CSTADS results.⁴ Data from the US are similar: past 30-day e-cigarette use among US high school students increased from 11.7% in 2017 to 27.5% in 2019,^{13,14} which is the largest recorded increase in the use of any substance among US adolescents.

Multiple studies have demonstrated that e-cigarettes may be a risk factor leading people toward combustible cigarette use. A meta-analysis showed that among adolescent and young adult never-smokers, e-cigarette use was associated with increased odds of initiation of combustible cigarette smoking (odds ratio [OR] 3.50, 95% CI, 2.38–5.16, $P = 0.03$).¹⁵ Another study showed similar results (adjusted OR [aOR] 6.8, 95% CI, 1.65–28.25).¹⁶ This association was further supported by Azagba and colleagues,¹⁷ who used data from the 2016–17 CSTADS to demonstrate that Canadian students who used an e-cigarette for more than 21 of the past 30 days had increased odds of both trying combustible cigarettes (aOR 4.83, 95% CI, 3.33–7.01) and smoking regularly (aOR 3.39, 95% CI, 2.16–5.34). These data collectively suggest that e-cigarette use may be associated with higher rates of both occasional and regular use of combustible cigarettes. This is of special concern because 42% of Canadian student e-cigarette users have never smoked a combustible cigarette.⁴

However, there are two important counterarguments to the proposition that e-cigarette use is a gateway to combustible cigarette use. First, there is a common liability of use between combustible and e-cigarettes, meaning that there are common factors that drive people to use both combustible and e-cigarettes, but the two are not necessarily causally related. Second,

if increased e-cigarette use were causally related to increased smoking initiation, one would expect to see this reflected in population-level studies, but this is not the case. Hammond and colleagues found increased rates of e-cigarette use among adolescents in Canada, the US, and the UK (from 2017 to 2018) but increased rates of combustible cigarette smoking only among

Our aim is to review the epidemiology of e-cigarette use, discuss the evidence for e-cigarettes as a smoking cessation aid, and examine the known cardiovascular and respiratory effects of e-cigarette use.

Canadian adolescents, which, as per the authors' conclusions, suggests that e-cigarette use may not be causally related to increased smoking uptake.³ E-cigarettes may indeed be a gateway to combustible cigarette smoking, and this is a valid concern, but there is not yet enough evidence to state a conclusive causal association.

Smoking cessation and harm reduction

E-cigarettes are widely used as a smoking cessation tool: 32.4% of Canadian smokers used e-cigarettes for this purpose in 2017,² and the UK National Health Service officially recommends e-cigarettes as a smoking cessation aid.¹⁸ Though older studies^{19–21} have shown that e-cigarettes are not superior to traditional nicotine replacement therapy (NRT) for smoking cessation, more recent randomized controlled trials have shown e-cigarettes to be superior to NRT [Table 1]. A UK randomized controlled trial published in 2019 showed a 1-year smoking abstinence rate of 18.0% in its e-cigarette group compared with 9.9% in the NRT group (relative risk [RR] 1.83, 95% CI, 1.30–2.58, $P < 0.001$), with a number needed to treat of 12 (95% CI, 8–27).²² Similarly, another randomized

controlled trial published in 2020 showed the superiority of e-cigarettes plus nicotine transdermal patches compared with patches alone for smoking cessation (RR 2.92, 95% CI, 0.91–9.33, $P = 0.05$).²³ Though these more recent results are encouraging for smoking cessation interventions, one caveat is that e-cigarette users may remain nicotine dependent even after quitting combustible cigarettes. The previously mentioned UK randomized controlled trial showed that 80% of participants in the e-cigarette group continued to use e-cigarettes after 1 year of abstinence from smoking, while only 9% of participants in the NRT group continued to use NRT after 1 year.²²

For smokers of combustible cigarettes, another possible beneficial aspect is harm reduction via partial substitution of combustible cigarettes with e-cigarettes. This is conceptually plausible because e-cigarettes deliver nicotine via a similar smoking-like behavior but with fewer apparent health risks compared with combustible cigarettes. Moreover, e-cigarettes offer the psychological and sociocultural aspects of cigarette smoking that traditional NRT does not, which places e-cigarettes in a unique position as a more desirable combustible cigarette substitute.²⁴ However, the limited data available thus far suggest that e-cigarettes have either no effect or a net detrimental effect on harm reduction at the population level. In smokers who are not intending to quit, ad libitum e-cigarette use while continuing ad libitum combustible cigarette use is not associated with reduced combustible cigarette use.^{25,26} Another study found that e-cigarette use was associated with a net effect of increased combustible cigarette use; only 13.2% of ever e-cigarette users were able to successfully quit combustible cigarette smoking, while 22.2% of e-cigarette users started or restarted smoking combustible cigarettes.²⁷ Nonetheless, e-cigarettes may provide a viable harm reduction strategy at the individual level for smokers who are able to successfully transition partially or exclusively to e-cigarettes.²⁴ However, this is likely most effective if reviewed on a case-by-case basis rather than as a general recommendation for smokers not intending to quit because the data do not currently support the use of e-cigarettes as a population-level harm reduction intervention.

Cardiovascular effects

Combustible cigarette smoking is one of the strongest preventable risk factors for cardiovascular disease.²⁸ Though the association between e-cigarette use and cardiovascular outcomes is largely unclear at this point, new data suggest that e-cigarettes are associated with cardiovascular morbidity [Table 2], though it is likely less than that of combustible cigarette smoking.²⁹ This section highlights the potential associations between e-cigarette use and cardiovascular disease, hypertension, endothelial health, and myocardial function.

Of greatest concern is the emerging potential relationship between e-cigarette use and cardiovascular disease. Observational studies have noted associations between e-cigarette use and higher incidence of coronary artery disease (OR 1.4, 95% CI, 1.35-1.46),³⁰ stroke (OR 1.71, 95% CI, 1.64-1.80),³⁰ and myocardial infarction

(OR 1.59–2.25, $P < 0.001$).^{30,31} One of these studies compared the myocardial infarction risk of combustible versus e-cigarette use and found that, as expected, combustible cigarette smoking was more strongly associated with myocardial infarction (OR 2.72 versus 1.79).³¹ Collectively, these observational associations warrant further study because a causal relationship between e-cigarettes and cardiovascular disease has not yet been established.

Early evidence suggests an association between e-cigarette use and the development of hypertension and elevated resting heart rate. This is important because these hemodynamic changes are thought to precede the development of cardiovascular disease. A recent meta-analysis found that chronic e-cigarette use (compared with no use) was associated with increased heart rate (mean difference [MD] 2.27, 95% CI, 1.64-2.89, $P < 0.0001$), increased systolic

blood pressure (MD 2.02, 95% CI, 0.07-3.97, $P = 0.042$), and increased diastolic blood pressure (MD 2.01, 95% CI, 0.62-3.39, $P = 0.004$).³² The cardiovascular disease implications of these small but statistically significant hemodynamic changes remain unclear. These shifts appear to be at least partially associated with nicotine, as one randomized controlled study found that systolic blood pressure, diastolic blood pressure, and heart rate were significantly higher when participants used nicotine-containing e-cigarettes (compared with nicotine-free e-cigarettes).³³ An encouraging finding from this meta-analysis is that positive hemodynamic changes were seen in association with switching from combustible to e-cigarette use, including a significant reduction in systolic blood pressure (MD -7.00, 95% CI, -9.63 to -4.37, $P < 0.0001$) and diastolic blood pressure (MD -3.65, 95% CI, -5.71 to -1.59, $P = 0.001$), but

TABLE 1. Evidence for e-cigarettes as a smoking cessation aid.

