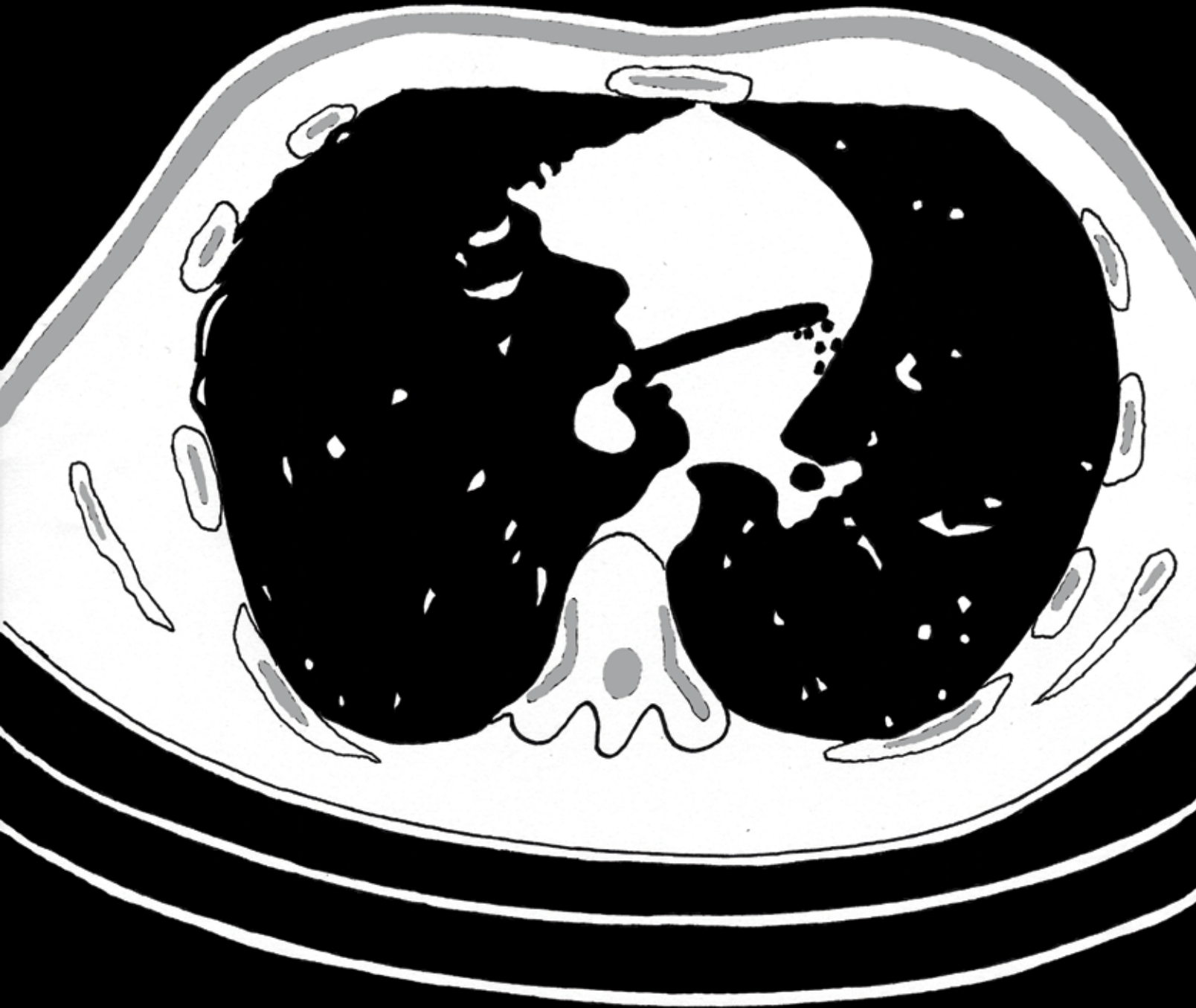


BCM J

BC Medical Journal

BC Cancer Lung Screening Program: Insights on a risk model–based approach



IN THIS ISSUE

The Foundry Work and Education Program: Vocational rehabilitation

Experiences of illicit opioid overdose survivors: Opioid epidemic to COVID-19 pandemic

Treating families and victims of missing and murdered Indigenous women and girls tragedies



A memorial to honor missing and murdered Indigenous women and girls painted across the steps of Robson Square in Vancouver, with the message: No more stolen sisters. BCMD2B article “Treating families and victims of missing and murdered Indigenous women and girls tragedies: Recommendations for physicians” starts on page 80.

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

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76 Editorials

- Menopause: Is the media going to set the record straight?
Caitlin Dunne, MD
- Acknowledging land and Earth
Cynthia Verchere, MD

78 Letters

- Re: Are vitamins a complete waste of money?
Rick Potter-Cogan, MB

79 President’s Comment

- We Are All Perfectly Fine
Joshua Greggain, MD

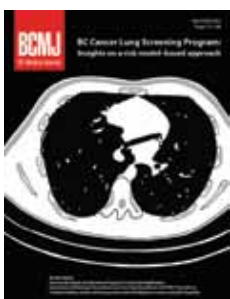
80 BCMD2B

- Treating families and victims of missing and murdered Indigenous women and girls tragedies: Recommendations for physicians
Samantha Gibbon, BSc

CLINICAL

84 BC Cancer Lung Screening Program: Insights on a risk model-based approach for primary care providers

- Stephen Lam, MD, Janette Sam, RT(R), Javis Lui, BA, Yue Zhang, MPH, John Mayo, MD



ON THE COVER

Low-dose computed tomography provides a cost-effective means of reducing lung cancer mortality in high-risk individuals. Article begins on page 84.

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The Foundry Work and Education Program provides critical mental health, education, training, and employment support to youth across BC. Article starts on page 88.

88 The Foundry Work and Education Program: A vocational rehabilitation program, Vivian W.L. Tsang, MD, Diana Alqutub, MPH, Matthew Wenger, MSc, Steve Mathias, MD, Skye Barbic, PhD

92 Special Feature
Experiences of illicit opioid overdose survivors: From opioid epidemic to COVID-19 pandemic, Amritpal Maniani, BSc, Justin M. Chan, MSc, Robert Shaw, MD

97 WorkSafeBC
Hand-arm vibration syndrome in the workplace
Shobhit Maruti, MD

100 BCCDC
Supporting BC youth at risk of drug poisoning from unregulated supply, Kali Sedgemore, Alexis Crabtree, MD, Blake Stitilis, MPH

101 College Library
Virtual care resources
Chris Vriesema-Magnuson

Looking for the News?

Our News section has moved online so that it can be more timely. Find it at bcmj.org/article-type/news.

102 Classifieds

105 Proust for Physicians
Dr Joshua Greggain, president, Doctors of BC

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Menopause: Is the media going to set the record straight?

According to Statistics Canada, there are over 5.3 million people in British Columbia,¹ and nearly one-quarter of them are women 45 years of age or older. This prompts the question: for a condition that affects nearly 1.3 million people in our province, why aren't we talking more about menopause?

When I teach UBC medical students about menopause, I emphasize that it is a physiological diagnosis. It is a normal process in the lives of people with ovaries, wherein egg supplies have been depleted, ovarian function declines, and estrogen production drops dramatically. I also emphasize, however, that physiologic does not mean painless. The symptoms that ensue in the absence of estrogen, such as hot flashes, mood changes, sleep disturbances, and genitourinary atrophy, can range from mildly troublesome for some women to totally debilitating for others.

In February 2023, the *New York Times* published an article titled “Women have been misled about menopause.”² The author, Susan Dominus, does an admirable job of summarizing women's silent suffering as a result of our society's reluctance to acknowledge and treat the symptoms of menopause. One of her sources, Dr Rachel Rubin, says it best: “Menopause has had the worst PR campaign in the history of the universe.”

