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Possible hydromorphone-induced neurotoxicity in patients undergoing buprenorphine induction for opioid use disorder

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The changing epidemiology of syphilis in BC; article begins on page 431. Pictured: **Treponema pallidum** ***bacterium.***

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ON THE COVER
In the case study beginning on page 428, three patients who were administered rapid induction with hydromorphone used as a bridging agonist experienced previously undocumented signs such as delirium and myoclonus, thought to be due to opioid-induced neurotoxicity.

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The impacts of flooding on health; article on page 434. Pictured: Abbotsford, BC, 17 November 2021.

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Gratitude—the Christmas gift that keeps on giving

Christmas morning . . . the most wonderful time of the year. It's 7 a.m. and I am awoken by my two kids urging me out of bed and into our matching moose-print onesies. "Teeth brushing later, Mom! Let's go, let's go!" they yell. Still in grade school, my kids are fully invested in the magic of the season. We search for signs of Santa's visit: Have the cookies been eaten? Carrots chewed by reindeer? And what of the presents? Some wrapping does not match the other gifts under the tree, a reliable sign those offerings have come from the North Pole. I watch my kids with a sense of overwhelming joy, coupled with smug satisfaction. I really nailed it. I must be mom of the year. For confirmation, one need look no further than Samukai, a rare Lego figure that I sourced on Facebook. I had it shipped overnight after my son wrote an addendum to Santa, explaining why it was absolutely essential that his elves build this Lego king, as it was no longer available in stores.

December can be especially difficult for those who are dealing with depression, anxiety, or grief.

Christmas morning is going perfectly, until it isn't.

"That's it?" my kids ask. "No more presents?" Their excitement turns to dismay as they realize the gifting is over. "What will we *do* for the rest of the day?" they ask, beginning the process of comparing who got more and whose gifts are better. As the infighting starts, my joy turns to anger. Don't they know how lucky and privileged we are to even get presents? Then my anger subsides and a dark cloud of shame descends. I sit sullenly on the couch, sipping my tea and wallowing in the realization that I am a terrible parent who has failed to instill any sense of values in my kids. I imagine my future as a lonely old lady, deserted at Christmas because I raised entitled offspring who never learned the real meaning of the holiday.

Bad-parent shame can be gut-wrenching but also very motivating. Determined to be better this year, I turned to friends and colleagues to learn how others manifest gratitude. Interestingly, I got just as many responses about what *not* to do, as what *to* do. Many people advised against the impulse to force gratitude upon my children. Some colleagues recalled their own parents constantly "shoving it down their throats" and "piling on the guilt." This notion reminded me of Boxing Day brunch with my dad and stepmother when I was 13; instead of the usual $50 bill in an envelope, I got a generic thank-you card from the food bank accompanied by a tax receipt made out to my stepmother's business. Gratitude was not my predominant emotion that day.

At a colleague's recommendation, I listened to a podcast about *The Gifts of Imperfect Parenting* by Brené Brown.[1] Her book emphasizes that it's not just how we talk to our children; it's also how we talk to ourselves. In a culture of "more, more, more," we need to practise gratitude to avoid being swept up in the currents of commercialism.

I have come to appreciate that expressing gratitude forces me to slow down and share my happiness. Gratitude allows us to savor the good experiences and be more resilient during the challenging ones. The holidays are not a joyful time for everyone; December can be especially difficult for those who are dealing with depression, anxiety, or grief. But even in difficult times, experts suggest that gratitude can be an opportunity to acknowledge the good things. On days when gratitude seems impossible to conjure, remember that it can also apply to memories, past events, or even hopes for the future. It may seem contrived at first, but experienced practitioners assure us that the cognitive dissonance fades with routine.

As we head into the holiday season, I invite you to comment at www.bcmj.org and share your experience with gratitude. You never know who it might help! I have told my kids that they gave me the greatest gift of all last year—gratitude—and I use it every day. ■

—Caitlin Dunne, MD, FRCSC

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Decolonization: CPSBC retires the crowned lion

Her Majesty Queen Elizabeth II died on 8 September 2022, the same day the College of Physicians and Surgeons of BC (CPSBC) surveyed the province's doctors on a proposed new logo. The decision to retire the colonial crest coincides with the closing of the Second Elizabethan Age. In 2021, the registrar explained: "Since its adoption in 1886, the College crest has been the official stamp used on all our communication and documentation. The College crest is a distinctively colonial symbol with a lion wearing a crown on its head while sitting on top of another crown, reflecting the royal coat of arms of the British monarchy and all of its rights. This year we will be undertaking a significant rebranding process, which includes replacing the crest with a new identifier that reflects our current-day values of inclusivity and accessibility to all British Columbians."

The coincidence of these two events marks an opportunity to examine medicine's colonial roots in BC. In March 1778, Royal Navy captain James Cook was greeted by the Nuu-chah-nulth people in the place currently known as Nootka Sound, setting the stage for British colonization of present-day BC. In little under a century, the enormous land mass now known as BC was claimed for the Crown, with small reserve tracts set aside for the Indigenous population, whose numbers declined rapidly in the face of colonization.

In recent years, the CPSBC has recognized the need to improve its relationship with the Indigenous population and the care provided by the province's doctors, retaining Stormy Lake Consulting to assist in the rebranding process. Stormy Lake distributed a questionnaire to physicians requesting feedback on the proposed new CPSBC logo. As its website states: "We live in a world of eroding trust. Brands are letting us down, facts are not constant, and social justice is having a moment. . . . As a result, trust has become the new currency. Marketing needs to work through the channels of trust: experiences, community, individual advocates, and reliable products."

Can the CPSBC adopt new values, ensuring that physicians practise in a manner that is accessible, inclusive, and trust enhancing for Indigenous patients? Is substantive change possible in a body with a statutorily defined mandate to regulate a conservative profession firmly anchored in Western tradition?

Western thinking is so ingrained that, in practice, it constitutes our only philosophical and political frame of reference for resolving issues of social justice.

The CPSBC is a direct descendant of the Royal College of Physicians of London, established by King Henry VIII in 1514. Medicine as practised by BC's physicians today conforms to the Western medical model; academic physicians constantly refine the classification and treatment of illness based on data obtained via scientific study. Disease-focused Western medicine could hardly be more disparate, in both philosophy and practice, from the traditional techniques employed by Indigenous healers prior to colonization. And perhaps not surprisingly, it has been unable to ensure that the health of the Indigenous population rises to that of other groups.

What of the proposed new logo? The CPSBC survey questions whether it may be problematic or offensive. Could anyone genuinely take offense at such an innocent array of blue rectangles and half-circles? Perhaps they should have asked whether the logo truly signifies a break with colonial tradition. For while the regal lion and crowns are gone, the proposed logo consists of geometric figures not found in precolonial BC. They trace back to Euclidean geometry, a classical Greek discipline foundational to mathematics, relentless Western scientific progress, and ultimately colonization.

In fact, Western thinking is so ingrained that, in practice, it constitutes our only philosophical and political frame of reference for resolving issues of social justice. The notion that past harms against Indigenous people should be atoned for reflects an intrinsically Western, Judeo-Christian world view. Such harms are now being acknowledged and rectified through Western means: following years of litigation, the Supreme Court of Canada recognized Aboriginal land title in the landmark 1997 decision *Delgamuukw v. British Columbia*.

Change at the CPSBC is managed as it is in other Western institutions. Consensus has emerged that the medical profession and its regulator have failed Indigenous patients and that this wrong must be righted and the brand revised. With the problem identified, the issue has been outsourced to recognized experts in the field. In its own words, Stormy Lake Consulting is "a world-class strategy firm that uses research, facilitation, consultation, deep analysis, and insightful synthesis to bring sense-making strategic solutions to clients. In short, we turn 'complex' into 'clear, compelling and useful.'"

The CPSBC will certainly rebrand, but can it truly "decolonize"—that is, discard the Western colonial mindset that governs its every action? Readers are invited to review a final quote form the Stormy Lake website to reach their own conclusion: "Strategy needs to identify . . . rational milestones and emotional states, matching the product to the moment, identifying the tools and information stakeholders use at each stage, and constantly updating itself as more information about the customer's journey is learned." ■

—David J. Esler, MD

Reflection, hope, and optimism

As I think back on the year and the significant privilege I've had to serve as your president, I am sincerely grateful for the opportunity and for each of you who has continued to show up despite the hardships and tribulations we have faced. I marvel at and admire your tenacity, dedication, and perseverance. In my travels across the province, both virtually and in person, from urban to rural to remote communities, your contributions to medicine are not only obvious, but also astounding. You have continued to rise above and make a significant and positive impact while traversing uncharted waters during a health care crisis in a constrained system.

Our ability to inspire and lead has never had such a critical influence as it does now. It is in times of uncertainty and scarcity that people look to us for guidance and reassurance, and I do believe our future is in great hands. I also believe that a reimagining is necessary for a system redesign that delivers desirable health care outcomes and achieves health care equity. So as we embark on a significant undertaking to transform our medical landscape and culture, I look to invigorating creative opportunities that will allow us to dramatically shift our future. Because the future lies with those who create it.

My hope is to continue to radically change the face of medicine and advocate for equity and improvement.

My presidential platform was dedicated to visibility for justice, equity, diversity, and inclusion. I find inspiration for a better tomorrow in our collaborative recognition of the need for a culture change in health care. Within the deep spirit of this work, we need to look through a lens of truth and reconciliation to build a framework that allows our health care system to thrive. We need to not only consider our most marginalized populations, but also lead with the intention to serve their best interests while at the same time developing—and fostering—partnerships that serve the health of our entire province. We also need to consider all aspects of health, not just our work in medicine. We know that health includes a myriad of facets, which is why we need to be deliberate in our inclusion of the social determinants of health while planning what happens in our system. We are only as healthy as our system, yet at times it seems we are a series of disjointed maladies. We need to shift from being disease focused to having more of a holistic health focus that encompasses all interactions, even those outside our specific system that impact and influence one's overall health: adverse childhood experiences, our societal interactions, the way we live, and the way we see ourselves and one another. It's time to look at primary prevention, wellness and healthy communities, and our leadership contributions in the reform of our health care system.