Article	Study type	Population	Research question	Statistical result	Conclusion
Hartmann-Boyce et al. ¹⁹	Cochrane systematic review and meta-analysis	Various	Effectiveness of e-cigarettes (vs NRT) as a smoking cessation aid	RR 1.26 (95% CI, 0.68-2.34)	E-cigarettes are no more effective than NRT for smoking cessation.
Kalkhoran et al. ²¹	Systematic review and meta-analysis	Various	Effectiveness of e-cigarette use (vs no use) as a smoking cessation aid	OR 0.72 (95% CI, 0.57-0.91)	E-cigarette users are less likely than nonusers to successfully quit smoking combustible cigarettes.
Hajek et al. ²²	Randomized controlled trial	UK adults attending the UK National Health Service smoking cessation services	Effectiveness of e-cigarettes (vs NRT) for smoking cessation	RR 1.83 (95% CI, 1.30-2.58, $P < 0.001$) NNT 12 (95% CI, 8-27)	E-cigarettes are more effective than NRT for smoking cessation among smokers intending to quit.
Walker et al. ²³	Randomized controlled trial	New Zealand adult smokers who were e-cigarette naive and motivated to quit smoking	Effectiveness of combining nicotine patches with e-cigarettes (vs nicotine patches alone) for smoking cessation	RR 2.92 (95% CI, 0.91-9.33, $P = 0.05$)	E-cigarettes used in combination with nicotine patches are more effective than nicotine patches alone for smoking cessation among smokers intending to quit.
Bullen et al. ²⁰	Randomized controlled trial	New Zealand adult smokers motivated to quit smoking	Effectiveness of e-cigarettes (vs nicotine patches) for smoking cessation	RR 1.26 (95% CI, 0.68-2.34, $P = 0.46$)	E-cigarettes are no more effective than nicotine patches for smoking cessation among smokers intending to quit.
Caponnetto et al. ²⁵	Randomized controlled trial	Italian adult smokers not intending to quit smoking	Effectiveness of nicotine-containing e-cigarettes (vs nicotine-free e-cigarettes) for smoking reduction and cessation	Reduction: 10% vs 12% ($P = 0.24$) Cessation: 13% vs 4% ($P = 0.24$)	Nicotine-containing e-cigarettes are no more effective than nicotine-free e-cigarettes for smoking reduction or cessation among smokers not intending to quit.
Liu et al. ²⁷	Observational study	Italian e-cigarette users	Association between combustible cigarette and e-cigarette use	Ever e-cigarette users: 13% quit smoking 22.2% started or restarted smoking	E-cigarette use may be associated with increased combustible cigarette use.

NRT: nicotine replacement therapy; RR: relative risk; OR: odds ratio; NNT: number needed to treat.

no difference in heart rate (MD 0.03, 95% CI, -2.57 to +2.52, $P = 0.983$).³² This suggests an improved cardiovascular risk profile for smokers of combustible cigarettes who switch completely to e-cigarettes.

Another key aspect of cardiovascular health is myocardial function. This is estimated by the myocardial performance index, which uses echocardiographic parameters to calculate an expression of global systolic and diastolic ventricular function. Smokers of combustible cigarettes have worse myocardial function parameters and worse scores on the myocardial performance index after smoking a combustible cigarette.³⁴⁻³⁶ However, e-cigarette users appear to have no change in myocardial function parameters or myocardial performance index scores immediately after e-cigarette use.³⁷ This suggests improved myocardial health for smokers of combustible cigarettes who switch completely to e-cigarettes, thereby providing another possible benefit of cardiovascular harm reduction.

Respiratory effects

Combustible cigarette smoking is strongly associated with poor respiratory health. E-cigarettes are likely less harmful to the respiratory system

than combustible cigarettes,⁹ but new data suggest that e-cigarettes are associated with independent respiratory health risks, most notably acute EVALI.¹⁰ Weaker associations have been shown between e-cigarettes and chronic respiratory diseases, including higher incidence of chronic obstructive pul-

monary disease,³⁸ asthma,³⁹⁻⁴³ and obstructive lung disease not otherwise specified.⁴⁴⁻⁴⁶ Because the data on the respiratory effects of e-cigarettes are expansive, we provide an overview of the key points. For a more detailed review of the respiratory effects of e-cigarettes, see Gotts and colleagues.⁹

New data suggest that e-cigarettes are associated with independent respiratory health risks, most notably acute e-cigarette, or vaping, product use-associated lung injury.

In the US, there was a national outbreak of EVALI, with 2807 hospitalizations and 68 deaths as of 18 February 2020.⁴⁷ This illness peaked in September 2019 and is now steadily declining.^{48,49} In comparison, EVALI cases in Canada have been relatively sparse, with a total of 19 cases, 15 hospital admissions, and no deaths reported as of 11 March 2020.⁵⁰ EVALI was first reported in the US in August 2019 in a case series that included 53 patients.⁵¹ Most of those patients presented with respiratory symptoms (dyspnea, cough, chest pain), gastrointestinal symptoms (nausea, vomiting, diarrhea, abdominal pain), and constitutional symptoms (fever, chills, malaise). Many of those patients had severe acute illness: 58% required admission to the ICU, 32% required intubation and mechanical ventilation, and 17% had acute respiratory distress syndrome. Two patients required extracorporeal membrane oxygenation, and one of them died. On CT scanning of the chest, key findings included bilateral ground-glass lung opacities, sometimes with subpleural sparing. Most patients received glucocorticoids, which resulted in respiratory improvement. Although the specific etiological agent within the e-cigarette vapor is unconfirmed at this time, vitamin E acetate has been strongly implicated.¹¹

TABLE 2. Cardiovascular effects of e-cigarettes.

Article(s)	Study type	Association	Statistical result	Conclusion
Ndunda and Muutu ³⁰	Observational study	Coronary artery disease	OR 1.4 (95% CI, 1.35-1.46)	E-cigarette use is associated with higher incidence of coronary artery disease.
Ndunda and Muutu ³⁰ Alzahrani et al. ³¹	Observational studies	Myocardial infarction	OR 1.59 (95% CI, 1.53-1.66) ³⁰ OR 1.79 (95% CI, 1.20-2.66, $P = 0.004$) ³¹	E-cigarette use is associated with higher incidence of myocardial infarction.
Ndunda and Muutu ³⁰	Observational study	Stroke	OR 1.71 (95% CI, 1.64-1.80)	E-cigarette use is associated with a higher incidence of stroke.
Skotsimara et al. ³²	Systematic review and meta-analysis	Hemodynamic parameters	sBP: MD 2.02 (95% CI, 0.07-3.97, $P = 0.042$) dBP: MD 2.01 (95% CI, 0.62-3.39, $P = 0.004$) HR: MD 2.27 (95% CI, 1.64-2.89, $P < 0.0001$)	E-cigarette use is associated with higher sBP, dBP, and HR.
		Improved hemodynamic parameters after switching from combustible cigarettes to e-cigarettes	sBP: MD -7.00 (95% CI, -9.63 to -4.37, $P < 0.0001$) dBP: MD -3.65 (95% CI, -5.71 to -1.59, $P = 0.001$) HR: MD -0.03 (95% CI, -2.57 to +2.52, $P = 0.983$)	Switching from combustible cigarettes to e-cigarettes is associated with lower sBP and dBP but no difference in HR.
Farsalinos et al. ³⁷	Observational study	No acute change in myocardial function	Mitral flow early diastolic velocity: $P = 0.13$ Mitral flow late diastolic velocity: $P = 0.083$ Deceleration time of early mitral flow: $P = 0.581$ Isovolumetric relaxation time: $P = 0.286$ Myocardial performance index: $P = 0.330$	E-cigarette use is not associated with acutely worsened myocardial function.

OR: odds ratio; sBP: systolic blood pressure; dBP: diastolic blood pressure; HR: heart rate; MD: mean difference

Vitamin E acetate is added to black market e-liquids as a condensing product, and it is problematic because it is sticky, which results in vitamin E acetate remaining in the lungs longer than other ingredients. The exact mechanism of vitamin E acetate-mediated pulmonary toxicity is unknown, but it is thought to interfere with pulmonary surfactant function.¹¹ One study found vitamin E acetate and tetrahydrocannabinol in the bronchoalveolar lavage fluid in 94% of EVALI patients;¹⁰ other studies found 77% to 84% of EVALI patients reported using tetrahydrocannabinol-based products.^{10,49,51} It is

important to note that vitamin E acetate is present mainly in tetrahydrocannabinol-containing e-liquids purchased on the black market, not in nicotine-containing e-liquids purchased through licensed businesses.¹² Therefore, the risk of EVALI is likely low among users of commercially available nicotine-only e-liquids.

There is also evidence of long-term respiratory risk from e-cigarette use [Table 3], though the evidence is less conclusive than that of acute EVALI. Several retrospective observational studies have noted that e-cigarette users report symptoms of airway obstruction and

alveolar injury. This includes increased chronic productive cough (OR 2.1, 95% CI, 1.8-2.5, $P < 0.001$),⁵² higher incidence of asthma (highest OR 2.36, 95% CI, 1.89-2.94, $P < 0.001$)³⁹⁻⁴³ and asthma exacerbations,⁵³ chronic obstructive pulmonary disease,³⁸ and dyspnea.³⁸ Other studies have found e-cigarette use is associated with reduced cough sensitivity⁵⁴ and ciliary dysfunction in cell culture models,⁵⁵ which suggests that e-cigarette users may be at higher risk for pulmonary infection.⁹ Case reports have also described diffuse alveolar hemorrhage, exogenous lipoid pneumonia, organizing pneumonia,

TABLE 3. Respiratory effects of e-cigarettes.