Prior to 2002, hormone therapy was common. However, after the early termination of the Women's Health Initiative hormone therapy trial in 2002 and 2004, fears about hormone therapy hit the press, and the demand for prescriptions dropped dramatically.³⁻⁵ Of the risks described in the Women's Health Initiative trial (still the largest randomized controlled trial to date on hormone therapy), the one that has garnered the most enduring public attention is breast cancer. More specifically, in

the group of over 16 000 women that could be assigned to take conjugated estrogen and medroxyprogesterone acetate, those taking both hormones for longer than 5 years had a relative risk of 1.26 for developing breast cancer. As Dominus points out in her article, “[w]hat happened next was an exercise in poor communication that would have profound repercussions for decades to come.” When investigators declared that the trial was halted because invasive breast

The *New York Times* is, in fact, telling women what they need to know.

cancer increased by 26% in users of combined hormone therapy, it caught a lot of attention from patients and physicians alike. However, that relative risk statistic sounded much scarier than if one considered the absolute risk, which was eight additional breast cancers per 10 000 women years.^{3,4}

I am part of an online group for Canadian woman physicians in which a colleague recently posted about struggling with perimenopause. Vasomotor symptoms and dyspareunia were seriously affecting her work and her relationship with her partner. She polled the group to see if she should consider hormone therapy, asking whether the group thought it was safe. I was pleasantly surprised to see that replies were unanimously in support of hormone therapy. This tells me that the right information is out there and many physicians know about it; maybe some even read the two *BCMJ* articles on managing menopause in the October 2022 issue (insert winking emoji). The ongoing challenge is counseling our patients. As the *New York Times* article points out, the data on menopausal

hormone therapy are nuanced, and the risks versus benefits need to be individualized. Practitioners may struggle to find the time for a thorough discussion on menopausal symptoms, which can often involve addressing misinformation and talking through the data, or lack thereof, on various “natural” options that are heavily marketed to this population.

In 2019, Dr Timothy Rowe and I wrote a *BCMJ* editorial titled “New research on hormones and breast cancer: The headlines don't convey what women really need to know.”⁶ I must now happily eat my words and declare that the *New York Times* is, in fact, telling women what they need to know. I can only hope that a lot of women read it. ■

—Caitlin Dunne, MD

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Acknowledging land and Earth

Most of us are now familiar with land acknowledgments: statements made at the beginning of a meeting or event that acknowledge the people and nations who culturally and physically inhabited a territory prior to colonization. These offerings have increased significantly since the 2015 report of the Truth and Reconciliation Commission.

I vividly remember the first time I, a descendant of settlers, heard a land acknowledgement. In 2014, I was waiting for the start of a local play about the Militant Mothers of Raymur, who in 1971 camped on railway tracks until an overpass was built for their kids to use to cross the tracks to get to school. Many of the women were marginalized, directly affected by racism and/or the gender dismissal of the time. When a woman stood to address us, I initially thought she was part of the introduction to the play. She introduced herself and her Indigenous affiliation; then her soft words lodged themselves firmly in me. Hearing for the first time an unvarnished, irrefutable truth directly from someone affected left me with the discomfort of culpability and the knowledge that she had a right to ask for accountability.

Since then, I have heard many land acknowledgments, often rote or performative. Indigenous leadership asks us now to help evolve these into more meaningful structures of reconciliation—correctly pronouncing names of the people and the lands, sharing details of historical context and complexity, and not only acknowledging the past but also defining current relationships with Indigenous groups and committing to inclusivity and reflection of Indigenous interests.

Indigenous cultures openly acknowledge and protect the land and water on Earth. My office partner, Dr Doug Courtemanche,

an environmental activist for decades who walks the walk (read: bikes the bike, composts the compost), has set standards and examples for our group to follow, often crediting Indigenous knowledge. He recently presented excellent grand rounds about the climate emergency and what actions physicians can take. I asked his permission to amplify some of his most passionate points in this editorial.

Climate change is real, the science is not theoretical, and the climate emergency has already had more impact than predicted.

First, this is not a drill. Climate change is real, the science is not theoretical, and the climate emergency has already had more impact than predicted. Dr Courtemanche took care to pause several times during the talk to give us time to breathe and centre ourselves as we learned of inexorable changes related to carbon dioxide, water, microplastics, landslides, and extreme weather events.

Climate change *directly* impacts human health. The largest number of single-day deaths from any public health emergency in BC occurred on the day Lytton reached an all-time national record temperature of 49.6 °C in the heat dome of 2021. Famously, a patient was diagnosed with climate change in a Nelson emergency room. Despite sudden massive floods and atmospheric rivers, we were on track to have the driest year since records have been kept. Drought leads

to food and water insecurity, changes in vector and fish ecology, and agricultural collapse. Pollution and wildfire smoke directly worsen asthma and cardiovascular disease. Skin cancers are expected to increase. And climate anxiety, depression, suicide, and other mental health impacts are real and worrisome, especially in younger people.

In any emergency, physicians have agency and ethical obligations to engage and help to the best of our abilities. The climate emergency is a true public health emergency. It is frustrating that neither grassroots activism nor international organizations like the World Health Organization and United Nations have been able to create meaningful international government-level change. We, as physicians, are in a position to support planetary health.

Most Canadian doctors believe climate change is happening and are worried or *very* worried. Even when it feels like a tiny drop in a global bucket, change both in individual actions and at the health care system level can be effective.

Our family carbon footprints can be reduced by having fewer children, not using cars, curtailing air travel, and eating a more plant-based diet. Even partial reductions in these areas can help if enough of us participate.

Green committees in our hospitals and offices can implement reusable gowns, drapes, and equipment; more recycling and reprocessing; and fewer opened packages.

Canadian medical students have organized initiatives to integrate climate health into their curricula, and we can model green behavior for them. We can credibly inform climate debate, guide patients in green behaviors, and support more nontravel-based meetings for our education. We can read and recommend books focused on green and Indigenous traditions. We can vote and

EDITORIALS

invest responsibly and personally acknowledge stewardship of the land.

And some of us can amplify the message in an editorial. ■

—Cynthia Verchere, MD

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Letters to the editor

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Re: Are vitamins a complete waste of money?

In her January/February editorial, Dr Caitlin Dunne points out that there is no good evidence for adding vitamins or supplements to most people's diet [*BCMJ* 2023;65:4]. People are misled to believe there is a benefit and fall victim to the relentless power of advertising.

I would like to add a suggestion that we encourage adequate intake of omega-3 fatty acids from healthy food and not from proprietary products. Most of us already have good intake of omega-3 fatty acids from fish, oils, nuts, and vegetables, and we could suggest redirecting the high cost of these supplements to pay for wild fish and organic vegetables available from local

providers across BC to those who do not eat enough of these foods.

The vitamin and supplement industry, in my opinion, is an unnecessary and highly successful scam that wastes the precious income of too many people. People would be healthier with a better unsupplemented diet.

Finally, pelagic krill should be left in the ocean for natural predators, who deliver all the benefits to us when we eat wild fish. There is a risk of overfishing krill in Antarctica, which could further advance the demise of wild fish stocks. Humanity should do better than to cause that completely unnecessary loss.

—Rick Potter-Cogan, MB BCh BAO
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We Are All Perfectly Fine

Recently, I taught the CARE [Comprehensive Approach to Rural Emergencies] Course, along with several longtime friends and colleagues. This course shares and encourages emergency room skills and teachings alongside physicians, nurses, and paramedics in rural communities, with some iterations taught to groups of residents and international medical graduates. It is an intense weekend and, simultaneously, is very engaging. I haven't had the opportunity to teach the course often over the last year, so I made a commitment to myself to be present and involved. However, for a multitude of reasons, I wasn't quite my usual self—something noticed by a friend. Yet when asked how I was doing, my response was something like “I'm fine,” even though I wasn't.

While I don't recall the totality of our conversations from that weekend, I undoubtedly referenced losing a colleague in the preceding weeks, a series of evolving situations I was dealing with professionally, and the swath of meetings I'd been a part of. And since we have been friends for a long time, I likely also shared ongoing challenges of balancing work and life that we all face in our profession. Whatever I said, verbally or nonverbally, it was enough for my friend to bring me a book titled *We Are All Perfectly Fine*, by Dr Jillian Horton. It tells the story of an internist who attends a meditation retreat for burned-out doctors and, after learning the stories of the other physicians in attendance, finds a path forward to wellness. It recounts several physicians' stories of “their secret guilt and grief, as well as their deep-seated fear

of falling short of the expectations that define them.”