My hope is to continue to radically change the face of medicine and advocate for equity and improvement. What we allow will continue. The status quo has to go. We need to continue to forge and expand partnerships that foster growth within our patient communities and that will allow us to transform health care in our province in exemplary ways.

There are unique opportunities before us to have a collective impact that will substantially shift systems. We need to remember that the power of our voice, the power of our ideas, and the power of *us* can change the world. We are the leaders our health care system and our patients have been waiting for, and now is the time to lead this change. ■

—Ramneek Dosanjh, MD
Doctors of BC President

Letters to the editor

We welcome original letters of less than 500 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.

Burnout and job mentality

Dr Keyes and colleagues[1] recently presented a study of burnout among oncologists in the *BCMJ*, with symptoms of exhaustion, cynicism, and inefficiency occurring at alarming rates. The authors concluded that "[b]urnout is primarily a system-level problem driven by excess job demands and inadequate resources and support, rather than an individual-level problem triggered by personal limitations and lack of resilience." While that may be true, it may not be helpful unless the "system-level problem" is more clearly identified. I suspect that the problem is the delusion that medicine is a job, not an adventure.

Burnout is a common problem. A clue to its pathogenesis is in the old saying "All work and no play makes Jack a dull boy." It may have become more prevalent in the industrial age when more people got jobs and developed a "job mentality."

"Job mentality" means seeing life as a job—predictable, black and white. It is all about work, control, discipline, conformity, and responsibility. When you get a job, you get your job description. What happens after is your responsibility. If you follow the job description, you get paid; if you don't, you get fired. It is boring, unimaginative, and stupid.

The opposite is a "game mentality," seeing life as a game—unpredictable and full of challenges and surprises. This refers to games that are played primarily for fun, like tennis, hockey, or chess, not to devious strategies for taking advantage of others, which are also sometimes referred to as games. Games are about skill, experience, ingenuity, and quick thinking. At the beginning, their outcome is unknown, and it does not depend only on what we do; it depends also on all the other players, chance, luck, and circumstances beyond our control or even knowledge. Games have rules, and fair play is essential. While we don't have control over the course or the outcome of the game, how we play matters; it can make the difference between winning or losing. It is exciting, adventurous, and fun.

The "job mentality" probably occurs spontaneously in obsessive individuals, driven by the need for control, security, and predictability. It can be contagious and can become part of a toxic organizational culture, a system-level problem. The practice of medicine is replete with unexpected and uncontrollable situations, and it cannot be just a job. It is much more like a game, with an uncertain outcome. Doctors can be seen as professional players, facing formidable opponents—diseases and death. They cannot control the game, but their skills and ingenuity can make the difference between life and death.

This is probably particularly true of oncology, which I would not expect to become a specialty of fun and games anytime soon. However, most oncologists do not experience burnout, so there must be a way around it. Having seen (in psychiatric practice) people suffering from symptoms of burnout regardless of their line of work, if any, I think that burnout is related to the "job mentality" rather than work demands, and the idea that life is a game, not a job, could help to overcome burnout, replacing it with "a sort of ecstasy of curiosity and hope"[2] of earlier years.

—Vaclav Hyrman, MD, FRCPC
Vancouver

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CPSBC investments, fees, and impacts on members

I read the recent College of Physicians and Surgeons of BC (CPSBC) annual report with some interest, borne of a recent experience with lengthy delays in the approval process for a personal medical corporation. I admit this may have colored my judgment somewhat with respect to the CPSBC's stewardship of the resources it is given to protect British Columbians.

The financial statements attached to the annual report show $32.5 million in long-term investments, including $10 million in US equities and $5.8 million in international equities. There are no details on the reasons why a quasi-governmental organization with a captive payee base of physicians would require this level of savings. It is the $1725 medical licence renewal fees that ultimately pay the CPSBC's operating expenses. Since these can be (and have been) increased arbitrarily, there should be no concern regarding a shortfall of funds.

Despite these investments, the CPSBC continues to collect the highest application fees in Canada for new registrants ($1290), in addition to the $530 fee from the Medical Council of Canada (www.mcc.ca/services/application-for-medical-registration). Once registered, physicians can look forward to paying their medical licence fee, for a total cost of $3545, before being able to see their first patient.

Most importantly, we are at crisis levels of physician shortfalls. My Facebook feed is full of colleagues desperately searching for a locum to cover medical and parental leaves. Inability

to find coverage has a huge impact on quality of life, especially for family physicians. High registration fees are undoubtedly a strong disincentive for anyone considering a locum in British Columbia, especially new graduates interested in trying out practice in a beautiful new province.

It seems unconscionable for the CPSBC to be sitting on this rainy-day fund while the rain is pouring. The CPSBC has a mandate to protect British Columbians. It should review the impact of its fees on the family doctor shortage and consider reducing them rather than using them to play the stock market.

—Kevin Wade, CD, MD, CCFP(PC)
Victoria

College replies

I write in response to a recent letter submitted by Dr Kevin Wade regarding the College's finances and application and licensure fees. First, I would like to apologize for the delay in Dr Wade's professional medical corporation (PMC) approval process. The College acknowledges that the PMC program has experienced serious backlogs in the past, and we are actively working to address these delays. I am pleased to report that our average PMC approval time has dropped by more than 50% in 2022, and we are now processing applications within 2 weeks from the date of receipt.

I would also like to assure Dr Wade and all College registrants that the Board takes its fiduciary responsibility very seriously. Just this year, the Board reviewed the College's financial reserves policy with other medical regulatory authorities (MRAs) across Canada and our auditors. The Board's policy is to have 90% of annual operating expenses in reserves. The College's budget for 2022–23 is $38.2 million, so the $32.5 million that Dr Wade refers to comprises 85% of that amount. The Board has worked over the past 10 years to build financial reserves at a rate of 5% per year. Our peers generally have between 6 and 18 months' operating expenses in reserves.

The purpose of the contingency reserve, a so-called rainy-day fund, is to ensure that the College has sufficient financial resources to continue operations in the event of a significant event—for example, legislative changes, natural or economic disasters, or a pandemic. We are fortunate that the recent COVID-19 pandemic had only a minor effect on the College's finances. Had we experienced an extreme event such as a major earthquake that rendered the College's offices unusable, it would have been necessary to employ the existing reserve balance.

The College's investments are actively managed by TD Wealth, which was selected through an extensive request for proposal process. Long-term investments are invested approximately 60% in equities and 40% in fixed investments. In 2021, the College shifted to a socially responsible investment portfolio. Short-term operating funds are invested entirely in fixed investments, such as cash, GICs, and bonds funds. While 2022 has been a difficult year for the College's investments (–7.3%)—as it has been for all institutional investors—its long-term rate of return is > 5%.

The College's financial reserves help to keep registrant fees as low as possible to fund its operations and administrative obligations. Investment income from these reserves is projected to be approximately $1.5 million in 2023, which allows us to charge the second-lowest fees of all MRAs while operating in one of the most expensive jurisdictions. The **Table** shows annual licensure fees charged by MRAs across Canada in 2022.

TABLE. Annual licensure fees charged by MRAs across Canada in 2022.

Province	Annual licence renewal fees (2022)
BC	$1725
Alberta	$1792
Saskatchewan	$1950
Manitoba	$2050
Ontario	$1725
Quebec	$1735
Newfoundland	$2350
New Brunswick	$600
Nova Scotia	$1950
PEI	$2125

The College is also required to administer one of the most complicated legislative frameworks in the country and serves registrants by offering a medical library; both have associated costs.

Dr Wade also refers to the $1290 application fee—a combination of the credential analysis and registration fee of $640, plus the $650 preliminary qualification of licensure fee. The registration fee ranks below the midpoint of other MRAs across Canada, and the preliminary qualification of licensure fee is applied only in cases that require additional review by the College's registration department.

I hope that in providing this level of detail I have addressed Dr Wade's concerns. The College is committed to transparency and accountability and always welcomes inquiries from registrants about how it conducts its regulatory business to ensure British Columbians receive safe and competent medical care.

—Heidi M. Oetter, MD
Registrar and CEO, College of Physicians and Surgeons of BC

News

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National study: It's time to rethink treatment of atrial fibrillation

A national study led by University of British Columbia researchers at the Centre for Cardiovascular Innovation sheds light on how to more effectively treat atrial fibrillation. The study, published in the *New England Journal of Medicine*, shows that early intervention with cryoballoon catheter ablation (cryoablation) is more effective at reducing the risk of serious long-term health impacts compared with the current first step in treatment, antiarrhythmic drugs.

The minimally invasive procedure of guiding a small tube into the heart to kill problematic tissue with cold temperatures has been reserved as a secondary treatment when patients don't respond to antiarrhythmic drugs. This study adds to evidence that early intervention with cryoablation may be a more effective initial therapy in appropriate patients.

While atrial fibrillation starts as an isolated electrical disorder, each recurring incident can cause electrical and structural changes in the heart that can lead to longer-lasting events known as persistent atrial fibrillation (episodes lasting more than 7 continuous days). The new findings, stemming from a multisite clinical trial, show that cryoablation can stop this snowball effect.

For the trial, the pan-Canadian research team led by Dr Jason Andrade, an associate professor of medicine at UBC and director of heart rhythm services at Vancouver General Hospital, enrolled 303 patients with atrial fibrillation at 18 sites across Canada. Half the patients were randomly selected to receive antiarrhythmic drugs, while the other half were treated with cryoablation. All patients received an implantable monitoring device that recorded their cardiac activity throughout the study period.

Because cryoablation targets and destroys the cells that initiate and perpetuate atrial fibrillation, researchers say it can lead to longer-lasting benefits. After 3 years, researchers found that patients in the cryoablation group were less likely to progress to persistent atrial fibrillation compared with patients treated with antiarrhythmic drugs. Over the follow-up period, the cryoablation patients also had lower rates of hospitalization and experienced fewer serious adverse health events that resulted in death, functional disability, or prolonged hospitalization.

The study builds on a previous paper, "Cryoablation or drug therapy for initial treatment of atrial fibrillation," also published in the *New England Journal of Medicine*, in which Dr Andrade and his team demonstrated that cryoablation was more effective than antiarrhythmic drugs at reducing the short-term recurrence of atrial fibrillation.