Article(s)	Study type	Association	Statistical result	Conclusion
Meo et al. ⁴⁴ Vardavas et al. ⁴⁵ Staudt et al. ⁴⁶	Randomized controlled trial	Obstructive spirometry results	FEV1: 4.6 vs 5.2 ($P = 0.007$) ⁴⁴ No difference before and after use ^{45,46} FEV1/FVC: 77.4 vs 83.4 ($P = 0.001$) ⁴⁴ No difference before and after use ^{45,46}	Conflicting evidence.
Vardavas et al. ⁴⁵	Randomized controlled trial	Increased airway resistance (as measured by IOS)	Increased IOS at 5, 10, and 20 Hz: $\beta > 0.034$ ($P < 0.02$)	E-cigarette use is associated with increased airway resistance.
Polosa et al. ⁵⁹ Cibella et al. ⁶⁰ Veldheer et al. ⁶¹	Observational study	Improvement in spirometry after switching from combustible to e-cigarettes	FEV1: 3.33 vs 3.43 ($P = 0.013$) ⁵⁹ 3.46 vs 3.62 ($P = 0.69$) ⁶⁰ $\beta = 0.0009$ ($P = 0.84$) ⁶¹ FEV1/FVC: 80.3 vs 80.7 ($P = 0.96$) ⁶⁰ $\beta = 0.0028$ ($P = 0.51$) ⁶¹	Conflicting evidence.
Layden et al. ⁵¹	Case series	E-cigarette, or vaping, and vaping product use-associated lung injury (EVALI)	Hospitalization: 94% ICU: 58% Intubation: 32% Death: 2%	E-cigarette use is associated with EVALI.
Wang et al. ⁵²	Observational study	Chronic productive cough	OR 2.1 (95% CI, 1.8-2.5, $P < 0.001$)	E-cigarette use is associated with chronic productive cough.
Cho and Paik ⁴⁰ Osei et al. ⁴¹ Schweitzer et al. ⁴²	Observational studies	Asthma	OR 2.36 (95% CI, 1.89-2.94, $P < 0.001$) ⁴⁰ OR 1.39 (95% CI, 1.15-1.68, $P < 0.01$) ⁴¹ aOR 1.48 (95% CI, 1.26-1.74, $P < 0.01$) ⁴²	E-cigarette use is associated with higher incidence of asthma.
Wang et al. ³⁸	Observational study	Chronic obstructive pulmonary disease (COPD)	6.7% vs 3.7% ($P < 0.0001$)	E-cigarette use is associated with higher incidence of COPD.
Carson et al. ⁵⁵	In vitro experimental study	Ciliary dysfunction	Decreased ciliary beat frequency and decreased secretory function ($P < 0.05$)	Exposure to e-cigarette vapor induces ciliary dysfunction in a human airway epithelium cell culture model.
Agustin et al. ⁵⁶ McCauley et al. ⁵⁷ Flower et al. ⁵⁸	Case reports	<ul style="list-style-type: none"> • Diffuse alveolar hemorrhage • Exogenous lipoid pneumonia • Organizing pneumonia • Eosinophilic pneumonia • Acute respiratory bronchiolitis interstitial lung disease 	N/A	N/A

FEV1: forced expiratory volume in 1 second; FEV1/FVC: ratio of FEV1 divided by forced vital capacity; IOS: impulse oscillometry system; OR: odds ratio; aOR: adjusted odds ratio

eosinophilic pneumonia, and acute respiratory bronchiolitis interstitial lung disease associated with e-cigarette use.^{56–58} Several of these associations were noted to be independent of combustible cigarette use; this suggests that e-cigarettes carry their own unique respiratory health risks, which are just starting to be understood.

E-cigarette use may be associated with the development of obstructive lung physiology. To date, studies have found mixed results with re-

E-cigarette use is a rapidly growing phenomenon, especially among young people and never-smokers.

gard to e-cigarette use and spirometric changes. One study found e-cigarette use was associated with lower forced expiratory volume in 1 second ([FEV1] 4.6 versus 5.2, $P = 0.007$) and lower ratio of FEV1 to forced vital capacity ([FEV1/FVC] 77.4 versus 83.4, $P = 0.001$).⁴⁴ Since smokers of combustible cigarettes were excluded from this study, these results suggest that e-cigarette use may be independently associated with obstructive airway changes. However, spirometry was performed after only 1 hour of abstinence; thus, it potentially reflected acute bronchospasm rather than lasting changes in the airways. Furthermore, this association is still unclear, as two other studies have shown no difference in spirometric measurements before and after e-cigarette use.^{45,46} However, one of these studies did show an increase in pulmonary airflow resistance by impulse oscillometry,⁴⁵ which indicates evidence of obstructive airway changes before they can be seen on spirometry. In terms of improving obstructive lung physiology among smokers of combustible cigarettes who have switched completely to e-cigarettes, there are conflicting results: one study showed improved spirometry;⁵ two others showed no changes.^{60,61} Overall, the data suggest that e-cigarette use is potentially associated with early obstructive pulmonary changes, but this association remains inconclusive.

Summary

E-cigarette use is a rapidly growing phenomenon, especially among young people and never-smokers. There is emerging evidence that e-cigarettes can be an effective smoking cessation tool for smokers of combustible cigarettes. However, they are not benign: there is evidence of potential cardiovascular and respiratory morbidity. Nonetheless, e-cigarettes do appear to have an improved cardiopulmonary risk profile compared with combustible cigarettes and therefore may provide a viable harm reduction strategy for some smokers. ■

Competing interests

Dr Khara has received personal fees from the Pfizer Canada Inc. Champix advisory board. All other authors report no competing interests.

References

- Sears CG, Walker KL, Hart JL, et al. Clean, cheap, convenient: Promotion of electronic cigarettes on YouTube. *Tob Prev Cessat* 2017;3:10.
- Health Canada. Canadian tobacco, alcohol and drugs survey (CTADS): Summary of results for 2017. Accessed 6 March 2020. www.canada.ca/en/health-canada/services/canadian-tobacco-alcohol-drugs-survey/2017-summary.html.
- Hammond D, Reid JL, Rynard VL, et al. Prevalence of vaping and smoking among adolescents in Canada, England, and the United States: Repeat national cross sectional surveys. *BMJ* 2019;365:l2219.
- Health Canada. Summary of results for the Canadian student tobacco, alcohol and drugs survey 2018–19. Accessed 10 March 2020. www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey/2018-2019-summary.html.
- Centers for Disease Control and Prevention. E-cigarette, or vaping, products visual dictionary. 2019. Accessed 10 February 2020. www.cdc.gov/tobacco/basic_information/e-cigarettes/pdfs/ecigarette-or-vaping-products-visual-dictionary-508.pdf.
- Bach L. JUUL and youth: Rising e-cigarette popularity. 2019. Accessed 7 January 2020. www.tobaccofreekids.org/assets/factsheets/0394.pdf.
- Harvanko AM, St. Helen G, Nardone N, et al. Twenty-four-hour subjective and pharmacological effects of ad-libitum electronic and combustible cigarette use among dual users. *Addiction* 2020;115:1149–1159.
- Burstyn I. Peering through the mist: Systematic review of what the chemistry of contaminants in electronic cigarettes tells us about health risks. *BMC Public Health* 2014;14:18.
- Gotts JE, Jordt S-E, McConnell R, Tarran R. What are the respiratory effects of e-cigarettes? *BMJ* 2019;366:l5275.
- Blount BC, Karwowski MP, Shields PG, et al. Vitamin E acetate in bronchoalveolar-lavage fluid associated with EVALI. *N Engl J Med* 2020;382:697–705.