In hindsight, I realize that by giving me that book, my friend was checking up and checking in on me, through both word and deed. It was powerful, empathetic, and compassionate. But unlike the satirical title

When we step away from our clinics, our call groups, our night shifts, or pare down some of our patients, we carry inordinate guilt about the feeling that we are falling short. But falling short of what?

of the book, we are *not* all perfectly fine. Generally, we *want* to be fine, if not perfect. We want to be good physicians, good partners, good spouses, good parents, good pet owners, and even good neighbors. Yet we don't always extend ourselves the same compassion that we show to others in similar contexts.

“My wellness is not your wellness” is a thought I have heard shared in our profession, yet I understand that our collective wellness is critical to our overall sustainability. What I do for my well-being is likely not the same as what you do for yours. Whereas I enjoy a hike outdoors and try to spend at least 30 minutes in nature each day, others may enjoy reading a book curled up with their favorite pet or their child(ren). I was

in awe of a group of physicians who gathered to pray collectively as a way to ground themselves before the day began. Others I know meditate to decompress. What each of us does for our own wellness is an individual choice, but the act of checking in on your friends and colleagues is critical.

At times, we are not able to see the blind spots when it comes to our own wellness. But if we don't identify them, then we can become unsustainable, both as people and as professionals. When we step away from our clinics, our call groups, our night shifts, or pare down some of our patients, we carry inordinate guilt about the feeling that we are falling short. But falling short of what? Self-imposed expectations, I suppose. If we could extend the same compassion to ourselves that we extend to our patients and loved ones, then I believe that our burdens would be lighter and our sustainability more robust. If only we could lean into, and sometimes lean onto, one another to check in and check up.

Sometimes we simply need to give each other a moment of rest, lean into our compassion, and release each other from our collective burden, much like my friend did when she offered me that book, knowing full well I was not perfectly fine. ■

—Joshua Greggain, MD
Doctors of BC President

Treating families and victims of missing and murdered Indigenous women and girls tragedies: Recommendations for physicians

The murder and disappearance of hundreds of Indigenous women and girls in Canada is a national tragedy; here, an Indigenous medical student discusses health care through the lens of two well-known reports and offers practical tools and recommendations BC physicians can use to make health care safer for Indigenous patients.

Samantha Gibbon, BSc

Positionality statement

During my first year of medical school at the University of British Columbia, an Indigenous youth went missing on the streets of Amiskwaciy Waskahikan (Edmonton). As a Nehiyaw (Cree) and Otipemisiwak (Métis) Indigenous youth worker, I worked as an Indigenous liaison in an Edmonton school district by creating spaces and opportunities for our sacred Indigenous youth, and I worked with this particular missing youth for an extended time as a traditional “auntie,” advocating for them in their education while providing cultural and spiritual experiences. Upon their disappearance, we—their community and their family—were at a complete loss as to their well-being. After a taxing

series of search parties, posters, fundraising, and media coverage (and lack thereof), our sacred youth was found living but not well. What resulted for them and their family was a multiyear process of custody, ownership, financial burden, and ultimately failing and fractured health. My role throughout the experience was that of distressed and helpless bystander; throughout the search and the subsequent consequences, I was terrified for the lives of those involved. I struggled with the threat not only that the youth might become a statistic of the missing and murdered Indigenous women and girls (MMIWG) (and men and boys) tragedies, but that their family would fall victim to the mental, emotional, physical, and spiritual harm that I have witnessed during the fallout of these tragedies. Since then, this youth and their family truly have become statistics of tragedy, their health marred by the trauma of the situation and its proceedings.

As I continued to integrate into the world of Western medicine in the UBC Southern Medical Program, I was strongly compelled by my experience to advocate for the wellness of victims such as my sacred youth and their family. I saw a gap in the intended holistic care we provide for Indigenous patients and their families.

I witnessed several health concerns in my Indigenous community members that directly stemmed from their MMIWG tragedy experience, including posttraumatic stress disorder, suicidality, depression, and eating disorders.

After careful review of the literature and guidance from my ever-growing mentorship from Indigenous physicians and allied health care workers, recommendations for physicians were born [Box 1]. These recommendations invite physicians to enrich their care and enhance their approach to providing necessary health services to the Indigenous population that has been affected by the MMIWG tragedies. The recommendations are actionable and direct, and they are accompanied by a list of relevant terms [Box 2] and patient resources [Box 3] designed to provide physicians with a supplement to the care they provide to Indigenous people in British Columbia.

As I near the end of my training as a medical student, I see a need for cultural support for our fellow BC physicians as the pressures of providing care for more and more patients with increasingly complex needs rise. I hope this article supports you in your goals to provide more deeply informed and holistic care to my Indigenous brothers and sisters.

Samantha Erron Gibbon is a Nehiyaw (Cree) and Otipemisiwak (Métis) iskwew who hails from Edmonton, Alberta. She completed her undergraduate degree at the University of Alberta and is currently completing the third year of her medical degree in the UBC Southern Medical Program. She enjoys spending time with her daughter and participating in traditional crafting and dance.

This article has been peer reviewed.

Two reports on Indigenous health issues: Problems and solutions

Two reports—*Reclaiming Power and Place: The Final Report of the National Inquiry into Missing and Murdered Indigenous Women and Girls* and *In Plain Sight: Addressing Indigenous-specific Racism and*

Discrimination in BC Health Care—make it clear that there is a great need for strategies to address the specific health needs of Indigenous people affected by the MMIWG tragedies.^{1,2} It is important to note that it is not only women and girls that are affected by the MMIWG tragedies; men, boys,

and nonbinary, queer, trans, Two Spirit, and gender-nonconforming people are affected as well. The health outcomes of Indigenous people affected by these tragedies are undetermined by a combination of a violent systemic colonial history and suboptimal cultural-safety education. Indigenous needs

BOX 1. Recommendations for physicians.

- Approach, acknowledge, and treat medical hesitancy with grace and compassion. Many Indigenous people may be nervous or frightened to see a doctor due to a historical legacy of trauma and adverse medical experiences.
- Acknowledge that traditional Indigenous cultural and medicinal practices may be the primary source of healing; Western medicine may come second.
- Consider having Indigenous-focused resources on hand, including 24-hour resources. Advise patients when to seek emergent and urgent care at hospitals and urgent care centres.
- Consider making an infographic with contact information for patients about professionals in your area.
- Learn the names of the nations on which your practice resides and have local language-based resources available when possible (<https://native-land.ca>).
- Clearly communicate your availability and work hours. Provide options and alternatives for 24-hour care [Box 3].
- Describe the full scope of your practice. If you can provide psychiatric care as a primary care physician, for example, or if you need to refer to another professional, be clear about the process for referral and that professional's role.
- Continue to practise empathy for the unique experience of missing family/community members.
- Stay updated on your patients' missing family/friend/community member's cases. If your patients volunteer updated information, make note of it.
- Advocate, when possible, for acute aid/intervention (often with local police/RCMP) in missing person's cases if that hasn't happened yet and your patients desire help.
- Acknowledge that you may be the first point of contact outside patients' friends or family following new developments in a missing person's case.
- Acknowledge that gender and sexual identity play a large role in Indigenous-based violence. Know and understand terms and dynamics that 2SLGBTQIA Indigenous people experience [Box 2].
- Familiarize yourself with the resources and services the First Nations Health Authority provides for Indigenous people in BC. Understand the difference between Status, Non-Status, Métis, and Inuit and how these identities influence government- and health authority-funded care.
- Consider taking the University of Alberta's free online course, Indigenous Canada (www.ualberta.ca/admissions-programs/online-courses/indigenous-canada/index.html).
- Read the fact sheet on MMIWG in Canada and familiarize yourself with the inquiry (www.nwac.ca/wp-content/uploads/2015/05/Fact_Sheet_Missing_and_Murdered_Aboriginal_Women_and_Girls.pdf).