Read the new study, "Progression of atrial fibrillation after cryoablation or drug therapy," at www.nejm.org/doi/full/10.1056/NEJMoa2212540 (account required).

Report on menopause: Steep toll of silence, stigma on Canadian women

A national research report from the Menopause Foundation of Canada (MFC) demonstrates the real-life impacts and inequities Canadian women face while going through perimenopause/menopause. The silence around menopause leaves many of the estimated 10 million women in Canada over the age of 40 (those in perimenopause, menopause, or postmenopause) trying to understand what is happening to their bodies, why they feel the way they do, and whether treatment and support are available. It also leaves women unaware of the potential long-term health impacts of menopause.

The survey involved 1023 Canadian women aged 40–60, representative by region, education, income, and ethnicity. Most women (95% in MFC's survey) experience menopausal symptoms; however, 46% of women in the study felt unprepared for this stage of life, and 54% believe menopause is still a taboo subject. Additionally, 40% reported feeling alone through their menopause experience. While the majority of women were aware of hot flashes (84%) and night sweats (77%), most were not aware that urinary tract infections (82%) and heart palpitations (75%) were symptoms. More than half did not know that headaches/migraines (58%), anxiety (58%), depression (56%), and memory issues (58%) were symptoms. Complicating the issue is determining whether these symptoms are the result of another condition.

The average Canadian woman will spend up to half her life in a menopausal state, yet MFC suggests that menopause is seen as something women must simply endure, with not enough focus on preventive care, lifestyle choices, and safe and effective treatment options available to help women during their menopausal years.

While women report their family physician is their most trusted source for information and advice about menopause, fewer than 25% said their family physician proactively discussed menopause with them. Of the 41% who sought out medical advice themselves, 72% found that advice to be unhelpful or only somewhat helpful, and 40% felt their symptoms were undertreated.

Further, MFC's research reveals that 75% of working women feel their employer is not supportive, or they do not know if they have support to help them manage this stage of life. MFC believes that normalizing this natural part of life is long overdue and everyone has a role to play. The organization hopes that talking about menopause can break the taboo and empower women with evidence-based information.

This independent research report was made possible by supporters and volunteers, including educational funding from Lupin Pharma Canada, Organon, Astellas Pharma, and Searchlight Pharma. MFC is a national not-for-profit advocacy organization created to raise awareness of the impact of menopause on women and society. Learn more at www.menopausefoundationcanada.ca. Read the report, "The silence and the stigma: Menopause in Canada," at https://menopausefoundationcanada.ca/wp-content/uploads/2022/10/MFC-Report_The-Silence-and-the-Stigma_Menopause-in-Canada_October-2022.pdf.

BC newborn screening expands

Newborns throughout British Columbia are being screened for three additional metabolic and genetic conditions, resulting in early identification and treatment and improved health outcomes.

Newborn Screening BC, a service of the Provincial Health Services Authority, is adding three tests to its current panel: severe combined immunodeficiency, spinal muscular atrophy, and biotinidase deficiency.

All babies born after 30 September 2022 in BC and Yukon are screened for 27 treatable conditions shortly after birth, on the same blood-spot card. There are no additional steps for families or health care providers.

For newborns, detecting certain disorders early means less invasive investigation and treatment, along with improved outcomes. More specifically, early detection and treatment of the disorders in the additional screening has been shown to greatly reduce mortality and improve the quality of life of newborns affected by these disorders. Early diagnoses also result in reduced costs for assessment, testing, and future health care.

Some screen time better than none during children's concussion recovery

While too much screen time can slow children's recovery from concussions, new research from the University of British Columbia and the University of Calgary suggests that banning screen time is not the answer.

Researchers looked for links between the self-reported screen time of more than 700 children aged 8–16 in the first 7–10 days following an injury and symptoms reported by them and their caregivers over the following 6 months. Children whose concussion symptoms cleared up the fastest had engaged in a moderate amount of screen time.

The study was part of a larger project called Advancing Concussion Assessment in Pediatrics led by psychology professor Dr Keith Yeates at the University of Calgary and funded by the Canadian Institutes of Health Research. The data came from participants aged 8–16 who had suffered either a concussion or an orthopaedic injury, such as a sprained ankle or broken arm, and sought care at one of five emergency departments in Canada. The purpose of including children who had orthopaedic injuries was to compare their recoveries with the group who had concussions.

Patients in the concussion group generally had relatively worse symptoms than their counterparts with orthopaedic injuries, but *within* the concussion group it was not simply a matter of symptoms worsening with more screen time. Children with minimal screen time recovered more slowly too.

Dr Molly Cairncross, an assistant professor at Simon Fraser University, conducted the research as a postdoctoral fellow working with associate professor Dr Noah Silverberg in UBC's Department of Psychology. Dr Cairncross offers that because kids use smartphones and computers to stay connected with peers, complete removal of those screens could lead to feelings of disconnection, loneliness, and not having social support, which are likely to have a negative effect on kids' mental health, and that can make recovery take longer.

Additionally, the longer study timeline led to another finding—the amount of time spent in front of screens during the early recovery period made little difference to long-term health outcomes. After 30 days, children who suffered a concussion or another type of injury reported similar symptoms, regardless of their early screen use.

Researchers also observed that screen time seemed to have less bearing on symptoms than other factors, such as the patient's sex, age, sleep habits, physical activity, or pre-existing symptoms, and emphasized that encouraging concussion patients to sleep well and gradually engage in light physical activity will likely do more for their recovery than keeping them off their smartphones. Ultimately, the findings suggest that using the same approach as with other activities—moderation—is of most help to children and adolescents with concussion. If symptoms flare up, screen time can always be limited.

The study, "Early postinjury screen time and concussion recovery," was published in *Pediatrics*: https://doi.org/10.1542/peds.2022-056835.

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Possible hydromorphone-induced neurotoxicity in patients undergoing buprenorphine induction for opioid use disorder

Patients who are prescribed high doses of hydromorphone when being treating for opioid use disorder should be carefully monitored for signs of neurotoxicity.

ABSTRACT: Opioid-induced neurotoxicity is a constellation of neuropsychiatric signs, including delirium, myoclonus, hyperalgesia, and disorientation, that are thought to be attributable to the accumulation of metabolites from opioids. It is most commonly described in palliative patients. To date, opioid-induced neurotoxicity has not been described in the use of hydromorphone in buprenorphine/naloxone inductions. We reviewed charts of three patients who presented with possible opioid-induced neurotoxicity after receiving high-dose hydromorphone to manage opioid withdrawal during rapid low-dose buprenorphine/naloxone inductions. The patients received a maximum daily dose of 96 to 108 mg of oral hydromorphone. Prominent signs of opioid-induced neurotoxicity included disorientation and delirium, involuntary muscle contraction, slowed movement, and speech difficulties. All patients exhibited these signs within 1 to 3 days of hydromorphone use and stopped exhibiting these signs within 2 to 4 days of its discontinuation. Because high doses of hydromorphone are increasingly used with buprenorphine/naloxone inductions, it is important to recognize possible complications associated with its use.

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The ongoing opioid overdose epidemic in North America presents a pressing need for effective tools in managing opioid use disorder and preventing toxic opioid poisoning. In Canada, 7902 deaths in 2021 were due to apparent opioid overdose, a 23% increase from 2020 and a 113% increase from 2019.[1] Opioid agonist therapy effectively reduces the risk of all-cause and overdose deaths due to opioid dependence.[2] Buprenorphine/naloxone (Suboxone) is a first-line opioid agonist therapy option; its use results in displacement of any existing opioids in the system from their corresponding opioid receptors.[3] Standard guidelines suggest that patients avoid using opioids prior to buprenorphine/naloxone induction until they are in moderate withdrawal to avoid precipitating withdrawal.[4]

The rapid rise in the potency of unregulated opioids, including the increasing availability of toxic fentanyl analogues, has introduced new challenges to buprenorphine/naloxone initiation and the avoidance of precipitated withdrawal.[5] Consequently, new protocols suggest using inductions in which low and increasing doses of buprenorphine are administered without a period of abstinence (sometimes referred to as "microdosing" or "microinduction"), typically overlapping with administration of full agonists until receptors are saturated with buprenorphine.[6,7] One such agonist is hydromorphone. Published induction protocols use maximum total daily oral hydromorphone doses of 24 to 72 mg in buprenorphine induction.[8] Hydromorphone has become more widely used due to its own high receptor affinity; local provincial guidance during the COVID-19 pandemic suggested its use as a safer prescribed alternative to the toxic unregulated opioid supply in British Columbia.[9]

As potency of unregulated opioids increases, higher doses of prescribed opioids may be required to facilitate buprenorphine induction. This has been the case at the Creekside Withdrawal Management Centre, a medical withdrawal management facility in Surrey. In 2020, patients who were administered rapid induction with hydromorphone used as a bridging agonist experienced previously undocumented signs such as delirium and myoclonus; they were thought to be due to opioid-induced neurotoxicity, which was initially described in palliative care literature.[10,11] We present case reports for three patients with possible opioid-induced neurotoxicity.

Case data

All three patients were male, in their 20s or 30s. They were admitted to Creekside Withdrawal Management Centre for 7 to 9 days of treatment. All patients received oral hydromorphone (maximum total oral daily dose: 96 to 106 mg) for withdrawal management, and all received buprenorphine/naloxone via low-dose induction [Table]. Prominent signs of opioid-induced neurotoxicity included myoclonus/tremor/dystonia, dysarthria/delayed/slowed/paucity of speech, disorientation/delirium, and bradykinesia/difficult movement. All patients experienced these signs within 1 to 3 days of hydromorphone initiation and had resolution within 2 to 4 days of its discontinuation. Other medications administered included trazodone, quetiapine, and lorazepam.

Full review and approval of this study were provided by the Fraser Health Research Ethics Board. Given the potential benefits of reporting this information and the efforts made to protect the patients' identity, no express consent was obtained from the patients.