- Boudi FB, Patel S, Boudi A, Chan C. Vitamin E acetate as a plausible cause of acute vaping-related illness. *Cureus* 2019;11:e6350.
- Lewis N, McCaffrey K, Sage K, et al. E-cigarette use, or vaping, practices and characteristics among persons with associated lung injury—Utah, April–October 2019. *MMWR Morb Mortal Wkly Rep* 2019;68:953–956.
- Cullen KA, Ambrose BK, Gentzke AS, et al. Notes from the field: Use of electronic cigarettes and any tobacco product among middle and high school students—United States, 2011–2018. *MMWR Morb Mortal Wkly Rep* 2018;67:1276–1277.
- Centers for Disease Control and Prevention. National youth tobacco survey (NYTS). 2019. Accessed 7 January 2020. www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm.
- Soneji S, Barrington-Trimis JL, Wills TA, et al. Association between initial use of e-cigarettes and subsequent cigarette smoking among adolescents and young adults: A systematic review and meta-analysis. *JAMA Pediatr* 2017;171:788–797.
- Primack BA, Shensa A, Sidani JE, et al. Initiation of traditional cigarette smoking after electronic cigarette use among tobacco-naïve US young adults. *Am J Med* 2018;131:443.e1–443.e9.
- Azagba S, Kah K, Latham K. Frequency of e-cigarette use and cigarette smoking among Canadian students. *Prev Med* 2019;126:105769.
- National Health Service U.K. Using e-cigarettes to stop smoking. 2019. Accessed 21 January 2020. www.nhs.uk/live-well/quit-smoking/using-e-cigarettes-to-stop-smoking.
- Hartmann-Boyce J, McRobbie H, Bullen C, et al. Electronic cigarettes for smoking cessation. *Cochrane Database Syst Rev* 2016;9(9):CD010216.
- Bullen C, Howe C, Laugesen M, et al. Electronic cigarettes for smoking cessation: A randomised controlled trial. *Lancet* 2013;382(9905):1629–1637.
- Kalkhoran S, Glantz SA. E-cigarettes and smoking cessation in real-world and clinical settings: A systematic review and meta-analysis. *Lancet Respir Med* 2016;4:116–128.
- Hajek P, Phillips-Waller A, Przulj D, et al. A randomized trial of e-cigarettes versus nicotine-replacement therapy. *N Engl J Med* 2019;380:629–637.
- Walker N, Parag V, Verbiest M, et al. Nicotine patches used in combination with e-cigarettes (with and without nicotine) for smoking cessation: A pragmatic, randomised trial. *Lancet Respir Med* 2020;8:54–64.
- Notley C, Ward E, Dawkins L, Holland R. The unique contribution of e-cigarettes for tobacco harm reduction in supporting smoking relapse prevention. *Harm Reduct J* 2018;15:31.
- Caponnetto P, Campagna D, Cibella F, et al. Efficacy and Safety of an eElectronic cigAreTte (ECLAT) as tobacco cigarettes substitute: A prospective 12-month randomized control design study. *PLoS One* 2013;8:e66317.
- Halpern SD, Harhay MO, Saulsgiver K, et al. A pragmatic trial of e-cigarettes, incentives, and drugs for smoking cessation. *N Engl J Med* 2018;378:2302–2310.
- Liu X, Lugo A, Davoli E, et al. Electronic cigarettes in Italy: A tool for harm reduction or a gateway to smoking tobacco? *Tob Control* 2020;29:148–152.

28. Lee PN. Tar level of cigarettes smoked and risk of smoking-related diseases. *Inhal Toxicol* 2018;30:5-18.
29. Stratton K, Kwan LY, Eaton DL, eds. Public health consequences of e-cigarettes. National Academies of Sciences, Engineering, and Medicine; 2018.
30. Ndunda PM, Muutu TM. Electronic cigarette use is associated with a higher risk of stroke. *Stroke* 2019;50 (suppl).
31. Alzahrani T, Pena I, Temesgen N, Glantz SA. Association between electronic cigarette use and myocardial infarction. *Am J Prev Med* 2018;55:455-461.
32. Skotsimara G, Antonopoulos AS, Oikonomou E, et al. Cardiovascular effects of electronic cigarettes: A systematic review and meta-analysis. *Eur J Prev Cardiol* 2019;26:1219-1228.
33. Franzen KF, Willig J, Cayo Talavera S, et al. E-cigarettes and cigarettes worsen peripheral and central hemodynamics as well as arterial stiffness: A randomized, double-blinded pilot study. *Vasc Med* 2018;23:419-425.
34. Lichodziejewska B, Kurnicka K, Grudzka K, et al. Chronic and acute effects of smoking on left and right ventricular relaxation in young healthy smokers. *Chest* 2007;131:1142-1148.
35. Karakaya O, Barutcu I, Esen AM, et al. Acute smoking-induced alterations in Doppler echocardiographic measurements in chronic smokers. *Texas Heart Inst J* 2006;33:134-138.
36. Farsalinos K, Tsiapras D, Kyrzopoulos S, Voudris V. Acute and chronic effects of smoking on myocardial function in healthy heavy smokers: A study of Doppler flow, Doppler tissue velocity, and two-dimensional speckle tracking echocardiography. *Echocardiography* 2013;30:285-292.
37. Farsalinos KE, Tsiapras D, Kyrzopoulos S, et al. Acute effects of using an electronic nicotine-delivery device (electronic cigarette) on myocardial function: Comparison with the effects of regular cigarettes. *BMC Cardiovasc Disord* 2014;14:78.
38. Wang JB, Olgin JE, Nah G, et al. Cigarette and e-cigarette dual use and risk of cardiopulmonary symptoms in the Health eHeart Study. *PLoS One* 2018;13:e0198681.
39. Bhatta DN, Glantz SA. Association of e-cigarette use with respiratory disease among adults: A longitudinal analysis. *Am J Prev Med* 2020;58:182-190.
40. Cho JH, Paik SY. Association between electronic cigarette use and asthma among high school students in South Korea. *PLoS One* 2016;11:e0151022.
41. Osei AD, Mirbolouk M, Orimoloye OA, et al. The association between e-cigarette use and asthma among never combustible cigarette smokers: Behavioral risk factor surveillance system (BRFSS) 2016 & 2017. *BMC Pulm Med* 2019;19:180.
42. Schweitzer RJ, Wills TA, Tam E, et al. E-cigarette use and asthma in a multiethnic sample of adolescents. *Prev Med* 2017;105:226-231.
43. Reid KM, Forrest JR, Porter L. Tobacco product use among youths with and without lifetime asthma—Florida, 2016. *MMWR Morb Mortal Wkly Rep* 2018; 67:599-601.
44. Meo SA, Ansary MA, Barayan FR, et al. Electronic cigarettes: Impact on lung function and fractional exhaled nitric oxide among healthy adults. *Am J Mens Health* 2019;13:1557988318806073.
45. Vardavas CI, Anagnostopoulos N, Kougias M, et al. Short-term pulmonary effects of using an electronic cigarette: Impact on respiratory flow, resistance, impedance, and exhaled nitric oxide. *Chest* 2012;141:1400-1406.
46. Staudt MR, Salit J, Kaner RJ, et al. Altered lung biology of healthy never smokers following acute inhalation of e-cigarettes. *Respir Res* 2018;19:78.
47. Centers for Disease Control and Prevention. Outbreak of lung injury associated with the use of e-cigarette, or vaping, products. Last updated 25 February 2020. Accessed 28 February 2020. www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html.
48. Krishnasamy VP, Hallowell BD, Ko JY, et al. Update: Characteristics of a nationwide outbreak of e-cigarette, or vaping, product use-associated lung injury—United States, August 2019–January 2020. *MMWR Morb Mortal Wkly Rep* 2020;69:90-94.
49. Hartnett KP, Kite-Powell A, Patel MT, et al. Syndromic surveillance for e-cigarette, or vaping, product use-associated lung injury. *N Engl J Med* 2020;382:766-772.
50. Government of Canada. Vaping-associated lung illness. 2020. Accessed 3 March 2020. www.canada.ca/en/public-health/services/diseases/vaping-pulmonary-illness.html.
51. Layden JE, Ghinai I, Pray I, et al. Pulmonary illness related to e-cigarette use in Illinois and Wisconsin—Preliminary report. *N Engl J Med* 2020;382:903-916.
52. Wang MP, Ho SY, Leung LT, Lam TH. Electronic cigarette use and respiratory symptoms in Chinese adolescents in Hong Kong. *JAMA Pediatr* 2016;170:89-91.
53. Choi K, Bernat D. E-cigarette use among Florida youth with and without asthma. *Am J Prev Med* 2016;51: 446-453.
54. Dicipinigaitis PV, Lee Chang A, Dicipinigaitis AJ, Negassa A. Effect of e-cigarette use on cough reflex sensitivity. *Chest* 2016;149:161-165.
55. Carson JL, Zhou L, Brighton L, et al. Temporal structure/function variation in cultured differentiated human nasal epithelium associated with acute single exposure to tobacco smoke or e-cigarette vapor. *Inhal Toxicol* 2017;29:137-144.
56. Agustin M, Yamamoto M, Cabrera F, Eusebio R. Diffuse alveolar hemorrhage induced by vaping. *Case Rep Pulmonol* 2018; 2018:9724530.
57. McCauley L, Markin C, Hosmer D. An unexpected consequence of electronic cigarette use. *Chest* 2012;141: 1110-1113.
58. Flower M, Nandakumar L, Singh M, et al. Respiratory bronchiolitis-associated interstitial lung disease secondary to electronic nicotine delivery system use confirmed with open lung biopsy. *Respirol Case Rep* 2017;5:e00230.
59. Polosa R, Morjaria JB, Caponnetto P, et al. Persisting long term benefits of smoking abstinence and reduction in asthmatic smokers who have switched to electronic cigarettes. *Discov Med* 2016;21:99-108.
60. Cibella F, Campagna D, Caponnetto P, et al. Lung function and respiratory symptoms in a randomized smoking cessation trial of electronic cigarettes. *Clin Sci* 2016;130:1929-1937.
61. Veldheer S, Yingst J, Midya V, et al. Pulmonary and other health effects of electronic cigarette use among adult smokers participating in a randomized controlled smoking reduction trial. *Addict Behav* 2019;91:95-101.