BOX 2. Definitions of relevant terms.

2SLGBTQIA: An umbrella term for people who are Two Spirit, lesbian, gay, bisexual, trans, queer, questioning, intersex, or asexual (<https://sharedhealthmb.ca/wp-content/uploads/Pronouns-2SLGBTQIA-Health-Care-Leading-Practice-Guide-v2.pdf>).

Gender-based violence: Harmful acts directed at an individual based on their gender. It is rooted in gender inequality, the abuse of power, and harmful norms. It is estimated that one in three women will experience sexual or physical violence in their lifetime.³

Historical and intergenerational trauma: Occurs when trauma caused by historical oppression is passed down through generations. As generations of Indigenous children left the residential school system, impacts of their institutionalization continue to be felt by subsequent generations.^{4,5}

National Inquiry into Missing and Murdered Indigenous Women and Girls: The National Inquiry's final report (2019) reveals that persistent and deliberate human and Indigenous rights violations and abuses are the root cause of Canada's staggering rates of violence against Indigenous women, girls, and 2SLGBTQIA people. The two-volume report calls for transformative legal and social changes to resolve the crisis that has devastated Indigenous communities across the country. Testimony from family members and survivors of violence spoke about a surrounding context marked by multigenerational and intergenerational trauma and marginalization in the form of poverty, insecure housing or homelessness, and barriers to education, employment, health care, and cultural support.²

Trans: An umbrella term for people whose gender identity doesn't fit with societal expectations. Members of this group might use the words transgender, transsexual, transitioned, genderqueer, or Two Spirit to describe themselves. Transgender people are those who are biologically male, female, or intersex but feel like a member of the opposite or another sex.⁶

Trauma-informed care: Trauma is often closely tied to substance use, mental illness, stigma, barriers to health care access, and other challenges. Trauma-informed care means recognizing this link and making sure people feel safe and are not retraumatized by their care.²

Two-Eyed Seeing: Refers to learning to see from one eye with the strengths of Indigenous knowledge and ways of knowing and from the other eye with the strengths of Western knowledge and ways of knowing—then learning to use both eyes together, for the benefit of all.⁷

Two Spirit: A translation of the Anishinaabemowin term *niizh manidoowag*, referring to a person who embodies both a masculine and feminine spirit. Two Spirit is used by some Indigenous people to describe their gender, sexual, and spiritual identity.⁸

may be better served by improving health care providers' understanding of how to safely and efficiently provide care.¹ As the number of both documented and undocumented missing and murdered Indigenous people climbs through the thousands, it is crucial that physicians have necessary resources available.

Many Indigenous patients are affected by the MMIWG tragedies because of the structure and function of traditional Indigenous kinship and communities. Although a patient may not be directly tied to a victim, these tragedies affect whole Indigenous communities. Special care may also be extended to survivors who were once a missing person themselves and are in need of trauma-informed, safe medical care.

Reclaiming Power and Place report and recommendations

The *Reclaiming Power and Place* report focuses on testimonies from families and friends of missing individuals in Canada by sharing the findings of the truth-gathering process.² Section 2 of the report addresses encountering oppression and proposes an approach that defines a right to culture, a right to health, a right to security, and a right to justice. It describes how the federal government's approach to health programs and services for Indigenous people does not enforce any statutory or treaty obligations to provide health services for First Nations or Métis people.³ Based on several Indigenous witnesses' descriptions of the failings of Canadian health care,² I believe that health care providers' unfamiliarity with traditional and holistic elements of Indigenous well-being plays an instrumental role in the discrepancies in health outcomes for families.

Reclaiming Power and Place also identifies that implicit discrimination violates one of the fundamental principles of human rights and often lies at the root of poor health status;² it then urges that barriers to health and well-being, such as lack of trauma-informed care for Indigenous people, should never be considered normal.² Because there are not enough financial supports and sustainable funding

models to encourage Indigenous individuals to enter into health and wellness fields,² non-Indigenous physicians may respond to these deficits by practising informed and compassionate care. Although non-Indigenous physicians practising informed care may not replace the need for Indigenous physicians, I believe it is instrumental in easing the implicit discrimination that exists in the current standard of Indigenous care in Canada.

In Plain Sight report and recommendations

The *In Plain Sight* report conducted an Indigenous Peoples' survey that examined stereotyping and racism, discrimination at the point of care, decreased access to health care, and poor outcomes in British Columbia hospitals.¹ In total, 2780 Indigenous people responded to the survey;¹ 20% of

all respondents "do not trust health care workers,"¹ and 19% "always receive poorer service than others."¹ Only 27% "always felt like their needs were taken seriously," as compared to the 59% of non-Indigenous respondents who "felt that their needs were always taken seriously."¹ The report references specific poor outcomes that Indigenous people face in BC, including higher suicidation, higher levels of stress, reduced life expectancy, increased rates of chronic disease, and higher infant mortality.¹ Suicidation is a term used in the report; it encompasses suicidal ideation, suicidal thoughts, and suicide attempts. I believe these findings may be extrapolated to the context of family, friends, and communities affected by the MMIWG tragedy, a group of individuals who are undoubtedly faced with a high burden of stress and mental health comorbidities. The recommendations included in **Box 1**

BOX 3. Patient resources.

BC Crisis Centre	https://crisiscentre.bc.ca Toll free: 1 800 SUICIDE (1 800 784-2433) (24 hour)
Centre for Suicide Prevention Information, research, and links to national distress websites.	www.suicideinfo.ca
First Nations Health Authority Health Benefits Program Information about First Nations Health Authority health benefits in BC.	www.fnha.ca/benefits/about-us
Hope for Wellness Helpline Hotline and online chat. Languages spoken: English, French, Cree, Ojibway, and Inuktitut.	https://hopeforwellness.ca/home.html Toll-free: 1 855 242-3310 (24 hour)
KUU-US Crisis Line Society Indigenous-specific 24/7 crisis line based in Port Alberni, serving all of BC.	www.kuu-uscrisisline.com Toll-free: 1 800 588-8717 Youth line: 250 723-2040 Adult line: 250 723-4050
310 Mental Health Support Provides empowering emotional support, information on appropriate referral options, and a wide range of support relating to mental health concerns.	www.wellbeing.gov.bc.ca/resource/310-mental-health-support 310-6789 (no area code needed) (24 hour)
Trans Lifeline Not-for-profit dedicated to the well-being of transgender people. Free help line run by volunteers.	www.translifeline.org Toll-free: 1 877 330-6366
Youth in BC Connecting youth with support, information, and resources.	www.youthinbc.com Toll-free in BC: 1 866 661-3311 (24 hour)

may be used by physicians to improve the reliability and trustworthiness experienced by their patients by fostering an environment of care and understanding.

The recommendations of the *In Plain Sight* report almost exclusively call for administrative and governing systems to make changes that will trickle down to individualized care provided by specialists and primary care physicians.¹ Until these higher-level recommendations are enacted, physicians are left to their own devices to initiate change and begin to challenge their workspaces. Many physicians may feel compelled to transform their practices to even further facilitate the unique needs of their Indigenous patients affected by the MMIWG tragedies.

A word of hope

Physicians may feel discouraged that so many of the implicit issues in the health care system depend on redesigning system-level approaches to Indigenous health care.

I hope these recommendations instead serve as a starting point for those who are motivated by the inequities and driven by the need to provide trauma-informed, safe, and directed care for a systemically disadvantaged group. ■

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BOLD ACTION BY THE CMA

Stephen Lam, MD, FRCPC, Janette Sam, RT(R), Javis Lui, BA, Yue Zhang, MPH,
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BC Cancer Lung Screening Program: Insights on a risk model-based approach for primary care providers

Low-dose computed tomography provides a cost-effective means of reducing lung cancer mortality in high-risk individuals.