Patient 1

This patient was using 0.5 to 1.0 g of IV opioids daily, with sporadic use of stimulants and alcohol. On admission, his urine tested positive for fentanyl, morphine, benzodiazepines, and amphetamines. A 4-day buprenorphine rapid induction was started, with a day 1 total dose of 12 mg, 88 mg of hydromorphone, and trazodone, acetaminophen, and ibuprofen. On day 2, he received a total of 4 mg of buprenorphine and 96 mg of hydromorphone. On day 3, he was drowsy and disoriented and had visual hallucinations. Only 32 mg of hydromorphone was administered, with 8 mg of buprenorphine. On day 4, he denied having hallucinations but had slowed movements and was seen pinching at the air. Hydromorphone was discontinued, and the patient received 12 mg of buprenorphine. On day 5, he had difficulty making purposeful movements and had latent motor and verbal responses; he received 12 mg of buprenorphine. The slowing of his motor movements continued on day 6, and he received 16 mg of buprenorphine. On day 7, he was sent to the emergency department, with Emergency Health Services noting "twitching." A CT scan of his head was negative for acute pathology, and the patient received 14 mg of buprenorphine. By day 9, he was at baseline and was discharged on a buprenorphine dose of 12 mg daily.

Patient 2

This patient had a recent history of smoking 1 g of fentanyl daily and a prior period of abstinence while taking buprenorphine. On day 1 of induction, he received a total dose of 36 mg of hydromorphone and 1.5 mg of buprenorphine. On day 2, he presented with diaphoresis, nausea, and tremors; a total of 100 mg of hydromorphone was administered in scheduled doses to manage withdrawal, along with 0.5 mg of buprenorphine. On day 3, in addition to diaphoresis, the patient developed piloerection, chills, restlessness, and tremors. He had a total of 92 mg of hydromorphone and 2 mg buprenorphine. By day 4, he reported cognitive "fog" with speech latency and was described as "drooling" and "mute." Scheduled hydromorphone was discontinued, and the patient received only 36 mg of hydromorphone, along with 6 mg of buprenorphine. On day 5, he received a total of 16 mg of buprenorphine and was noted to have a vacant stare and reduced speech volume, rate, and tone. He was sent to hospital.

On day 6, the patient was no longer confused. Bloodwork, a lumbar puncture, blood cultures, and a CT scan of his head were

TABLE. Timeline of opioid-induced neurotoxicity signs and medication doses.

	No. patients treated	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9
NEUROTOXICITY SIGNS										
Myoclonus/tremor/dystonia	3	0	1	1	0	1	1	1	0	0
Dysarthria/delayed/slowed/paucity of speech	3	0	0	0	2	3	0	0	0	0
Disorientation/delirium	3	0	0	1	2	1	0	0	0	0
Bradykinesia/difficult movement	3	0	0	0	2	3	1	0	0	0
Hallucinations	1	0	0	1	0	0	0	0	0	0
MEDICATION AND AVERAGE DAILY DOSE (MG)										
Hydromorphone	3	57.3	101.3	45.3	36.0	0	0	0	0	0
Buprenorphine	3	1.7	4.8	9.0	10.0	14.7	16.0	15.3	20.0	12.0
Trazodone	2	100	100	0	0	0	0	0	0	0
Lorazepam	2	0	0	0	2	0	1	0	0	0
Quetiapine	1	0	50	50	0	0	0	0	0	0

Three patients were admitted to Creekside Withdrawal Management Centre for between 7 and 9 days of treatment and received a maximum dose of 96 to 106 mg of oral hydromorphone. Signs of opioid-induced neurotoxicity presented within 1 to 3 days of hydromorphone initiation and resolved within 2 to 4 days of its discontinuation.

Shading represents a scale from zero to the maximum value for each row.

normal. He continued to have muscle rigidity with blunted affect and facial and tongue fasciculations. Buprenorphine was withheld. The patient was given a one-time dose of 1 mg of lorazepam for possible dystonia and was started on antibiotics and an antiviral. On day 7, he was feeling well and received 12 mg of buprenorphine. By day 8, all cultures were still negative, and the patient was discharged. He was later titrated up to 24 mg of buprenorphine as an outpatient.

Patient 3

This patient had a recent history of using 3.5 g of IV fentanyl daily. On admission, he reported last using fentanyl 2 days prior and had used 30 mg of methadone each of the previous 2 days to manage his withdrawal. On admission, his urine tested positive for opioids, fentanyl, methadone metabolites, and benzodiazepines, and he appeared to be in withdrawal. He was provided a total of 48 mg of hydromorphone and was initiated on a 3-day rapid buprenorphine induction, with a total of 1.5 mg on day 1. On day 2, he was administered a total of 108 mg of hydromorphone, along with trazodone and 5.5 mg of buprenorphine. On day 3, he received a total of 12 mg of hydromorphone and 17 mg of buprenorphine. On day 4, he was disoriented and had latent responses and rigid movements, and his heart rate was 111. Hydromorphone was discontinued.

The patient was sent to the emergency department, where he was found to be slow-moving and speaking incomprehensibly, at times aphasic. A CT of his head was normal, and he was administered olanzapine. He was discharged from the emergency department back to the Creekside Withdrawal Management Centre, and his speech was normal after he received a total of 12 mg of buprenorphine. On day 5, he was still disoriented regarding time, was drowsy, and had slow, whispered speech and a slow gait. His symptoms resolved by day 6, and he was discharged on day 8 on a stable dose of 20 mg of buprenorphine.

Discussion

Hydromorphone and other opioids are increasingly employed in the management of opioid use disorder, including the management of withdrawal while patients initiate buprenorphine.[12] In the cases presented, we observed signs of unusual movement (myoclonus/tremor/dystonia), slowed movement (bradykinesia/difficult movement), difficult speech (dysarthria/delayed/slowed/paucity of speech), hallucinations, and disorientation/delirium. To our knowledge, these are the first reported cases of possible opioid-induced neurotoxicity in the management of opioid use disorder.

Prior reports of opioid-induced neurotoxicity were primarily in the palliative setting, outside the context of substance use disorders. The cases we have presented suggest that cautious monitoring may be necessary when prescribing high doses of hydromorphone as part of a management strategy for opioid use disorder in an inpatient setting, where doses are scheduled and neurotoxic metabolites may accumulate in the system. In addition, although no cases have been reported of opioid-induced neurotoxicity in the outpatient setting, it may be worthwhile assessing whether its symptoms occur when hydromorphone is prescribed to outpatients as an alternative to toxic supply.

Furthermore, the complexity of an unregulated drug supply with unknown adulterants makes interpreting these patients' presentations challenging. In our geographical area, opioids have been increasingly contaminated with benzodiazepines, and we have seen several cases of clearly defined opioid and benzodiazepine withdrawal that have responded to benzodiazepine administration. We considered benzodiazepine withdrawal as a diagnosis for these patients; however, they had atypical presentations without traditional signs and did not improve appreciably with benzodiazepine administration. Nonetheless, benzodiazepine withdrawal may be a contributor to what we observed.

Summary

We recognize the rapidly emerging need to expand available options for managing opioid use disorder and hope that the case reports presented allow clinicians to recognize possible adverse effects of prescribing in certain populations and to adjust management to ensure patient safety and retention. Because we adjusted our own practices to reduce the use of high-dose hydromorphone at the first sign of opioid-induced neurotoxicity symptoms, further cases have not occurred.

Competing interests

None declared.

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The changing epidemiology of syphilis in BC

Rates of infectious syphilis in British Columbia have been steadily increasing over the past decade. In 2021, 1428 infectious syphilis cases were reported in BC (27.5 per 100 000 population, the highest on record in the last 40 years). Based on the number of reported cases in the first two quarters, infectious syphilis rates for 2022 are on track to be even higher.[1,2]

The majority of infectious syphilis cases in the past decade have been among gay, bisexual, and other men who have sex with men. However, the number and proportion of cases have been growing quickly among heterosexual populations in recent years. Currently, the majority of reported infectious syphilis cases occurred among non–gay, bisexual, and other men who have sex with men populations,[1] raising concern of increases in congenital syphilis.

Congenital syphilis is a severe, often debilitating, and potentially lethal infection that is the result of in utero transmission. Following zero reported cases of congenital syphilis in BC between 2014 and 2018, 12 cases of congenital syphilis, including 9 cases of early congenital syphilis,[3] were reported in BC from 2019 to 2022 quarter 2.[1] One resulted in stillbirth or neonatal loss.

Similarly, across Canada, infectious syphilis cases have risen by 124% from 2016 to 2020, and 50 congenital syphilis cases were reported in 2020.[4]

Syphilis screening recommendations

Syphilis clinical presentation, particularly secondary syphilis, can vary widely. Syphilis testing should be considered for all sexually active individuals presenting with new symptoms. Screening for syphilis and other sexually transmitted infections is recommended for individuals identifying risk factors, such as new sexual partners, or every 3–6 months for those with casual sexual partners.[5]

For pregnant individuals, syphilis screening is recommended in BC during the first trimester (or first prenatal visit) and at delivery (or anytime after week 35 for those planning home births).[5,6] Pregnant persons with ongoing risk, such as new sexual partners, transactional sex, illicit drug use, or unstable housing, should also be screened for syphilis at 28–32 weeks of pregnancy.[5]

People delivering a stillborn infant after 20 weeks' gestation should be screened for syphilis.[5]

Congenital syphilis

Infants born to individuals without prenatal care or with syphilis should be assessed for congenital syphilis. Syphilis should also be considered in the differential diagnosis for unwell neonates. For consultation, please call the on-call pediatric infectious disease physician at BC Children's Hospital (BCCH) at 604 875-2345. Outpatient follow-up of infants with probable or confirmed congenital syphilis is in partnership between local community pediatricians and the Oak Tree Clinic at BC Women's Hospital.

In the event of a stillbirth or neonatal death, pathologists at BCCH are available (604 875-2345) for consultation regarding confirmation of congenital syphilis.

Treatment

Intramuscular penicillin G benzathine is the recommended treatment for infectious syphilis, including in pregnant individuals. In the case of penicillin allergy, desensitization to penicillin is recommended. Sexual partners exposed in the previous 3 months should be tested and treated, as it can take up to 3 months for syphilis to be diagnosed by serology.[7] Infants with possible or confirmed congenital syphilis require treatment with intravenous penicillin for 10 days. For information about syphilis screening or treatment, contact the BCCDC public health nurse at 604 707-5607 or physician at 604 707-5610. ■

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WorkSafeBC and your patients with workplace injuries: Frequently asked questions

Q: How do I initiate a WorkSafeBC claim for a patient with an injury or disease I think might be related to the workplace?