Multiple studies have demonstrated that e-cigarettes may be a risk factor leading people toward combustible cigarette use.

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Evaluating patient perceptions of quality of care through telemedicine during the COVID-19 pandemic

Patient satisfaction with primary care providers has been very positive during the pandemic and has largely been similar for telemedicine and in-person consultations.

ABSTRACT

Background: Telemedicine was rapidly implemented at the start of the COVID-19 pandemic, yet there are limited studies that explore patients' perceptions of their quality of care due to this change.

Methods: A survey with qualitative and quantitative responses based on the Canadian Primary Care Patient Experience Survey was provided to patients with in-person and telemedicine appointments at a multiphysician primary care clinic in Langley, BC, between 1 November 2020 and 15 February 2021.

Results: In total, 777 patients received the survey link; the survey response rate was 54.8%. There was a statistically significant difference between the telemedicine and in-person cohorts for the time between making the appointment and seeing the physician ($P = 0.03$), but there were no statistically significant differences for the other

parameters. Overall, 32.3% of patients had no preference between modalities, whereas 54.9% preferred in-person consultation.

Conclusion: Satisfaction with in-person and telemedicine appointments was largely similar. Therefore, physicians can triage and use telemedicine appropriately to manage workflow, reduce wait times, and expand health care to rural/remote regions of the country postpandemic with no significant change in patients' experience of health care interactions.

Background

Telemedicine can be broadly defined as the use of electronic information and telecommunications technologies to facilitate health care services, with a common form being virtual care.^{1,2} Prior to the COVID-19 pandemic, telemedicine was used primarily to bridge the gap for rural or remote locations where there is lack of transport, mobility, or funding.^{3,4} While there has been increasing patient demand for telemedicine, many barriers existed with regard to governance of compensation mechanisms, licensure restrictions, and technology infrastructure across health care platforms and facilities.⁵ At the start of the COVID-19 pandemic, the use of telemedicine was expanded due to the necessity to limit vectors of disease spread. Primary care has been significantly impacted by this change. In-person visits have been

limited to those deemed necessary, and telemedicine has been widely used as a tool to provide patient care while maintaining social distancing. Throughout this rapid period of change, there has been limited literature on patient perceptions of their quality of care with the widespread use of telemedicine. In this study, we aimed to identify the proportion of patients who received telemedicine versus in-person appointments during the pandemic, and the number who required in-person follow-up after a phone consultation. In addition, we aimed to identify patient perceptions of their health care experience via telemedicine versus an in-person appointment. With this information, in conjunction with current technological capabilities of health care delivery, we aim to inform the projected need for telemedicine and identify potential areas of improvement during and beyond the COVID-19 pandemic. From a policy and technology perspective, we believe this information could help improve the delivery of health care, both locally and remotely, thereby improving access to primary care across Canada.

Methods

We conducted a single-centre prospective study of patients who presented to a multiphysician primary care office in Langley, BC, from 1 November 2020 to 15 February 2021. Approval for this study was granted by the University of

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This article has been peer reviewed.

British Columbia's Behavioural Research Ethics Board (H20-02844). A comprehensive list of all patients who presented to the clinic was collected and eligible individuals received an encrypted survey link sent by an independent medical office assistant. Patients were included if they were 18 years of age or older, had booked a telemedicine or in-person appointment, or were asked to follow up in person after a telemedicine consultation. Appointment type was determined together with the patient, with the option for in-person follow-up after a telephone appointment if it was required (i.e., for a physical exam). Patients were not included if they required an in-person visit for routine newborn and/or cancer screens, needed an in-person COVID-19 swab, or were asked to proceed directly to the emergency department following a telemedicine appointment.

The survey was voluntary and was anonymized and distributed using the Qualtrics survey tool. Questions were based on the Primary Care Patient Experience Survey developed by Health Quality Ontario, which was pilot tested in 2015. The survey was built upon and adapted to a digital survey format.⁶

Descriptive statistics and nonparametric tests were used to analyze the data. Satisfaction parameters were averaged and subjected to Wilcoxon signed-rank testing between the telemedicine and in-person cohorts ($\alpha = 0.05$). A Likert rating scale from poor (corresponding value of 1) to excellent (5) was used in the survey. Additionally, common themes between the telemedicine and in-person cohorts were analyzed based on open text responses within the survey.

Results

Patient demographics

In total, 777 individuals were contacted to participate in the study; 426 completed the survey (54.8%). The mean age of respondents was 61.4 years (\pm SD 16.5), and most were female (65.4%). Most patients (49.1%) self-reported their overall health as good. Over the previous year, 2.8% had not seen their doctor, 25.5% had seen their doctor twice, and 23.1% had seen their doctor five or more times. In terms of appointments, 49.8% were telemedicine, 45.5% were in-person, and 4.7% were telemedicine

followed by in-person assessment. Because only 20 individuals (4.7%) were asked to return for an in-person appointment following a telemedicine consultation, data on this group were not analyzed because they were considered negligible.

This study demonstrated that the quality of care and satisfaction of patients across both platforms [in-person and telemedicine] are similar.

Patient satisfaction

Most individuals (48.4%) felt they had excellent Internet/cellular connection throughout the call; 2.8% had a poor connection. Many rated their comfort when interacting on the call as excellent (44.2%) or very good (35.3%). In addition, 60.9% rated their health information being treated with the level of privacy they expected as excellent.

Most respondents rated their in-person experience as excellent regarding the length of time they waited in the waiting room (57.1%) and the length of time they spent in the examination room prior to seeing the health care provider (42.9%). In terms of their experience with the reception staff, 52.8% rated their experience as excellent, and 31.1% rated it as very good.

Most respondents with in-person visits rated the length of time between making their appointment and their visit as excellent (31.0%) or very good (30.5%); those with telemedicine appointments rated this factor as excellent (28.2%) or very good (50.2%). These results were statistically different based on a two-tailed *t* test ($P = 0.03$). Most respondents felt they had an excellent experience with the last appointment they had: in-person (58.5%) and via telemedicine (56.3%). These results were not statistically different ($P = 0.49$). In terms of the practitioner spending enough time with the patient ($P = 0.12$) and knowing their medical history ($P = 0.84$), most respondents rated their experience as excellent, and there was no statistical difference between the groups.

Overall, 32.3% of individuals had no preference between in-person and telemedicine appointments, whereas 54.9% preferred in-person and 12.8% preferred telemedicine. Individuals commented that physical examination, empathy, two-way communication, and identification of nonverbal cues were particularly good during in-person visits. Telemedicine appointments were considered to provide efficiency, convenience, safety during the pandemic, and time savings for simple things such as prescription refills and follow-ups. Suggestions for telemedicine improvement included providing a video option as opposed to audio only and striving to stick to the original appointment time.

Discussion

It was difficult to predict how physicians and patients would respond to the new virtual platform of telemedicine given its rapid introduction during the COVID-19 pandemic. This study demonstrated that the quality of care and satisfaction of patients across both platforms are similar.

Historically, telemedicine was used primarily for rural medicine. More recently, it has been implemented in specialty services ranging from cardiology⁷ to psychiatry.⁸ It has also been used in disaster response³ and even surgery (telesurgery).⁹ Prior to the pandemic, studies demonstrated that telemedicine was equivalent to in-person care across multiple domains. Shigekawa and colleagues found that telemental health and teledermatology were equivalent to in-person care, telerehabilitation was equivalent to or better than in-person care, and teleconsultation was considered a potential alternative to in-person care due to the large scope of care.¹⁰ Furthermore, a systematic review by Kruse and colleagues noted the benefits of telemedicine, such as ease of use, tendency to improve outcomes and communication, and low cost.¹¹ In addition, telehealth was shown to provide increased access to care, empowerment for patients managing chronic conditions, and improved medication adherence, and led to reduced readmissions.¹¹ Our study corroborates these findings by highlighting high levels of patient satisfaction with telemedicine for a variety of parameters, including logistics, quality of care, and respectful treatment of

patients. Most of the challenges that prevented implementation of telemedicine prior to the pandemic were related to infrastructure, reimbursement, and policy.^{5,11} These barriers were rapidly addressed at the start of the pandemic in order to accommodate a rapidly changing landscape with international social-distancing measures. As more evidence emerges regarding the impact and benefit of telemedicine during the pandemic, these limitations to its use will continue to diminish.