ABSTRACT: Lung cancer continues to be the most common cause of cancer death in Canada. Population-based lung cancer screening using low-dose computed tomography is a cost-effective means of reducing lung cancer mortality in high-risk individuals between 55 and 74 years of age who have ever smoked. Screening is provided by the BC Cancer Lung Screening Program. The downside of screening includes false-positive results, overdiagnosis, and exposure to ionizing radiation. The current screening policy in BC is based on a 6-year lung cancer risk score greater than 1.5% using the PLCom2012 risk prediction tool. The Pan-Canadian Early Detection of Lung Cancer

lung nodule malignancy prediction tool and volumetric measurement using computer-assisted diagnostic technology are used in the management of screening low-dose computed tomography findings. Primary care providers can use the information provided in this article and other resources on the BC Cancer Screening website to share decision making with their patients about enrollment in the screening program.

Lung cancer is the most commonly diagnosed cancer and the leading cause of cancer deaths in Canada and worldwide.¹ In British Columbia, an average of seven people die of lung cancer every day; in Canada, more people die from lung cancer than from breast, colon, and pancreatic cancers combined.² Approximately 72% of lung cancers are attributable to smoking, which creates an opportunity for targeted screening for lung cancer.³ Randomized clinical trials in the US and Europe showed a 20% to 39% reduction in lung cancer mortality using low-dose computed tomography screening compared with usual care or screening with chest X-ray.⁴⁻⁶ Screening works through downstaging—the process of finding lung cancers at an earlier stage, when patients are more likely to benefit from curative treatments and have an improved long-term quality of life. Approximately 40%

of lung cancer cases are diagnosed at stage 4, when the 5-year survival rate is less than 10%.⁷ However, when lung cancers are diagnosed at stage 1, the 5-year survival rate is between 73% and 90%; hence the importance of screening.⁷ In 2013, the US Preventive Services Task Force recommended annual screening for individuals 55 to 80 years of age who currently smoked or had quit within the last 15 years and had a smoking history of 30 or more pack-years.⁸ The Centers for Medicare & Medicaid Services have provided reimbursement for low-dose computed tomography screening in the US since 2014.⁹ In 2016, the Canadian Task Force on Preventive Health Care recommended annual low-dose computed tomography screening in people 55 to 74 years of age who currently smoked or had quit within the last 15 years and had a smoking history of 30 or more pack-years.¹⁰ In 2021, the US Preventive Services Task Force updated the lung cancer screening guideline to reduce the lower age limit to 50 years and the number of pack-years to 20 or more to address disparity in sex and race (B recommendation, moderate net benefit).¹¹ The Canadian Task Force on Preventive Health Care is in the process of updating its guideline. In September 2020, based on the strength of evidence and health economic analyses,^{12,13} the BC Ministry of Health announced the

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implementation of the first provincial lung screening program in Canada. In May 2022, the BC Cancer Lung Screening Program began conducting low-dose computed tomography screening. Ontario Health has also implemented an organized lung screening program.¹⁴ Pilot implementation programs are ongoing in Quebec and Alberta. Business case proposals are being submitted by several other provinces.

Risk model–based approach to lung screening

Lung screening is unique in that it targets a specific portion of the population that is considered to be high risk. Its purpose is to maximize the benefits and avoid unnecessary harms of screening for those who have a lower risk of lung cancer.¹⁵ For example, data from the National Lung Screening Trial showed that if the 6-year lung cancer risk is less than 0.64%, low-dose computed tomography screening does not reduce lung cancer mortality compared with screening with chest X-ray.¹⁶ Therefore, lung cancer screening is not recommended for everyone 55 years of age and older.

In BC, Ontario, and Quebec, screening eligibility is determined based on an individual's calculated lung cancer risk, using the PLCOm2012 risk stratification model.¹⁷ An overview of the PLCOm2012 risk stratification tool, the reasons for its selection, and the predictors involved is presented below.

PLCOm2012 risk stratification tool

The risk factors used in the PLCOm2012 risk stratification tool are shown in the **Box**. A 6-year lung cancer risk score greater than 1.5% is required to participate in the screening program. This threshold is based on the International Lung Screening Trial, which included people between 55 and 80 years of age who had ever smoked and had a PLCOm2012 6-year lung cancer risk greater than 1.5% or who met the 2013 US Preventive Services Task Force age and pack-years criteria.¹⁸ The PLCOm2012 prediction tool was shown to be 15.8% more sensitive than the 2013 US Preventive Services Task Force criteria,

and the positive predictive value was significantly higher (4.0% vs 3.4%, $P = .01$).¹⁸ Of those deemed ineligible for lung screening based on the PLCOm2012 or US Preventive Services Task Force criteria, lung cancer developed in 0.50% versus 0.85%, respectively ($P < .001$).¹⁸ Other studies in Canada and several countries around the world also showed that the PLCOm2012 prediction tool had higher sensitivity and negative predictive value than the US Preventive Services Task Force criteria, more lung cancers deaths were averted, more life-years were gained, and the tool was more cost-effective.^{13,16,19}

Female smokers typically accumulate fewer pack-years than male smokers. Age and pack-years criteria underestimate lung cancer risk in females. Compared with non-Indigenous people, Indigenous people have a higher risk of lung cancer despite smoking less tobacco.²⁰ The PLCOm2012 race model removes race/ethnicity disparity and reduces sex disparity more than the 2021 US Preventive Services Task Force screening criteria.^{18,21,22} The 2021 US Preventive Services Task Force criteria also exclude those who have stopped smoking for more than 15 years. A meta-analysis showed that the reducible relative risk after smoking cessation declines only marginally from 26.7% (95% CI, 20.2–34.3) after 15 years to 19.7% (95% CI, 13.3–26.4) at 20 years.²³ The duration of smoking cessation is not an exclusion criterion in the PLCOm2012. In people who have stopped smoking, low-dose computed tomography screening is one of the best options for reducing the risk of dying from lung cancer.³ Additionally, when using the PLCOm2012 to determine screening eligibility, screening can be prioritized according to individual risk scores, with the highest-scoring individuals being offered screening first. This is particularly beneficial when low-dose computed tomography resources are limited, such as during the COVID-19 pandemic.²⁴

Personalizing screening interval

A unique feature of the BC Cancer Lung Screening Program is the use of the Pan-

BOX. PLCOm2012 predictors.¹⁷

The PLCOm2012 model incorporates lung cancer risks based on demographic, environmental, and clinical risk factors, including:

- Age
- Education (proxy for socioeconomic status)
- Family history of lung cancer
- Body mass index
- Chronic obstructive pulmonary disease
- Smoking duration
- Smoking intensity
- Smoking quit time (if any)
- Personal history of cancer
- Race or ethnicity

Canadian Early Detection of Lung Cancer (PanCan) lung nodule malignancy risk prediction tool^{25,26} to personalize the screening interval after the baseline low-dose computed tomography has been conducted. The Canadian Agency for Drugs and Technologies in Health reviewed the diagnostic test accuracy of the PanCan versus the Lung Imaging Reporting and Data System²⁷ nodule management protocol. The PanCan protocol had significantly better specificity and positive predictive value in six studies and had similar diagnostic test accuracy in three studies: a case-control study, a study that included only subsolid nodules, and a study with a small sample size.²⁸ A prospective study conducted in Vancouver as part of the International Lung Screening Trial²⁹ confirmed that the PanCan protocol had a significantly higher sensitivity and positive predictive value than the Lung Imaging Reporting and Data System or NELSON³⁰ management protocols. The International Lung Screening Trial protocol is the only one that has a biennial screening provision for lower-risk individuals, which comprise approximately two-thirds of the screening population.³⁰ This management protocol can significantly reduce health care resource use, costs, and cumulative radiation exposure. In subsequent screenings, growth of existing lung nodules and appearance of new nodules are important indicators for malignancy risk.^{31–33} BC screening sites are equipped with state-of-the-art computer-assisted

diagnostic tools that accurately and consistently measure lung nodule volume and growth. A structured reporting system minimizes potential harms of screening, such as unnecessary diagnostic biopsy or surgery for false-positive findings; reduces overdiagnosis and overtreatment; and minimizes radiation exposure from additional imaging studies.¹⁵ A rapid referral process to a regional diagnostic workup team for patients with findings that suggest malignancy facilitates timely diagnosis and treatment.