A: Your initial examination and treatment start injured workers on the path to recovery. As the patient's physician, you are an important partner in that process. When your patient comes to you for initial treatment of a work-related injury or disease, fill out a Form 8. Please complete and submit the form as soon as possible after treating an injured worker for the first time; the sooner the claim is registered, the sooner your patient can receive applicable health care and wage loss benefits.

Physicians are reimbursed on a scale for Form 8/11 submission, which reflects the importance of your patient's ability to access benefits in a timely way. Reimbursement is highest if the form is submitted on the first day the injured worker is seen, with decreases each day after that. Physicians will not be reimbursed if the form is received by WorkSafeBC 6 business days or more after the injured worker is seen.

Please ask your patient if they have reported their injury to WorkSafeBC. If they haven't, remind them to call WorkSafeBC Teleclaim (604 231-8888 or 1 888 967-5377 toll-free).

Q: I am an emergency room physician. Should I submit a Form 8?

A: Yes. If you are seeing a patient with a workplace injury or you suspect a workplace injury or condition, please fill out and submit a Form 8.

Q: How do I know if my patient's claim has been accepted?

A: You can check an injured worker's claim status by using the claim status tool at https://pvc.online.worksafebc.com, calling the Teleclaim team (604 232-7787 or 1 866 244-6404 toll-free, Monday to Friday, 8 a.m. to 6 p.m.), or emailing hcsinqu@worksafebc.com.

Q: Can I speak to a medical advisor at WorkSafeBC about my patient's WorkSafeBC claim via the RACE line?

A: Yes. You can reach a medical advisor via the RACE app or call 604 696-2131 or 1 877 696-2131 toll-free. Physicians are available Monday to Friday, 8 a.m. to 5 p.m. We will call you back within 2 hours.

If your call is about your patient's claim, WorkSafeBC will be billed, so please use the unique physician fee code 19930; do not bill MSP.

Q: How do I bill the physician fee code 19930 for calls with WorkSafeBC?

A: The physician fee code 19930 is billable for telephone calls (including calls to the RACE line) to collaborate with other health care providers and WorkSafeBC case management team members involved in the care of injured workers.

This code is for consultation regarding a clinical issue for your patient with an active or pending WorkSafeBC claim; it is not for administrative billing.

The code applies to calls with a:

- WorkSafeBC medical advisor, board officer, or designate (e.g., case manager, return-to-work specialist).
- WorkSafeBC-sponsored treatment program physician or other program staff.
- Community physician involved in the care of an injured worker.
- Community allied health provider involved in the care of your patient (e.g., physiotherapist, occupational therapist, psychologist).
- Multidisciplinary team.

Q: Can I refer my patient with a workplace injury to the Visiting Specialist Clinic (VSC) at WorkSafeBC?

A: Community physicians cannot directly refer a patient to the VSC. If you would like your patient to be seen by a VSC specialist, please indicate this in the comments section on a Form 8/11 (or Form 8NP/11NP) and check the box to speak to a nurse or medical advisor so we become aware of your request and can follow up.

Patients with accepted WorkSafeBC claims can also be referred without authorization to specialists within the community for expedited consultations. The specialist seeing the injured worker for the injury accepted under the claim must use the fee code for expedited consultations.

Q: If my patient's claim is denied, why do I not receive a copy of the rationale?

A: Under the Freedom of Information and Protection of Privacy Act, WorkSafeBC cannot share information about workers with others without prior written consent. However, your patient may share claim decision information with you. ■

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

The importance of good documentation in an MSP audit

An article on this topic originally appeared in the November 2014 issue of the *BCMJ*. As this subject continues to pose a problem, the Patterns of Practice Committee decided to revisit the topic.

While physicians may view documentation of services as time-consuming, it is an important requirement of practice. In the process of a billing audit, the physician medical inspector and the Billing Integrity Program will base decisions primarily on the degree of documentation in a medical record.

The MSC Payment Schedule states that "a service for which an adequate medical record has not been recorded and retained is considered not to be complete and is not a benefit under the Plan" (Preamble A.2.vii.). It further defines the requirements of an adequate medical record (Preamble C.10) as follows:

> Except for referred 'diagnostic facility' services, a medical record is not considered adequate unless it contains all information which may be designated or implied in the MSC Payment Schedule for the service. Another medical practitioner of the same specialty, who is unfamiliar with both the patient and the attending medical practitioner, would be able to readily determine the following from that record at hand:
>
> a. Date and location of the service.
> b. Identification of the patient and the attending medical practitioner.
> c. Presenting complaint(s) and presenting symptoms and signs, including their history.
> d. All pertinent previous history including pertinent family history.
> e. The relevant results, both negative and positive, of a systematic enquiry pertinent to the patient's problem(s).
> f. Identification of the extent of the physical examination including pertinent positive and negative findings.
> g. Results of any investigations carried out during the encounter.
> h. Summation of the problem and plan of management.

Making and maintaining an adequate record of service is required to justify MSP claims.

Based on the documentation contained in the medical record, another physician should be able to readily provide continuity of care to a patient.

Making and maintaining an adequate record of service is required to justify MSP claims. In the event of an audit, medical inspectors look for documentation in patients' records to support that services were provided as claimed for all fee-for-service items. Some examples are:

- For fee items that are time based, start and end times may need to be documented in both the billing record and the chart, depending on the specific billing requirements. Medical inspectors assess this documentation to ensure that fee item criteria have been met.
- For fee items with detailed service provision requirements, such as General Practice Services Committee fee items for family physicians, all components of the service must be provided and documented to support that the service was completed in its entirety, including the provision of appropriate care for the duration of time the fee item indicates.
- For specialist advice fees and telephone fees, all components of the service must be documented as specified in the MSC Payment Schedule.

In the event of an audit, having little or no documentation in the medical records to support a claim or having records that are insufficient to support the nature and extent of the service being claimed may be adjudicated as the service not having been provided or the service not being considered a "benefit" or a billable service to MSP. ■

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This article is the opinion of the Patterns of Practice Committee and has not been peer reviewed by the BCMJ *Editorial Board. For further information contact Tara Hamilton, senior advisor, audit and billing, economics, advocacy and negotiations, at 604 638-6058 or thamilton@doctorsofbc.ca.*

Abbotsford, BC, 17 November 2021.

The impacts of flooding on health

Flooding is a seasonal hazard that many communities in the BC Interior encounter. It has become, and will likely continue to be, more frequent and more severe. Flooding affects not only health but also infrastructure and communities. Between 80% and 90% of all documented disasters from natural hazards in the last 10 years have resulted from floods, droughts, heat waves, and severe storms. The extreme conditions they generate are expected to increase due to climate change and will impact health.

Flooding impacts health directly, as well as indirectly through infrastructure and community disruption. Although young men are most at risk of mortality due to flooding, those most vulnerable to mental and physical effects are women, the elderly, and children.[1] Individuals affected by flooding are at least 5 times more likely to suffer from anxiety and depression. Those who experience disruption to utility infrastructure or increased floodwater depth have even higher odds of both outcomes.[2] Repeat flooding events lead to a higher prevalence of depression, quality-of-life measures such as chronic pain, and disrupted access to usual activities, with impacts persisting for multiple years.[3,4]

Our personal clinical experience from living in flooded areas has shown that although Canadians are often spared from the acute effects of flooding, such as death and injury, intermediate effects are pronounced, including impacts on underlying health conditions and damage to infrastructure; long-term effects include worsening mental health, poverty, displacement, and community change. Many individuals in flood-prone areas live in homes that are not insurable against flooding, with studies showing increased mental distress among the uninsured.[5] Flooding in Grand Forks in 2018 led to displacement of an entire neighborhood, further contributing to housing instability for many families. Individuals living there tended to be low income before the flood and after being displaced found themselves largely unable to secure reliable housing in a constricted housing market. In the severe 2021 flooding in Princeton, damage to vulnerable infrastructure resulted in evacuation of long-term care facilities due to inadequate heat as well as a multiweek hospital closure due to water damage. Loss of critical infrastructure, when it is most needed, is a serious health challenge.

Flooding tends to wash out vulnerable infrastructure, leaving both communities and citizens vulnerable. Lessening the future impacts on health, both direct and indirect, will require strengthening our national health emergency and disaster management capabilities and the resilience of our health systems. Municipalities are urged to prepare their communities to protect at-risk populated areas. Physicians might consider how to incorporate the impact of disasters such as flooding into the comprehensive assessment of their patients and their practice. A brief intervention that might include inquiring about a patient's social network (who might help you), advance preparation (what should you gather now, such as medications and a medical problem list), and planning (where could you go) has been shown to increase psychological readiness. There is an urgent need to build and deploy a disaster-resilient health system. Empowering patients to develop a personal pre-disaster plan, particularly those who are most vulnerable and most impacted, is important for managing health during a disaster. ■

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Obituaries

We welcome original tributes of less than 700 words; we may edit them for clarity and length. Obituaries may be emailed to journal@doctorsofbc.ca. Include birth and death dates, full name and name deceased was best known by, key hospital and professional affiliations, relevant biographical data, and a high-resolution head-and-shoulders photo.

Dr Bruce Fleming
1951–2022

Dr Bruce Fleming passed away on 18 July 2022 surrounded by his loving wife, Elizabeth Fleming; children, Andrew, Julia, and Kate Fleming; and daughter- and sons-in-law, Stephanie Schneider, Tim Jourdain, and Ehren Salazar. With Bruce's passing, British Columbia lost a brilliant medical educator, visionary administrator, and superb emergency physician.

Bruce obtained undergraduate and medical degrees from the University of British Columbia. Following graduation he completed a 2-year internship in Napier, New Zealand, where he perfected his medical craft while caring for the underserved. As planned, Bruce returned home to his beloved Vancouver, where he specialized in both family and emergency medicine. A gifted physician and educator, Bruce became a role model for multiple generations of physicians, receiving outstanding teacher and outstanding clinical teacher awards from fourth-year medical students and residents in emergency medicine at UBC.