We identified a statistically significant difference between the telemedicine and in-person groups in terms of the time between making an appointment and attending it. Although telemedicine appointments are limited in power, they have demonstrable benefits. Telemedicine can be performed from anywhere, which provides more opportunities for appointments that do not require travel to a clinic. This allows certain types of appointments, such as review of lab and radiology results, follow-up, and issues that do not require a physical exam, to occur in a time-sensitive manner.¹²⁻¹⁴ Currently, many physicians are limiting in-person visits in order to reduce zones of infection, which is adding to the delay experienced in the in-person cohort. As the pandemic settles, these restrictions and regulations may ease. However, if this new type of patient flow works well, many patients and physicians may prefer to continue to use telemedicine for most of their clinic appointments. In this case, there is a risk that patients who must be seen in person will experience longer wait times, and those who are uncomfortable with or do not have the means to use telemedicine may be underserved. Therefore, it is important to address potential disparities for those with limited digital access, digital literacy, and English language proficiency, among others.¹⁵

While many patients in our study preferred in-person visits (54.9%), 32.3% had no preference, and patients rated telemedicine appointments as being equivalent to in-person visits for most of their care. Thus, telemedicine should no longer be a temporary measure that is used during the pandemic; a mixed model should be considered as a permanent solution that can be improved upon to better serve patients. Improving access to marginalized communities should be addressed in conjunction with

improving convenience and privacy for patients and developing billing, workflow integration, and electronic health record interoperability for physicians.¹⁶ There are many possibilities for furthering such care with at-home monitoring devices and the advent of wearable technology.

**Moving forward
beyond the pandemic,
we suggest that a hybrid
model of care based
on both in-person
and telemedicine
consultation continue
to be used.**

As access to digital services continues to expand, it is imperative that physicians and medical learners are trained early on so they feel comfortable and proficient using these innovative technologies.

Study limitations

Our study was limited by our recruitment and data collection methods. Because participation was voluntary, there is a risk of selection bias—in particular, volunteer bias and nonresponse bias. Given that patients likely have variable risk tolerance during the pandemic and can often choose whether they prefer a telemedicine appointment over an in-person consultation, there is a risk of bias that those who opt for telemedicine start at a place of greater satisfaction. Those patients are very likely to be the same ones who are comfortable with using digital technologies.

Conclusion

At the start of the COVID-19 pandemic, telemedicine was rapidly introduced into primary care to reduce the risk of infectious disease spread. It was unknown how patients would respond to this and whether care would be effective via telemedicine. Our study suggests that patients' satisfaction with their primary care provider has been very positive during the pandemic, and that telemedicine and in-person consultations are equivalent for most patient

care needs. Moving forward beyond the pandemic, we suggest that a hybrid model of care based on both in-person and telemedicine consultation continue to be used. ■

Competing interests

None declared.

References

1. Perednia DA, Allen A. Telemedicine technology and clinical applications. *JAMA* 1995;273:483-488.
2. Shaw J, Jamieson T, Agarwal P, et al. Virtual care policy recommendations for patient-centred primary care: Findings of a consensus policy dialogue using a nominal group technique. *J Telemed Telecare* 2018;24:608-615.
3. Cherry CO, Chumblor NR, Richards K, et al. Expanding stroke telerehabilitation services to rural veterans: A qualitative study on patient experiences using the robotic stroke therapy delivery and monitoring system program. *Disabil Rehabil Assist Technol* 2017;12:21-27.
4. Lurie N, Carr BG. The role of telehealth in the medical response to disasters. *JAMA Intern Med* 2018;178:745-746.
5. Canadian Medical Association. Virtual care in Canada: Discussion paper. 2019. Accessed 12 January 2022. www.cma.ca/virtual-care-canada-discussion-paper.
6. Health Quality Ontario. Primary care patient experience survey: Support guide. 2015. Accessed 12 January 2022. www.hqontario.ca/Portals/0/documents/qj/primary-care/primary-care-patient-experience-survey-support-guide-en.pdf.
7. Kuehn BM. Telemedicine helps cardiologists extend their reach. *Circulation* 2016;134:1189-1191.
8. Doarn CR. Telemedicine and psychiatry—A natural match. *mHealth* 2018;4:60.
9. Asiri A, AlBishi S, AlMadani W, et al. The use of telemedicine in surgical care: A systematic review. *Acta Inform Med* 2018;26:201-206.
10. Shigekawa E, Fix M, Corbett G, et al. The current state of telehealth evidence: A rapid review. *Health Aff* 2018;37:1975-1982.
11. Kruse CS, Krowski N, Rodriguez B, et al. Telehealth and patient satisfaction: A systematic review and narrative analysis. *BMJ Open* 2017;7:e016242.
12. Silver SL, Lewis MN, Ledford CJW. A stepwise transition to telemedicine in response to COVID-19. *J Am Board Fam Med* 2021;34(suppl):S152-S161.
13. Scott SN, Fontana FY, Züger T, et al. Use and perception of telemedicine in people with type 1 diabetes during the COVID-19 pandemic—Results of a global survey. *Endocrinol Diabetes Metab* 2020;4:e00180.
14. Novara G, Checucci E, Crestani A, et al. Telehealth in urology: A systematic review of the literature. How much can telemedicine be useful during and after the COVID-19 pandemic? *Eur Urol* 2020;78:786-811.
15. Samuels-Kalow M, Jaffe T, Zachrisson K. Digital disparities: Designing telemedicine systems with a health equity aim. *Emerg Med J* 2021;38:474-476.
16. Lin S, Sattler A, Smith M. Retooling primary care in the COVID-19 era. *Mayo Clin Proc* 2020;95:1831-1834.

Culturally effective care to improve racialized health inequities

In a country as diverse as Canada, health practitioners must be able to care for individuals from different backgrounds and cultures. Neglecting this crucial component of health can lead to health inequities and poorer health outcomes. This became even more evident during the COVID-19 pandemic when the health of many—specifically immigrant, racialized, and Indigenous communities—was more negatively impacted when compared with Caucasian communities. COVID-19 highlighted the racialized inequities in health care in British Columbia. Unfortunately, this continues to go under-recognized due to the inability to accurately collect and report data on these disparities.

Other Western countries have had mechanisms set up to collect data based on both ethnicity and religion. For example, in the United Kingdom, the Office for National Statistics has continually reported on this. Between 10 January 2022 and 16 February 2022 (when Omicron was the main variant), rates of deaths involving COVID-19 were higher for many ethnic minority groups, such as the Bangladeshi and Pakistani populations, compared with the White British population.¹

It is a necessity of living in an antiracist society to identify racialized disparities, understand the factors driving them, and inform policy to minimize the disparities. In summer 2020, South Asians in Surrey, British Columbia, experienced a disproportionate impact from COVID-19 restrictions. Mandates were

introduced for individuals to stay at home, wear masks, and be physically distant. However, according to census data, 52% of workers in Surrey are doing labor jobs that don't allow them the luxury to work from home. After English, Punjabi is the most spoken language in Surrey. One-third of residents do not speak English at home. Many also live in multigenerational homes where if one person gets COVID-19 often the entire household gets it. The privilege required to abide by public health restrictions went under-recognized in provincial mandates.

While information was being provided about COVID-19 from health authorities and the government, it was not effectively reaching this community. Daily COVID-19 briefings were held in English, with no translations initially provided. It became evident that culturally effective health promotion was lacking. Culturally effective care involves the delivery of care through knowledge, understanding, and appreciation of cultural beliefs and values in order to optimize health outcomes. It also helps to improve health communication and health literacy.

Thus, many public health professionals, medical students, residents, and physicians from the South Asian community created grassroots campaigns and organizations to deliver culturally effective care to South Asians across BC. One initiative involved bringing together stakeholders such as medical professionals, gurdwaras, and health authorities to deliver information about COVID-19 in a culturally effective way. Gurdwaras are known as community hubs for Sikhs in particular. Patrons were provided lessons in Punjabi at gurdwaras on proper hand hygiene, the importance of wearing masks, and the meaning of physical distancing. Information was made easily accessible, and the guidelines were contextualized in a way

that allowed individuals to understand how to protect themselves and their loved ones.

The Government of British Columbia recently announced the Anti-Racism Data Act.² The goal of this Act is to identify gaps in service delivery that contribute to systemic racism. While it is an important milestone in celebrating diversity and formalizing our government's commitment to minimizing the impacts of colonialism, we have a long way to go.