Role of primary care providers

Primary care providers play an important role in identifying patients who would benefit from lung cancer screening and encouraging them to participate [Figure]. Primary care providers are provided with tear-off pads to give to individuals who are between 55 and 74 years of age and have ever smoked for 20 years or more to encourage them to call the BC Cancer Lung Screening Program (1 877 717-5864) and complete a detailed risk assessment with the screening

centre navigators to confirm their eligibility. A fax referral form may also be used for any patient the primary care provider thinks may experience barriers to self-referral (e.g., language barrier, screening hesitancy).

Twenty years or more of smoking is used to simplify messaging because the duration of smoking is a major risk factor for lung cancer.³⁴ The Lung Screening Program navigators administer the PLCOm2012 risk assessment tool to determine screening eligibility, a process that takes, on average, 10 minutes. The navigators, who are trained in smoking cessation counseling, also provide telephone counseling and education material on smoking cessation. For those who are still actively smoking, quitting can double the benefits of screening in reducing lung cancer mortality and all-cause mortality.³⁵⁻³⁷ Primary care providers will be asked to prescribe pharmacotherapy such as varenicline, which has been shown to significantly improve the smoking cessation rate when combined with telephone counseling.³⁸

Incidental findings in the thyroid, heart, lung, kidneys, adrenals, and liver are common in lung cancer screening.³¹ Findings of severe coronary calcification, for example, can trigger important lifestyle and risk management discussions in those patients. A guide to managing common incidental findings is provided in the low-dose computed tomography screening report to the primary care provider. A provider guide for health care professionals, and other resource materials, can be accessed via the BC Cancer Screening website (www.bccancer.bc.ca/screening/health-professionals/lung/resources).

Summary

Lung cancer continues to be the most common cause of cancer deaths in Canada and worldwide. Population-based lung cancer screening using low-dose computed tomography is a cost-effective means of reducing lung cancer mortality in those who are at high risk of lung cancer. We encourage primary care providers to use the information we have provided and other resources on

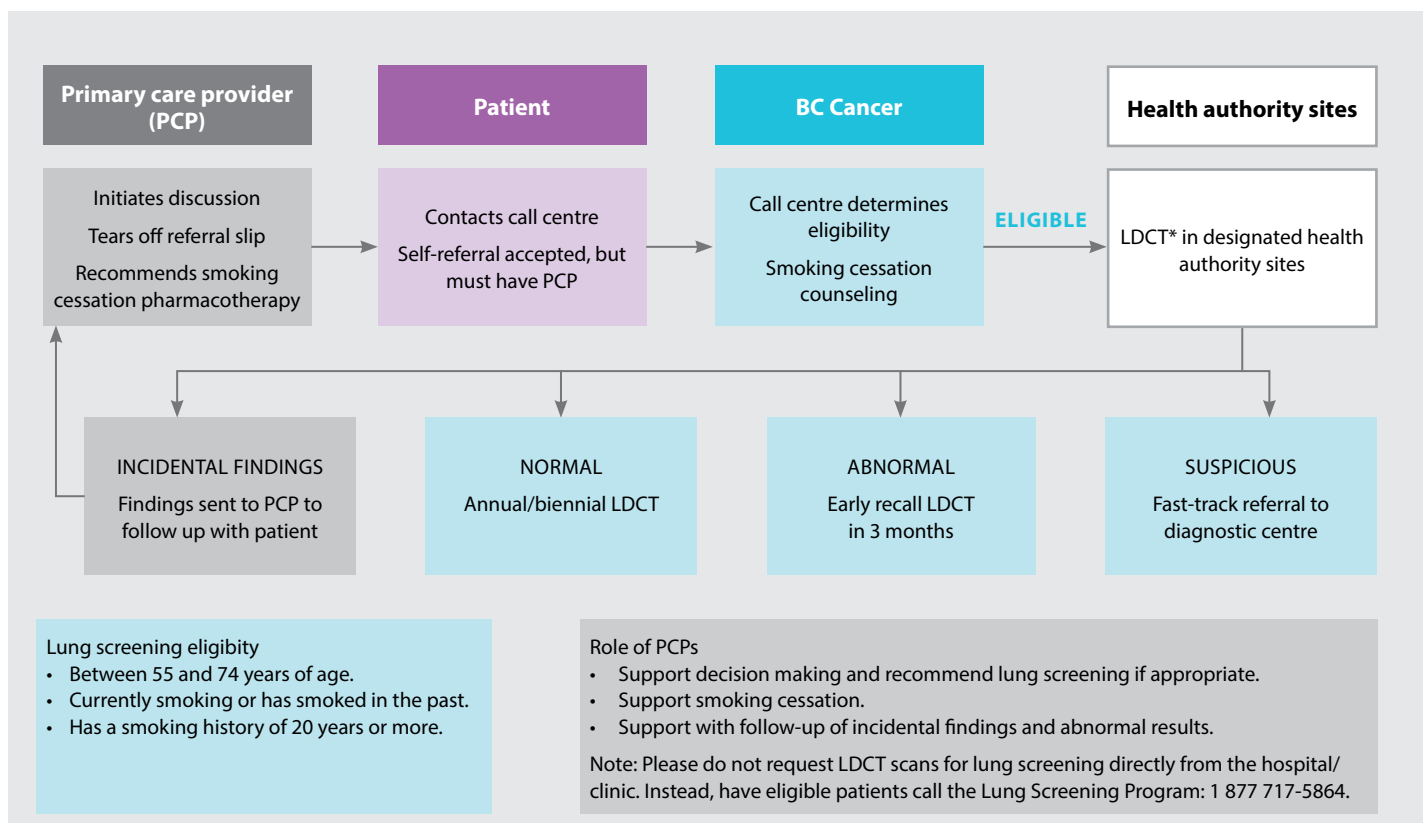


FIGURE. BC Cancer Lung Screening Program flowchart.

*LDCT = low-dose computed tomography

the BC Cancer Screening website to share decision making with their patients about enrollment in the screening program. Lung cancer screening policy in BC will evolve through research, critical review of emerging evidence, internal system performance review, and outcome evaluation. ■

Competing interests

None declared.

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Vivian W.L. Tsang, MD, MGC, Diana Alqutub, MPH, Matthew Wenger, MSc, Steve Mathias, MD, FRCPC, Skye Barbic, PhD

The Foundry Work and Education Program: A vocational rehabilitation program

The Foundry Work and Education Program provides critical mental health, education, training, and employment support to youth across BC.

ABSTRACT: In BC, one in four young people live with a mental health or substance use disorder that impairs their functioning. Current gaps in care include lack of support for youth in areas such as poverty reduction, employment, education, and housing. In 2021, 13% of young people in BC aged 15 to 29 years were not involved in education, employment, or training. A promising solution is vocational rehabilitation, where patients build tangible skills and focus on career training as a form of treatment. Foundry is a BC-wide network of integrated health and wellness services for youth aged 12 to 24 years and their families or caregivers. The Foundry Work and Education Program began in 2015 as part of a \$15 000 pilot project. The program used an individual placement and support model of employment, an evidence-based model shown to be effective across 28 randomized controlled trials. To

date, 92 of the 273 youth who participated in the program have secured and maintained competitive employment, and 7 have returned to school to complete their GED or pursue post-secondary education. The program has been developing partnerships, building community, and reducing systemic barriers and discrimination faced by young people. It is critical that further research and funding be provided to expand and replicate similar programs for all Canadians.