As associate dean for student affairs at UBC from 1999 to 2007, Bruce spearheaded expansion of student services to all four provincial training sites. This groundbreaking work was successful because of his unique skills, which included common sense, hard work, charm, and honesty. In 2011 he became associate dean of admissions, where he directed MD undergraduate selection. In this role he brought integrity and transparency to the process of selection, elevating the priority for admission of Indigenous people. Bruce was greatly admired by his peers, and he received the Silver Anniversary Award at the recommendation of his UBC classmates for lifetime career accomplishments. In addition to his academic achievements, Bruce was a passionate ukulele picker and was talented at soccer, basketball, and water sports. He loved participating in athletic adventures with friends—it was always about elevating others and never about his own achievement.

Bruce was much more than the sum of his accomplishments—so much more. He was an extraordinary husband, father, grandfather (Cohen, Wallis, Ethan, and Lucas), and friend, whose spirit of warmth and empathy brought joy to many. Once you entered Bruce's circle you were an esteemed partner for life, and his loyalty and generosity were unparalleled. He traveled the world both for the university and for pleasure, and my trips with Bruce and his wife Liz remain among the most special moments in my life. That is what it was like to know Bruce Fleming, a man with extraordinary talent and extraordinary decency who made the world a better place.

—Bruce L. Miller, MD
San Francisco, CA

Dr John Harries Maxwell James
1928–2022

John sadly left this world on 2 October, very peacefully, after a short illness. He will be greatly mourned by his wife, Anne; sons, Richard (Joanna) and Edward (Nicole); daughters, Angela, Catherine (Gary), and Jacqueline (John); and 11 grandchildren and four great-grandchildren. He was predeceased by his first wife, Jennifer, and his surgeon son, David.

He was a proud Welshman, leaving the family farm at age 17 to study medicine at St. Mary's in London at the end of the Second World War. He often recounted the story of a V-bomb landing at the end of the street when he went down for his interview in 1945. One of his teachers was Sir Alexander Fleming of penicillin fame.

After completing his national service in the Royal Air Force, John worked as a GP in New Forest, Hampshire, where he was instrumental in establishing one of the first health centres

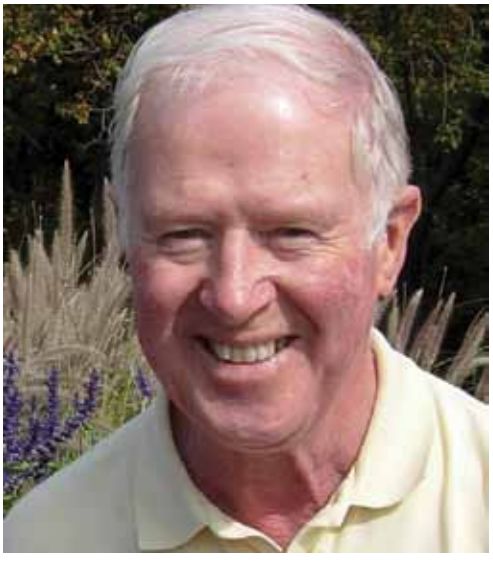
in the country (essentially the precursor of the primary care networks that BC health authorities are now trying to establish).

He became part of the "brain drain" in 1973 and, after successfully negotiating the LMCC, managed to join a well-established group practice in Oakridge, Vancouver, where he stayed for 20 years. He was on staff at Vancouver General Hospital and did many deliveries at the old Grace Hospital. He loved medicine, and many of his patients became friends. He worked until the age of 80 and even then was reluctant to retire! The latter years of his career were spent locuming.

John especially enjoyed his time in Port Alice and Sechelt, where he had a cabin on the seashore and a boat. He loved life and was an eternal optimist as well as being a great joke teller. He embraced life in BC to the fullest. His passions were boating; gardening; his winter getaway to Mismaloya, Mexico; and, true to his Welsh roots, music, family, and rugby.

He will be greatly missed—he was one of a kind, truly an all-rounder.

—Richard James, MD
Delta



Dr William George Vance Mitchell
1936–2022

It is with deep sadness that we announce the passing of our father, grandfather, brother, and uncle, Dr William George Vance Mitchell. Vance passed away peacefully on Thursday, 15 September 2022, surrounded by family.

Vance forged an 85-year-long trail of laughter, compassion, generosity, and wisdom. He will be dearly missed by his brothers, Alan (Marie) and Terry (Carol); his children, Ian (Erin), John (Sonja), and Natalie (Mike); his grandchildren, Jaime, Finley, Ben, Sean, Clovelly, and Emily (Dylan); and his great-granddaughter, Mana. He also leaves behind much-loved nieces and nephews.

Vance is reunited with his wife and favorite dance and golf partner, Christabel (Chris), and his sister, Joan, who preceded him in death. They loved him dearly and will never forget his wit, charm, grace, and tomfoolery.

Vance was born in Londonderry, Northern Ireland, on 26 September 1936. He and his family would summer in Portstewart, and he loved to share stories of his adventures there, including roller-skating, golfing, and general shenanigans. While studying medicine at Queen's University Belfast, Vance met Chris, a nurse in training; they married in 1963. Vance worked as a surgeon in Northern Ireland before immigrating to Canada in 1970 with three children under the age of 4. Vance spent 2 years at the University of Alberta Hospital in Edmonton before moving to Kamloops, where he completed his career at Royal Inland Hospital. He made many lifelong friends throughout his medical career. Vance retired in 1998, soon after moving to Sun Peaks, where Vance and Chris enjoyed life on the mountain. Vance stayed in Sun Peaks after Chris passed away in 2015 and was well supported by friends from the mountain.

Vance was many things to many people. He was a gifted surgeon; a loving husband and devout family man; a quiet, peaceful man; a funny, gregarious host; an avid sportsman; an impatient man; a patient man; an introvert; and an extrovert. He had a finely honed Irish sense of humor, which he passed on to his children, and loved to tell stories. Outside of the operating room, Vance enjoyed golfing and fishing (and tying flies), but his happiest times were with his family. Vance's family is warmed by memories of card games, family gatherings at Sun Peaks, and skiing at Tod Mountain.

Tremendous heartfelt thanks go to the compassionate and exceptional nurses and doctors at Royal Inland Hospital and Kamloops Hospice. And many thanks to his primary care aide, Rya, who provided much more than comfort to him; they shared so many laughs.

—Ian Mitchell, MD, FRCP(EM)
Kamloops

Dr Orest Ivan Porayko
1938–2022

Dr Orest Ivan Porayko, aka "Opey," "Opa," and "Uncle Chupy," died in his home next to his wife of 60 years on 30 September 2022.

Orest was born in Vegreville, Alberta, on 3 August 1938. He grew up in an austere household, the third youngest of 8 siblings. He excelled in academia and athletics, which led him to the University of Alberta, where he studied science and played college football.

Orest worked hard to get accepted to the U of A's medical school in 1959 and graduated with his MD in 1963. After an internship, he applied for a neurosurgical residency, and along with the grueling clinical work, he also completed his master's degree in surgery, with a research focus on spinal cord regeneration therapies.

Along the way, he met a beautiful young nurse from Moose Jaw named Marlene. They married in 1965. Three sons would soon follow (poor Marlene had to deal with far too many Y chromosomes in the Porayko household).

Shortly after completing his residency, Orest accepted a job at Royal Columbian Hospital in

New Westminster and settled into a house in Coquitlam. He treated thousands of grateful patients, some of whom I would come across in my own medical practice decades later. They would always tell me about his kindness and attention to detail.

Orest was a man of few words, and this, along with his stocky build, often intimidated people. His gruff facade belied a gentle, generous heart and a strong sense of ironic humor. He gave all the time he had to his family and very rarely indulged himself. As his children, we remember him showing up at weekend judo tournaments with his pager on his hip, massaging our shoulders before it was our turn to fight.

Until he became ill, Orest was very active. He loved his swimming pool, doing dozens of laps after work in the spring and summer. He played pickleball for endless hours. Well into his 70s, he skied down double black diamond runs at Whistler Blackcomb and often insisted on dragging his family up the hill to ski in all sorts of horrendous weather. He was extremely physically strong, which was helpful when he and Marlene bought property on Gambier Island Sea Ranch and pitched in with farm duties. He loved taking care of the animals on the farm and taking his dogs for long walks in the forest.

Orest was the protagonist in a story that is often ascribed to urban legend but is quite true. Around the turn of the century, he was hiking with his wife near Whistler when their dog ran onto the track as a passenger train approached. Orest ran onto the track and rescued the dog, but the train then hit him with full force. In the Whistler clinic, he walked the terrified general practitioner through the steps involved in placing the surgical chest tube he needed to survive the trip south, with his large hemopneumothorax and flail chest.

His left anterior descending coronary artery occluded when he was in his mid-70s, and he was physically never the same. It was a cruel irony that a neurosurgeon would acquire a non-surgical spinal cord disease that would progress relentlessly to paraplegia and then complete debility. He survived beyond all expectations until he was finally laid to rest.

He is survived by his wife, Marlene, and his sons, Lorne (Jennifer), Bryan (Shelly), and Richard (Tricia and Levi). He is also survived by his two sisters, Walley and Gracie, and his brother, Leighton. We miss him.

In lieu of flowers, please make a donation to the nonprofit organization Help Ukraine Vancouver Island. Visit https://ukrainehelpvi.ca/how-to-donate or scan the QR code below.

—Lorne David Porayko, MD, FRCPC, CIM
Victoria

Dr Marcia E. Prest
1952–2022

Dr Marcia Prest, beloved by so many, tragically passed away earlier this year after an illness. She was 69 years old.

Marce was born in Victoria. She obtained her BSc from the University of Waterloo and her medical degree from Queen's University, in 1979. Her 3 years of residency at downtown Toronto hospitals included medical forays to Moosonee and Moose Factory, as well as to England to train with Dame Sherlock. Marce then moved to Ottawa for 2 years of GI residency at Ottawa General Hospital and Ottawa Civic Hospital, and subsequently 4 years in practice at the National Defence Medical Centre.