Advancing culturally effective care has many benefits to reducing health inequities, particularly in racialized communities. Some of these benefits include improved communication, trust, and satisfaction; improved team-based care; improved patient-centred care; improved patient participation and care coordination; and overall improved health outcomes.

It is about time. ■

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References

1. Office for National Statistics. Updating ethnic contrasts in deaths involving the coronavirus (COVID-19), England: 10 January 2022 to 16 February 2022. Accessed 24 May 2022. www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/updatingethniccontrastsindeathsinvolveingthecoronaviruscovid19englandandwales/10january2022to16february2022.
2. Government of British Columbia. Office of the Premier. New Anti-Racism Data Act will help fight systemic racism. Accessed 24 May 2022. <https://news.gov.bc.ca/releases/2022PREM0027-000673>.

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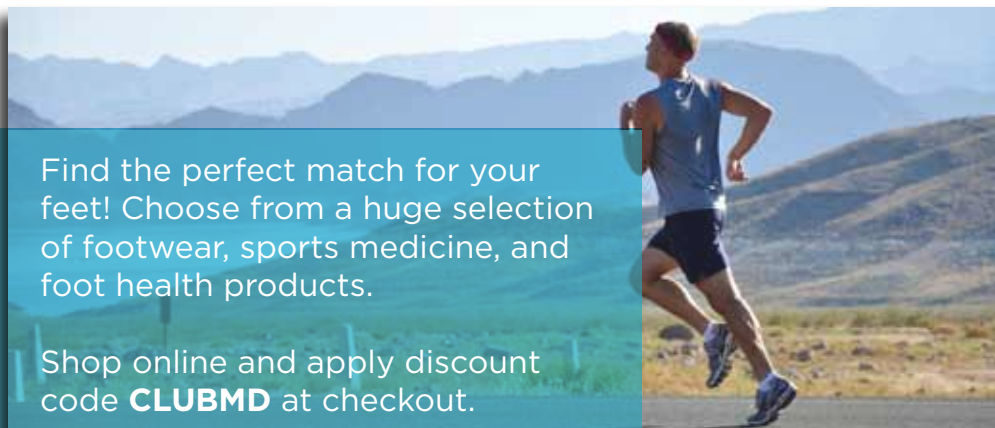
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Family physician with solo practice in Kamloops is looking to turn over a fully equipped practice to a physician able to provide longitudinal care for his patients. The clinic is centrally located and is set up with a well-managed and organized EMR (Telus Med Access). Available December 2022. For further information contact Santie at 778 220-0848.

VICTORIA—FP WALK-IN

Fee-for-service practice near downtown Victoria for 30 years with new and long-term patients of varied demographics. Looking to transfer ownership for retirement but will continue regular shifts for smooth transition. Oscar EMR, two

exam rooms, equipped for minor procedures. Contact Dr Michael Greenwood at 250 388-9934 or jbcentre@telus.net.

EMPLOYMENT

ABBOTSFORD—FP FOR MULTIDISCIPLINARY MATERNITY OFFICE

Seeking family physician to join the Fraser Birth Collaborative in beautiful Abbotsford, BC. We are a team of physicians, midwives, counselors, nurses, physiotherapists, RMTs, etc., that provide full care for mothers and babies until 2 months after birth. We would like a physician to join us and provide family practice care inside the clinic to follow these babies after discharge from our care. Abbotsford is a community of 160 000 people, with a newer regional hospital, 1 hour from Vancouver. Contact inbox@fraserbirth.ca.

ACROSS CANADA—PHYSICIANS FOR YOU—MATCHING DOCTORS WITH CLINICS

Are you a physician looking for work or a medical facility requiring physicians? Our team works with independently licensed Canadian physicians, CFPC/RCPSC-eligible international medical graduates, and clinics across Canada. Check out our reviews and current job postings, and call Canada's trusted recruitment firm today! Visit www.physiciansforyou.com.

NANAIMO—GP

The Caledonian Clinic has availability for a general practitioner (locum or permanent position). We are a well-established, very busy clinic with 23 general practitioners, one first-year resident, one second-year resident, a podiatrist, a geriatrician/internist, and an orthopaedic surgeon. Our EMR is Profile by Intrahealth. We are located in a modern new clinic in the Nanaimo North Town Centre. Lab and pharmacy services are on site within the centre. Contact Lisa Wall at 250 716-5360 or email lisa.wall@caledonianclinic.ca. Visit our website at www.caledonianclinic.ca.

NISGA'A VALLEY—FAMILY MEDICINE LOCUMS AND FTES

Family physicians needed to provide primary and urgent care for a population of 3500 in four communities across the traditional Nisga'a Territory, easily accessed by flights into Terrace. A supportive team of three to four physicians work together to provide full-scope services (excluding obstetrics). The health centres are staffed with full-time RNs who take the first call after hours. Soaring mountains, dramatic lava beds, natural hot springs, mountain-biking trails, and thriving salmon-filled rivers offer outstanding recreation year-round. Excellent remuneration, average more than \$11 000

per week. Contact Dr Jeremy Penner at md@nisgahealth.bc.ca.

NORTH VAN—FP LOCUM

Flexible hours and vacation time with no call. In-office and telehealth options available with great MOA support staff and a new competitive split; 100% to doctors for optional hospital visits, nursing home visits, medical-legal letters, etc., or sessional work. For further information contact Kim at 604 987-0918 or kimgraffi@hotmail.com.

POWELL RIVER—LOCUM

The Medical Clinic Associates is looking for short- and long-term locums. The medical community offers excellent specialist backup and has a well-equipped 33-bed hospital. This beautiful community offers outstanding outdoor recreation. For more information contact Laurie Fuller. Phone: 604 485-3927, email: clinic@tmca-pr.ca, website: powellrivermedicalclinic.ca.

RICHMOND—FT OR PT FAMILY PHYSICIAN

Busy, well-established Richmond clinic looking for an associate. We are a two-doctor, two-MOA clinic. Our clinic location is very accessible and has ample parking. There is a pharmacy next door. Workload is 100% in-clinic; no nursing home or hospital patients. We offer a competitive

split. For further info email rmdclinic01@gmail.com.

**RICHMOND/STEVESON—
OUTSTANDING LONG-TERM
OWNERSHIP OPPORTUNITY**

Guaranteed income: Work-to-own family/aesthetic practice(s). Two turnkey strata units. Technologically advanced practice(s). Individual or group of family doctors/NPs. Can start with a guaranteed income and buy real estate earlier in your career. Tax efficiency planning. Dermatologist may be interested in aesthetic practice. For more information contact msinghalmd@gmail.com.

**SOUTH SURREY/WHITE
ROCK—FP**

Busy family/walk-in practice in South Surrey requires GP to build family practice. The community is growing rapidly and there is great need for family physicians. Close to beaches and recreational areas of Metro Vancouver. Oscar EMR, nurses/MOAs on all shifts. CDM support available. Competitive split. Please contact Carol at peninsulamedical@live.com or 604 916-2050.

**SURREY (BEAR CREEK AND
NEWTON)—FAMILY PRACTICE**

We are looking for part-time/full-time physicians for walk-ins/family practice to work on flexible shifts between 9 a.m. and 6 p.m.; option to work 7 or 5 days per week. Clinic with eight exam rooms, two physio rooms, and pharmacy on site. Competitive split. For more information, please contact Anand at wecaremedicalclinic2021@gmail.com or 778 888-7588.

**SURREY/DELTA/
ABBOTSFORD—GPS/
SPECIALISTS**

Considering a change of practice style or location? Or selling your practice? Group of seven locations has opportunities for family, walk-in, or specialists. Full-time, part-time, or locum doctors guaranteed to be busy. We provide administrative support. Paul Foster: 604 572-4558 or pfoster@denninghealth.ca.

**SURREY (SCOTT ROAD)—FT/
PT GPS FOR SUPPORTIVE,
ESTABLISHED, PHYSICIAN-
OWNED CLINIC**

Arista Medical Centre is seeking FT/PT GPs for a busy family practice. Flexible schedule. Brand-new, modern, multidisciplinary, multiphysician clinic with a very collegial atmosphere and physician-focused MOA support with seven exam rooms. Free parking. Highly competitive split. Please contact Manni at info@aristamedical.ca or 604 572-1000.

**VANCOUVER—FP/
GYNECOLOGIST/PEDIATRICIAN/
SPECIALIST, AND RMT**

Cross Roads Clinics: Opportunity to join our large multidisciplinary clinic with excellent support focusing on family health, preventive health, and the care of women and children. Virtual care, extended flexible hours/scheduling, and vacation friendly. Modern 9000 sq. ft. facility with 34 patient rooms and gymnasium. Physiotherapy, massage therapy, naturopathic medicine, acupuncture, dermatology, minor surgery, pediatrics, women's health, infertility, contraception, menopause, and incontinence clinic on site. No need to build your practice as we have patients immediately available to you.