The burden of disease related to mental health disorders has increased in Canada, especially during periods of transition.¹ Most recently, the importance of mental health has come to the forefront as the psychiatric consequences of the COVID-19 pandemic are seen in Canada. Substance use rates have skyrocketed, and the number of deaths from the drug toxicity crisis in some provinces, such as British Columbia, outweigh the number of deaths from COVID-19.²

While standard treatments for substance use disorders in Canada (as illustrated by the Canadian Centre on Substance Use and Addiction and Health Canada's Substance Use and Addictions Program) focus primarily on medical interventions such as opioid agonist therapies, deaths related to substance use have continued to increase.^{3,4}

Between January and December 2021, 7560 people died from opioid-related toxicity in Canada.⁵

Gaps in mental health care affect youth

Mental health concerns affect young people disproportionately. In BC, one in four young people live with a mental health or substance use disorder that impairs their functioning.⁶ Furthermore, in 2021, 13% of young people aged 15 to 29 years were not in education, employment, or training.⁷ Due to the lack of socioeconomic considerations regarding available treatment paradigms, our most vulnerable youth wrestle with continued unemployment, unchanged social circumstances, and homelessness.⁸ Current gaps in care include the lack of consideration for supporting youth in domains such as poverty reduction, employment, education, and housing. A larger focus must be placed on “psychosocial, rehabilitation and aftercare services,” as described in Indicator 3.5.1 of the United Nations Sustainable Development Goals.⁹

A promising solution is vocational rehabilitation, where patients build tangible skills and focus on career training as a form of treatment.¹⁰ Community employment opportunities and career support result in changes to a person's socioeconomic status

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over time. The Foundry Work and Education Program creates outpatient employment support that re-engages young people who are experiencing mental health, substance use, and other complex challenges, with the goal of attaining a better quality of life in BC.

Foundry Work and Education Program

Foundry is a BC-wide network of integrated health and wellness services for youth aged 12 to 24 years and their families or caregivers. Foundry's walk-in-oriented model allows youth and caregivers to access support without a referral. Once a young person is connected to a centre, the Foundry team works with them and their caregiver to understand their needs and help them access the specific services they require. Core services include mental health care, substance use services, physical and sexual health care, youth and family peer supports, and social services. Some examples are individual, family, and group interventions; gender-affirming care; vocational and school supports; and leisure and social wellness programs. As of March 2023, there were 14 physical Foundry centres across BC [Figure], and free resources and appointments were available virtually through the Foundry BC mobile app. Foundry has more than 140 partners and is operated by Providence Health Care; its online platform is powered by BC Children's Hospital. Between 2018 and 2021, 23 749 youth were served, and more than 110 145 services were provided.

The Foundry Work and Education Program began in 2015. As part of a \$15 000 pilot project, a 16-week work and study program was conducted at Foundry's first centre. Nine out of 10 youth graduated from the program, and they all found employment or study opportunities within 6 weeks of graduating.¹¹ The program used an individual placement and support model of employment, an evidence-based model shown to be effective across 28 randomized controlled trials.^{12,13} In 2016, the program was expanded through a partnership with

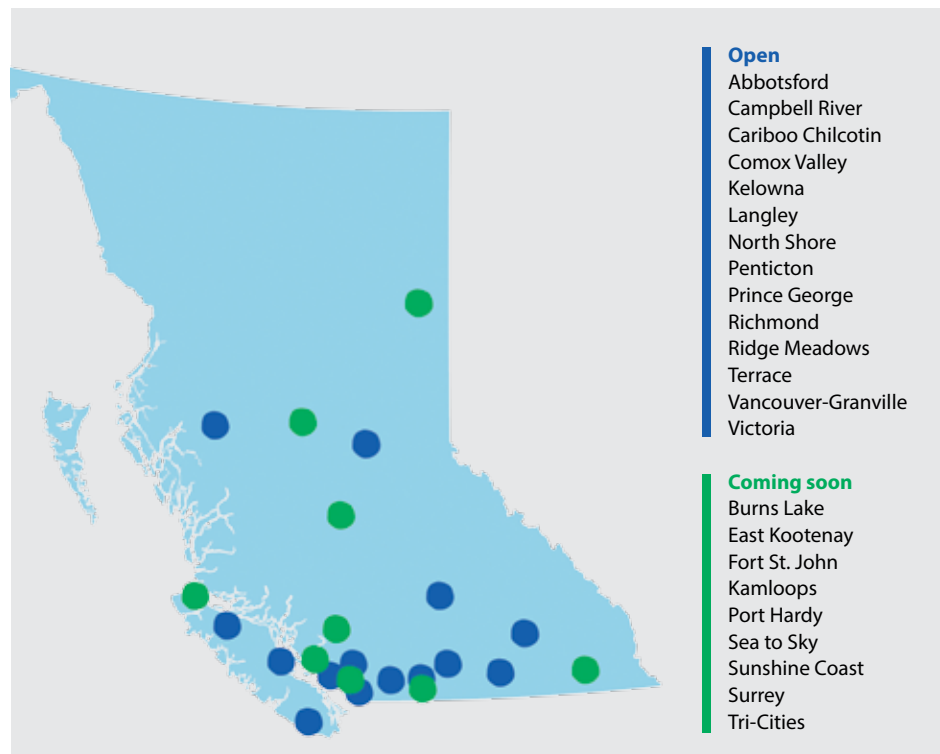


FIGURE. Locations of Foundry centres in BC.

the YMCA of Greater Vancouver to deliver supported employment programming. The 43 youth who completed the program reported improvements in their mental health, quality of life, functional status, and safety. In addition, 74% of those youth were able to find meaningful employment within 11 weeks of graduating from the program.¹¹ With funding from the Canadian Institutes of Health Research, this model continued for 3 years, and a total of 168 young people were served. In subsequent years, funding from Service Canada and the BC Ministry of Social Development and Poverty Reduction allowed for the official establishment and expansion of the program across the centres and virtual care. Currently, the program is funded by Service Canada and the BC Ministry of Social Development and Poverty Reduction. The research arm of the program is funded partly by the Future Skills Centre through the Centre for Addiction and Mental Health.

Each centre has two providers who carry, on average, 20 youth per caseload at a time.

With support from the Foundry Central Office, the specialists evaluate the program, ensure that fidelity to the individual placement and support model is achieved, and allow communities to come together to share innovation. Additionally, in partnership with the Centre for Addiction and Mental Health, Douglas Mental Health University Institute, and the University of British Columbia, a pan-Canadian study on the effect of this model within integrated services is being conducted.

Participation in the program

There are both internal and external pathways for participation in the Foundry Work and Education Program. Internally, Foundry staff who work in other services within the organization can refer youth to the program. Externally, eligible youth can access a virtual intake form on the Foundry website or access the service by walking in, emailing, or calling their local Foundry centre. For youth or caregivers who require more help to connect with the Foundry centre,

health professionals are invited to call or visit the centre with the youth or caregiver to provide a more supported experience.

Any young person who enters a Foundry centre is provided with a “not in employment, education, or training” screening. Those who answer “no” to being in school or work, demonstrate interest in the program, and are not currently enrolled in a different employment program will receive direction from a Foundry Work and Education Program specialist regarding the next steps. The young person is then provided with information about the structure, supports, and mutual expectations of the program. The youth is asked about their specific goals and interests and is asked to provide personal information and the necessary documents for enrollment in the program. They are also invited to participate in a provincial and national study.

A youth who was enrolled in the Foundry Work and Education Program described their situation prior to entering the program: “I was unaware of what to expect . . . although I did have a general plan, I was lost in my situation due to a lot of uncertainty and did not know what to do next.” Foundry offers a place for youth to come for help when faced with unideal or changing life circumstances and tenuous social supports.

The Foundry Work and Education Program offers career and education supports that are tailored to the youth’s unique needs and goals, which are identified through a rapport-building period and guided by the completion of a career and study profile. An individualized support plan is then generated, which includes career and education coaching sessions, skill-building workshops, and involvement of the integrated health team. Foundry Work and Education Program specialists adapt their approach to meet each youth’s needs, and they use a variety of communication methods, such as text and email, to share opportunities and resources with youth in the program. Coaching sessions include offering supports and tools for managing social, mental, or physical health concerns, and explaining job development services. Over the course

of weekly sessions with the participant (the number of sessions is determined by the participant), topics such as motivation to work, barriers to education and training, work experience, strengths and talents, necessary accommodations, preferred employment, and other support needs are discussed.