In 1988, Marce opened her practice across the street from Surrey Memorial Hospital and was the city's first staff gastroenterologist. Marce's near constant presence was transformative for patient care in Surrey, as it meant that patients did not have to be transferred elsewhere for endoscopy, and no doubt countless lives were saved. Marce's tireless work and dedication cannot be overstated; many of us feel she was one of the hardest-working physicians we have ever met. The days were long, frequently spent working into the night, spanning 33 years, always at the service of the referring doctors and, of course, the patients.

What was truly special about Marce was this work ethic paired with kindness toward everyone she touched, whether patient, colleague, or friend. She went above and beyond for her patients, providing services for free (disability forms and the like), writing letters to advocate for them for social supports, and even treating one hepatology patient and their family every year to a hotel stay in downtown Vancouver with tickets to the Liver Ball. There are so many examples of her generosity over the years.

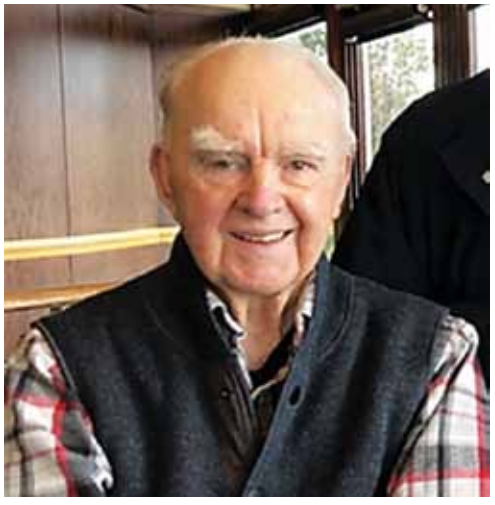
Marce was not just kind, but also poised, wise, and elegant. She reminded me of a blonde Audrey Hepburn. She was a beautiful force to behold in her element, whether it was standing next to the bedside of a patient and compassionately explaining their health challenges to them or seeing her with intensity in her sparkling blue eyes as she scoped an ICU patient and saved yet another life. Marce was, therefore, a popular gastroenterologist and was highly sought after in the Fraser Valley and beyond, regularly receiving referrals from across the province. She balanced her busy practice with a personal life full of varied interests—cooking classes, exercise classes, biking, skiing, French lessons, golf lessons, and gardening—and raising her two children.

Marce leaves behind her wonderful husband, David; their two children, Andrew and Samantha; her son-in-law, Brad; her two darling grandchildren, Rio and Dom; and countless friends and colleagues who loved her. She was adored by so many, and her passing is a tragic, massive loss.

I miss you so very much, Marce, and though I do not think I will ever recover from your loss, I was blessed to have you as a close friend, mentor, and work partner. As I walk through Surrey

Memorial Hospital, I think I can still hear your footsteps going *click click click* as you raced from patient to patient in those hallways, always a smile on your face. Rest in peace, dear Marce.

—Davinder K. Sandhu, MD
Surrey



Dr Gordon Bruce Thompson
1925–2022

It is with deep sadness that the Department of Surgery, University of British Columbia, announces the death of Dr Gordon Thompson, who, after a short illness, passed away peacefully at Royal Jubilee Hospital on 24 September 2022 at age 97. He was surrounded in his last hours by his loving family: his wife, Sally, of 62 years of marriage; his daughters, Tracey and Meg; and three grandsons, Oliver and Ethan Spratt and Calvin Cotton.

Gordon was born in Humboldt, Saskatchewan. After medical school at McGill University in Montreal, he undertook neurosurgical training at the world-leading Montreal Neurological Institute-Hospital under the influence of Dr Wilder Penfield and Dr William Vernon Cone, his tutor and his mentor, with whom he forged a special bond. In 1960, Gordon joined the neurosurgical staff at UBC and Vancouver General Hospital under the leadership of Dr Frank Turnbull, whom he succeeded as head in 1966. Until his retirement, Gordon served as head for an amazing 24 years (1966–1990). During his tenure he established the first neurosurgical training program at UBC in 1966, where he trained a myriad of successful duly certified neurosurgical trainees and recruited several colleagues to join and enlarge the division's expertise in functional, spinal, tumor, and neurovascular subspecialties. That legacy continues to this day.

Gordon himself excelled in complex spinal degenerative diseases and in the field of epilepsy surgery; with the help of epileptologist Dr Juhn Wada, he humbly achieved results comparable to the best world centres in the area of temporal lobe epilepsy.

Outside of the operating theatre, he served his specialty in the important roles of chief of the Royal College Neurosurgical Exam Committee for 10 years, head of the Canadian Neurosurgical Society for 2 years, and president of the Western Neurosurgical and North Pacific Neurosurgical Societies.

He was a generous and caring leader who treated his colleagues, residents, and nursing and neurorehabilitation staff with respect and support, sometimes even financial. He also loved entertaining them at joyful parties at his home.

His greatest joy, however, was his loving family: his wife, Sally; their three daughters, Tracey Thompson-Franson, Wendy Thompson (predeceased), and Meg Thompson; their husbands; and his three grandsons. On retirement, Gordon moved from Vancouver to Parksville for 18 years for the quiet community-involved life but moved to Victoria 4 years ago to be close to his immediate family.

Our dear colleague, friend, and mentor lived a long, full, productive life. A man of faith, may he rest peacefully. His legacy to us will endure, and he will be missed by all who knew him.

—Felix Durity, MD
Vancouver

Recently deceased physicians

July–October 2022

The following Doctors of BC members died between July and October 2022. Thank you to their families for sharing this information with the Membership Department. If you knew any of the deceased who have not yet had an obituary published in the *BCMJ*, please consider submitting a piece to journal@doctorsofbc.ca.

Dr Richard Lawrence Cone
8 March 1953–15 July 2022

Dr Kiri Joan Margaret Simms
24 April 1958–3 August 2022
Obituary: www.mccallgardens.com/obituaries/kiri-joan-margaret-simm

Dr James Brodie Cupples
1 October 1955–12 August 2022

Dr Lindsay Diana Rawling
10 May 1979–2 September 2022

Dr Robin Pearce Lowry
23 April 1947–4 September 2022
Obituary: www.tributearchive.com/obituaries/25832052/robin-pearce-lowry

Dr Gerald John Simkus
1 August 1956–30 September 2022
Obituary: https://vancouversunandprovince.remembering.ca/obituary/dr-gerald-simkus-1086519642

CME calendar

NEW: As of January 2023, CME calendar listings will be published only on the *BCMJ* website. They will no longer be published in print issues. Online listings are updated weekly. **Rates:** $75 for up to 1000 characters, plus GST, per month. **Deadline:** Every Thursday (listings are posted online every Friday). **Planning your CME listing:** We suggest that your ad be posted 2 to 4 months prior to the event. **Ordering:** Place your ad at www.bcmj.org/cme-advertising. Payment is accepted by Visa or Mastercard on our secure online payment site.

PSYCHOLOGICAL PPE, PEER SUPPORT BEYOND COVID-19

Online (every 2nd and 4th Wednesday)

In response to physician feedback, the Physician Health Program's drop-in online peer-support sessions, established in April 2020, are permanently scheduled for every second and fourth Wednesday at noon. The weekly sessions are cofacilitated by psychiatrist Dr Jennifer Russel and manager of clinical services Roxanne Joyce, and are drop-in with no commitment required. The focus is peer support, not psychiatric care. All participants have the option to join anonymously. To learn more about the sessions and the program, visit www.physicianhealth.com/how-we-can-help/peer-support. Email peer support@physicianhealth.com for the link to join by phone or video.

BOTOX AND FILLER COURSE—ANATOMY AND UNIVERSITY-LEVEL TRAINING

Online/Tsawwassen (monthly)

Did you know that botulinum toxin is the #1 facial rejuvenation procedure? Are you interested in adding Botox and other injectable treatments to your practice? PTIFA has an integrative curriculum that will train you to successfully incorporate botulinum toxin treatment into your practice. Through our anatomy-based training and PTIFA's proven clinical protocols, your practice will benefit from increased practice revenue, improved patient care and loyalty, and a highly engaged team. Learn both the therapeutic (migraines/headaches) and the aesthetic (fine facial lines and wrinkles) applications. PTIFA offers anatomy-based training (20+ hours) and training recognized by the highest standard of practice in Canada. Receive the most clinically

based training, including the opportunity to inject 8+ patients. Courses held monthly in Tsawwassen, BC. Start today with the online Level 1 – Advanced Anatomy course (20 CME). Save $500 using code "BCMJonline." Register now at PTIFA.com.

MINDFULNESS IN MEDICINE WORKSHOPS AND RETREATS
Multiple locations (Dec 2022–Mar 2023)

Join Dr Mark Sherman and your community of colleagues for a transformative workshop or retreat! The workshops focus on the theory and practice of mindfulness and meditation, reviewing definitions, clinical evidence, and neuroscience, and introducing key practices of self-compassion, breath work, and sitting meditation to nurture resilience and healing. Our meditation retreats are an opportunity to delve deeply into meditation practice in order to recharge, heal, and reconnect, and to build a practice for life. Workshops accredited for 16 Mainpro+ group learning credits. Heal Thyself: A Meditation Retreat for Physicians and Health Professionals, 1–6 December 2022 online and 23 February–5 March 2023 at Bethlehem Centre in Nanaimo. Foundations of Theory and Practice Workshop for Physicians and Their Partners, 20–23 January 2023 at Long Beach Lodge Resort in Tofino. Contact hello@livingthismoment.ca, or check out www.livingthismoment.ca/events for more information.

BCCDC

Continued from page 431

5. Public Health Agency of Canada. Syphilis guide: Screening and diagnostic testing. Updated 2022. Accessed 23 October 2022. www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/syphilis/screening-diagnostic-testing.html.
6. Perinatal Services BC. New recommendations for syphilis screening in pregnancy. Updated 3 September 2019. Accessed 23 October 2022. www.perinatalservicesbc.ca/about/news-stories/stories/new-recommendations-for-syphilis-screening.
7. BC Centre for Disease Control. British Columbia treatment guidelines: Sexually transmitted infections in adolescents and adults 2014. Accessed 23 October 2022. www.bccdc.ca/resource-gallery/Documents/Communicable-Disease-Manual/Chapter%205%20-%20STI/CPS_BC_STI_Treatment_Guidelines_20112014.pdf.