Potential service contract for family medicine. Great opportunity to focus on patient care, whether new to practice or semi-retiring; allow us to manage the rest. Please contact admin@crossroadsclinics.com.

**VANCOUVER/RICHMOND—
FP/SPECIALIST**

We welcome all physicians, from new graduates to semi-retired, part-time or full-time. Walk-in or full-service family medicine and all specialties. Excellent splits at the busy South Vancouver and Richmond Superstore medical clinics. Efficient and customizable Oscar EMR. Well-organized clinics. Contact Dr Balint Budai at medicalclinicbc@gmail.com.

**VICTORIA—FAMILY PHYSICIANS,
URGENT AND PRIMARY CARE
CENTRES**

Island Health has exciting opportunities for family practitioners to work at new UPCCs. Join a team of primary care providers and other allied health staff to collectively deliver integrated team-based care. The UPCCs are bright new clinics offering turnkey operation with no overhead costs and a group clinical service contract with competitive rates. Patient visits consist of scheduled LC and unscheduled UC or same-day primary care. For further information or to discuss these opportunities directly with our medical director, please contact our recruitment team at medstaffrecruitment@islandhealth.ca.

VICTORIA—HOSPITALISTS

Hospitalists in Victoria provide comprehensive 24-hour care to a wide variety of patients at both Victoria General Hospital and Royal Jubilee Hospital. We are involved in undergraduate and resident teaching through UBC.

Experience engaging and rewarding medicine in one of Canada's most beautiful cities! Email recruiting@si-hi.ca.

MEDICAL OFFICE SPACE

**BURNABY METROTOWN—
FULLY FURNISHED, READY TO
WORK, MEDICAL OFFICE SPACE
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Updated COVID-19-compliant, fully furnished, five-room medical clinic (970 sq. ft.). Street-level location and ample walk-by traffic. Free parking and within walking distance of Metrotown SkyTrain. Perfect for family practice, a walk-in clinic, and/or cosmetic medical. Incentives and attractive lease rates offered. If interested, please contact drniou@gmail.com.

**SURREY—SELF-CONTAINED
SPACE ACROSS FROM SURREY
MEMORIAL HOSPITAL**

Medical office space at City Centre 2. Two physician offices, 990 sq. ft. waiting area, four exam rooms. Space for two MOAs. One private bathroom. Parking space available for rental at additional cost. Utilities included. Available starting February 2022. Email: Carla at frasergeneral surgerygroup@gmail.com. Phone: 604 416-0084. Turnkey options also available.

**VANCOUVER—MEDICAL
CO-WORKING SPACE**

Pay-per-use rental of two exam rooms and front desk for your MOA in our 2400 sq. ft. family practice. Maintain full control over your practice and staff while reducing your overhead. Medical supplies, equipment, and utilities included. Medical fridge and autoclave on site. For pricing plans, details, and contact info, visit www.mangomedical.ca/cowork.

MISCELLANEOUS

CANADA-WIDE—MED TRANSCRIPTION

Medical transcription specialists since 2002, Canada-wide. Excellent quality and turn-around. All specialties, family practice, and IME reports. Telephone or digital recorder. Fully confidential, PIPEDA compliant. Dictation tips at www.2ascribe.com/tips. Contact us at www.2ascribe.com, info@2ascribe.com, or toll-free at 1 866 503-4003.

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VANCOUVER—TAX & ACCOUNTING SERVICES

Rod McNeil, CPA, CGA: Tax, accounting, and business solutions for medical and health professionals (corporate and personal). Specializing in health professionals for the past 11 years, and the tax and financial issues facing them at various career and professional stages. The tax area is complex, and practitioners are often not aware of solutions available to them or which avenues to take. My goal is to help you navigate and keep more of what you earn by minimizing overall tax burdens where possible, while at the same time providing you with personalized service.


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Pr **DAYVIGO™**
lemborexant tablets

INDICATION AND CLINICAL USE:

Sleep disturbance may be the presenting manifestation of a physical and/or psychiatric disorder. Consequently, a decision to initiate symptomatic treatment of insomnia should only be made after the patient has been carefully evaluated.

DAYVIGO™ (lemborexant) is indicated for the treatment of insomnia, characterized by difficulties with sleep onset and/or sleep maintenance. DAYVIGO is not recommended for patients under the age of 18 years. DAYVIGO is not recommended in patients with severe hepatic impairment.

CONTRAINDICATIONS:

- Hypersensitivity to this drug or to any ingredient in the formulation, including any non-medicinal ingredient, or component of the container.
- Patients with narcolepsy.

RELEVANT WARNINGS AND PRECAUTIONS:

- Abnormal thinking and behavioural changes
- CNS depressant effects (including alcohol) and daytime impairment and risk of falls
- Complex sleep behaviours
- Sleep paralysis, hypnagogic/hypnopompic hallucinations, and cataplexy-like symptoms
- Worsening of depression/suicidal ideation
- Co-morbid diagnoses
- Drug interactions - inhibitors and inducers of CYP3A
- Patients with galactose intolerance
- Driving and operating machinery
- Patients with dependence/tolerance and abuse liability
- Rebound insomnia
- Patients with hepatic impairment
- Patients with compromised respiratory function
- Pregnant or breastfeeding women

FOR MORE INFORMATION:

Please see the Product Monograph at <https://ca.eisai.com/en-CA/our-products> for important information on adverse reactions, drug interactions, and dosing not discussed in this piece. The Product Monograph is also available by calling 1-877-873-4724.

† Based on a 1-month global, randomized, double-blind, parallel-group, placebo- and active-controlled, phase 3 study (SUNRISE 1) in 743 participants with insomnia disorder (age ≥55 years). Participants received placebo (N=208) or DAYVIGO 5 mg (N=266) or 10 mg (N=269) at bedtime. Latency to persistent sleep baselines: placebo, 44 mins; DAYVIGO 5 mg, 45 mins; DAYVIGO 10 mg, 45 mins. Wake after sleep onset baselines: placebo, 112 mins; DAYVIGO 5 mg, 113 mins; DAYVIGO 10 mg, 115 mins.²

REFERENCES:

1. DAYVIGO Product Monograph, Eisai Limited, November 3, 2020.
2. Rosenberg R, Murphy P, Zammit G, et al. Comparison of Lemborexant With Placebo and Zolpidem Tartrate Extended Release for the Treatment of Older Adults With Insomnia Disorder: A Phase 3 Randomized Clinical Trial. *JAMA Network Open*. 2019;2(12):e1918254.

DAYV-CAN/E-24.2



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The only orexin receptor antagonist indicated in insomnia.*

INSOMNIA TREATMENT: WHEN DAY TURNS TO NIGHT CONSIDER

Pr **DAYVIGO**TM
lemborexant tablets

DAYVIGOTM is indicated in adults for the treatment of insomnia, characterized by difficulties with sleep onset and/or sleep maintenance.

Symptomatic treatment of insomnia should only be initiated after the patient has been carefully evaluated to rule out a physical and/or psychiatric disorder.

Demonstrated efficacy¹

- At Days 1/2, DAYVIGO 5 mg reduced sleep onset time (LPS) from baseline by 17 minutes vs. 6 minutes with placebo ($p < 0.01$).^{1†}

The primary efficacy endpoint was the mean change in latency to persistent sleep (LPS) from baseline to end of treatment, as measured by polysomnography. LPS was defined as the number of minutes from lights off to the first 10 consecutive minutes of non-wakefulness.

- At Days 1/2, DAYVIGO 5 mg improved sleep maintenance (WASO) from baseline by 51 minutes vs. 18 minutes with placebo (secondary endpoint) ($p < 0.001$).^{1†}

The secondary efficacy endpoint was the mean change from baseline to end of treatment in wake after sleep onset (WASO) measured by polysomnography. WASO was defined as the minutes of wake from the onset of sleep until wake time.

A proven safety profile¹

- DAYVIGO was generally well tolerated.
- Most common adverse events were headache (5 mg: 6%, 10 mg: 4.6%), somnolence (5 mg: 5%, 10 mg: 8.4%), nasopharyngitis (5 mg: 2.8%, 10 mg: 1.7%), fatigue (5 mg: 2.1%, 10 mg: 1.5%), urinary tract infection (5 mg: 0.7%, 10 mg: 2.1%).¹

**REQUEST
SAMPLES**

dayvigosample.ca/request



Pr **DAYVIGO**TM
lemborexant tablets

Covered by most Canadian private insurance plans*



* Comparative clinical significance unknown.

† Data on file, Eisai Limited.

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