Classifieds

NEW PRICING: As of January 2023, there will be a two-tier pricing structure for classified ads. Advertisers have the option to run an ad online-only at our current monthly rates, or pay a $25 per-month surcharge for an ad to be included in a print issue as well as online. **Online rates:** Doctors of BC members: $50 + GST per month for each insertion of up to 350 characters. $75 + GST for insertions of 351 to 700 characters. Nonmembers: $60 + GST per month for each insertion of up to 350 characters. $90 + GST for insertions of 351 to 700 characters. **Deadlines:** Ads must be submitted or canceled by the first of the month preceding the month of publication, e.g., by 1 January for February publication. Visit www.bcmj.org/classified-advertising for more information. **Ordering:** Place your classified ad online at www.bcmj.org/classified-advertising. Payment is required at the time that you place the ad.

PRACTICES AVAILABLE

BURNABY—FULL-TIME FAMILY PRACTICE AVAILABLE

Organized, well-established family practice available. Med Access EMR; 12-year-old office building at PrimeCare Medical Centre with four FT and six PT colleagues and support of walk-in and urgent-care clinics. Obstetrics/hospital optional. Willing to consider part-time. Income split or 100% less overhead. Enquiries to ron.demarchi@primecaremed.ca or 604 520-3006.

KAMLOOPS—FAMILY PRACTICE AVAILABLE

Family practice opportunity in a spacious modern building in downtown Kamloops, with two exam rooms and natural lighting. Additional room with sterilizer and instruments for minor procedures. Option to do OB, in-hospital work, and long-term care. Office space available to lease. Ability to take over staff, attach new patients if wanted, and take over furniture and equipment. Telus Med Access EMR is currently in place and the practice is available to take over from 1 May 2023. Locum coverage can be provided for 4–8 weeks per year, for 3 years. For further information contact Matteo at 250 574-2299 or matteocat2@gmail.com.

KAMLOOPS—SOLO PRACTICE AVAILABLE FOR FAMILY PHYSICIAN

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.

EMPLOYMENT

ABBOTSFORD—PHYSICIAN OPPORTUNITY, PRIME LOCATION

Join a team of two family physicians at Omnicare Medical Clinic. 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 and earning in a prime location in Abbotsford. Six full exam rooms, one procedure room, and offices. High-end equipment. Oscar EMR. Contact Mohamed at 778 888-3747.

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! www.physiciansforyou.com.

BURNABY/SIMON FRASER UNIVERSITY—PSYCHIATRISTS NEEDED

Simon Fraser University's Health and Counselling Services is seeking part-time psychiatrists to join its multidisciplinary team providing services to domestic and international university students at the SFU Burnaby campus. Our mental health team includes physicians, mental health nurses, a transition case manager, case managers, psychologists, registered clinical counselors, and counseling interns. Compensation is provided via a combination of fee-for-service (MSP), sessional payments, and a service contract agreement. Applicants must have FRCPC and be eligible for full licensure with CPSBC. For further information please contact Gracia Hansma, email adassist@sfu.ca.

CALGARY—FAMILY PHYSICIAN

We have an exciting opening for a family physician and specialist physician to join our brand-new modern clinic. We have dedicated and well-trained staff to help our physicians. Our focus is to provide a patient-centred approach that is exceptional and optimal to our patients' well-being. We guarantee $650K-plus earning per year, as we offer many services, including third-party earnings. We provide facial rejuvenation, hair restoration, light therapy, OIS assessments, Nexplanon insertion, IUD insertion, and assessments for several embassy diplomats and agents. Our environment is stress free. Please contact our manager at 403 400-7787 or email info@santimedclinic.com.

GABRIOLA ISLAND—FP

Family practitioner wanted to join Gabriola Island's award-winning interdisciplinary clinic team. Benefits: furnished and equipped offices, subsidized rent, a three-bay urgent treatment room, visiting specialists, local ambulance services, a heliport, and a hospital close by in Nanaimo. Gabriola is a Gulf Island. Our population of 4500 enjoys a Mediterranean climate. We will help you secure suitable housing and acquaint you with our schools and amenities. Live, work, and play in a family-friendly community. Enjoy the benefits of a rural lifestyle and a

commuter ferry and seaplane connection to urban centres. Learn more at www.beourdoctor.ca.

LANTZVILLE—IMMEDIATE OPPORTUNITY FOR FT/PT FAMILY PHYSICIANS
The Sow's Ear Medical Clinic is looking for physicians to join our family practice. We are a busy multiphysician clinic with an on-site lab and adjoining pharmacy. This is a great opportunity to join an established clinic with a built-in patient panel or to start your own patient panel in a new location! The clinic is located in Lantzville, just outside of Nanaimo on Vancouver Island. This prime location means you can enjoy an oceanfront village feel with the comforts of big city amenities only minutes away. Multiple openings available: start your own practice immediately or take over an existing practice in June 2023. For more information, contact Vicky Smith at sowsear-docs@shaw.ca.

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.

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.

PORT COQUITLAM/WHITE ROCK—EXCELLENT OPPORTUNITY FOR FPS
MD Medical Clinic is looking for full-time or part-time family physicians for family practice and walk-in, in-person, and virtual care. Excellent administrative support (billing, scheduling, coordination). Two brand-new, modern, well-equipped clinics in the heart of Port Coquitlam and prestigious White Rock. Minimum income guarantee. Exciting signing bonus. Both clinics already have registered patients. For more information, call 236 516-3469 or email mdmedicalclinicbc@gmail.com. Visit our website at www.mdmedicalclinic.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/STEVESTON—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—FP
Family physician in Fleetwood looking for a part-time/full-time associate/locum with flexible hours. Busy family medicine clinic with mostly South Asian patients, and Oscar EMR. Well-equipped modern facility with four examination rooms and experienced staff. Punjabi speaking an asset. Call 604 585-9696 or email drsohal@shaw.ca.

VANCOUVER—EMPLOYMENT OPPORTUNITY
Family doctor wanted for a concierge model practice located in upper Kitsilano in Vancouver. Must be willing to practise slow-paced, thorough medicine. Income potential greater than $300 000. Starting bonus $40 000. Please email hnjames@telus.net.

VANCOUVER—FP/GYNECOLOGIST/PEDIATRICIAN/SPECIALIST, AND RMT
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1. Gilsanz V, Gibbons DT, Roe TF, et al. Vertebral bone density in children: Effect of puberty. Radiology 2017; 166:847-850.

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2. Mollison PL. Blood Transfusion in Clinical Medicine. Oxford, UK: Blackwell Scientific Publications; 2020. pp. 78-80.
3. O'Reilly RA. Vitamin K antagonists. In: Colman RW, Hirsh J, Marder VJ, et al. (eds). Hemostasis and Thrombosis. Philadelphia, PA: JB Lippincott Co; 2015. pp. 1367-1372.
4. Health Canada. Canadian STD Guidelines, 2021. Accessed 15 July 2021. www.hc-sc.gc.ca/hpb/lcdc/publicat/std98/index.html.

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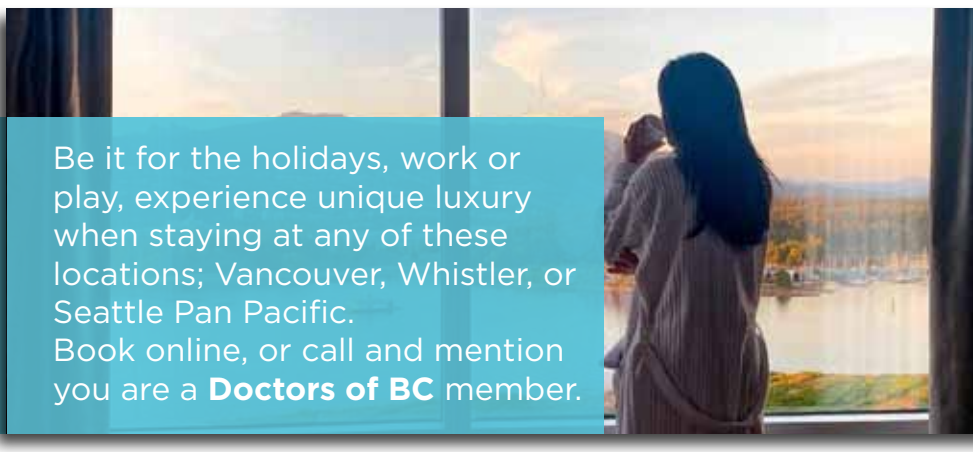

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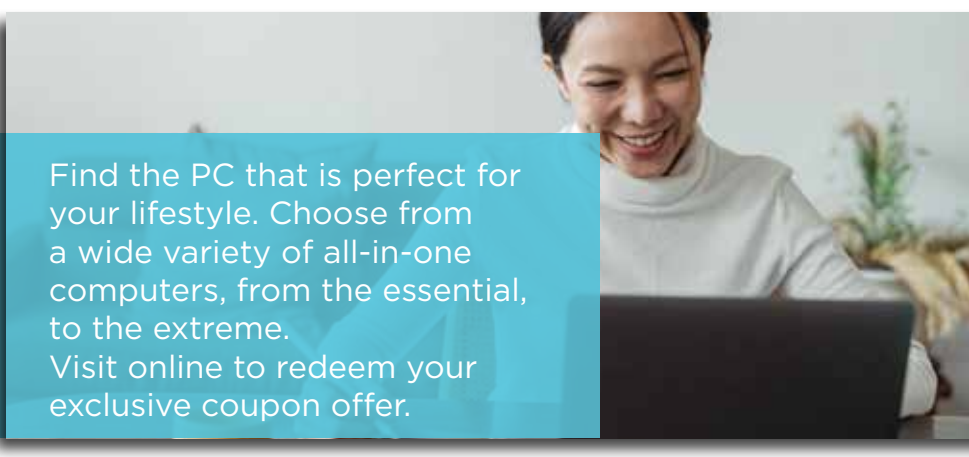

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