A participant in the program stated: “Each session, I came in with an issue. [A Foundry Work and Education Program specialist] helped me organize my thoughts and worked together with me to prioritize tasks for goals that best aligned with my values and needs.”

Employment skills and wellness workshops include topics such as résumé building, job searching, coping strategies, interview skills, and preparing for workplace challenges. Foundry centres can also propose additional workshops depending on the needs of the youth in their local community. Program participants are encouraged to attend these workshops to complement their individual coaching sessions and promote peer learning.

The youth who provided the previous quote also stated: “Not only did [the Foundry Work and Education Program specialist] help with the emotional side, but [they also] provided assistance with my other needs, which had a strong effect on my emotions: job search, tailoring résumé, understanding of a specific job market, understanding and brainstorming possible options, weighing pros and cons for different situations, etc.”

Guided by the individual placement and support model, Foundry Work and Education Program specialists also engage in discussions with employers and hold meetings to review participants, share insights with interdisciplinary care team members, and discuss operational and administrative program needs. Help with educational opportunities such as additional certificate training and continuing formal education are also provided.

Foundry centres offer a range of health and social services to any young person aged 12 to 24 years, as well as supports and services for their parents, caregivers, and/or other family members. All centres deliver

free, nonjudgmental, strength-based services in a youth-friendly space. Youth can drop in to talk to someone or to get support from a care provider, which can include peer support workers, counselors, physicians, nurse practitioners, and other allied health members. No referral is required. Physicians can connect youth directly to a centre. A complete list of operating centres, including their address and contact information, is provided on the Find a Foundry Centre web page (<https://foundrybc.ca/get-support/find-a-centre>) and in the Table.

For young people and caregivers who cannot conveniently access a centre or who would prefer a virtual service experience, Foundry Virtual BC is available (<https://foundrybc.ca/virtual>). Again, no referral is required. Young people and their caregivers can access the service directly to schedule a virtual counseling appointment, find peer support, access primary care, get support with employment, access virtual groups and workshops, or browse the library of tools and resources. To do so, the Foundry BC app can be downloaded or accessed through a browser.

More information about Foundry BC and access to online mental health and wellness resources is provided at <https://foundrybc.ca>.

Program outcomes

To date, 92 of the 273 youth who have participated in the Foundry Work and Education Program have secured and maintained competitive employment, and 7 have returned to school to complete their GED or pursue postsecondary education.

A youth shared their thoughts on their journey through the program: “I find that my situation overall has improved greatly. The main problem I came in with has been solved. I was able to get a job in the field that I wanted with [the Foundry Work and Education Program specialist]’s assistance. My mental state improved, and I have been given skills to maintain/improve further. I find that previous occurrences of uncontrollable high emotions are much more manageable and occur less often, if any at all.

TABLE. Foundry's provincial services.

Centre	Address	Contact
Abbotsford	101-32555 Simon Ave., Abbotsford, BC V2T 4Y2	604 746-3392 info@foundryabbotsford.ca
Campbell River	140 10th Ave., Campbell River, BC V9W 4E3	250 286-0611 mail@jhsni.bc.ca
Cariboo Chilcotin	51 4th Ave. South, Williams Lake, BC V2G 1J6	250 398-2185 mfranklin@ccchild.org
Comox Valley	575 10th St., Courtenay, BC V9N 1P9	250 338-7341 mail@jhsni.bc.ca
Kelowna	100-1815 Kirschner Rd., Kelowna, BC V1Y 4N7	236 420-2803 foundrykelowna@cmha.bc.ca
Langley	20616 Eastleigh Cres., Langley, BC V3A 4C4	604 546-2700 Foundry@encompass-supports.com
North Shore (North and West Vancouver)	211 W. 1st St., North Vancouver, BC V7M 0E3	604 984-5060 foundrynorthshore@vch.ca
Penticton	501 Main St., Penticton, BC V2A 5C6	778 646-2292 FoundryPenticton@OneSkyCommunity.com
Prince George	1148 7th Ave., Prince George, BC V2L 5G6	236 423-1571 foundry@nbc.ymca.ca
Richmond	101-5811 Cooney Rd., Richmond, BC V6X 3M1	604 674-0550 FoundryRichmond@vch.ca
Ridge Meadows	2-22932 Lougheed Hwy., Maple Ridge, BC V2X 2W2	604 380-3133 foundry@comservice.bc.ca
Terrace	101-3219 Eby St., Terrace, BC V8G 4R3	250 635-5596 foundryterraceinfo@tdcss.ca
Vancouver Granville	1260 Granville St., Vancouver, BC V6Z 1M4	604 806-9415 icymhp@providencehealth.bc.ca
Victoria	818 Douglas St., Victoria, BC V8W 2B6	250 383-3552 frontdesk@foundryvictoria.ca

I am grateful that the 1:1 sessions with [the Foundry Work and Education Program specialist] and the CBT [cognitive-behavioral therapy] group heavily focused to provide their services in a supportive and nurturing environment. I took my understanding of CBT from the group sessions and advice from the 1:1 sessions to share with someone close to me. This also allowed me to review content I went over in Foundry.”

As the first organization to bring supported employment and education services to youth across BC in an integrated health setting, Foundry has achieved a significant milestone. This work has resulted in many vulnerable youth receiving support with their work, education, and training goals

in a way that was previously unavailable. In combination with other Foundry services, this approach to integrated health and social services is changing the trajectory of their lives. Further, the Foundry Work and Education Program has been changing communities by developing partnerships, building community, and reducing systemic barriers and discrimination faced by young people. For these reasons, the Foundry Work and Education Program has become the cornerstone of Foundry's social service stream and is critical to supporting youth employment, education, and training across BC. ■

Competing interests

None declared.

Acknowledgments

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Experiences of illicit opioid overdose survivors: From opioid epidemic to COVID-19 pandemic

This qualitative study suggests that people who use illicit opioid drugs rely on their support community to stay alive, and that the COVID-19 pandemic may have eroded that network.

Amritpal Maniani, BSc, Justin M. Chan, MSc, Robert Shaw, MD

ABSTRACT

Background: British Columbia continues to experience an overwhelming burden of opioid overdose, exacerbated by the COVID-19 pandemic beginning in 2019. We aimed to determine the experiences of opioid overdose survivors and identify contributors, including the pandemic, in the increasing incidence of opioid overdoses.

Methods: We recruited opioid overdose survivors from the Fraser Health region to participate in semi-structured interviews. Interviews were recorded, transcribed, and analyzed thematically.

Results: A difficult childhood and mental illness were the two most common themes among participants. Other themes included awareness of risk, with 60% of participants having more than three overdose events and no participants

overdosing alone. The most common reported impact of COVID was reduced access to support groups.

Conclusions: Opioid overdose has increased dramatically during the COVID pandemic and may be driven by increased isolation in a cohort that relies on using with others to mitigate the risks of overdose.

The term *opioid crisis* originally referred to the overprescription of opioids in the United States beginning in the early 1990s; however, modern usage refers to the dramatic spike of opioid overdoses and opioid-related deaths beginning approximately in 2013.¹ In 2016, opioid-related deaths were highest in Canada and the United States at 85 and 131 per million inhabitants, respectively, compared with 26 per million inhabitants across all OECD countries.² In Canada, the opioid crisis has affected all regions nationwide, with the highest incidence of opioid-related deaths and hospitalizations occurring in Western provinces.^{3,4} Increased deaths from illicit drug overdoses were paired with the appearance of fentanyl-laced drugs in illicit Canadian drug markets and the surge of Chinese-manufactured fentanyl, including the ultrapotent analog carfentanil.

Despite multipronged interventions, including public education and distribution of over 1 million take-home naloxone kits,⁵ illicit drug toxicity deaths nearly doubled

from 985 in 2019 to 1724 in 2020, making them more lethal than car crashes, suicide, and homicide combined.⁶ This dramatic rise was likely also driven by the effects of the COVID-19 pandemic, as the average monthly illicit overdose deaths more than doubled from 82 in 2019 to 210 as of 31 January 2023.⁶ A coordinated effort by the BC Centre for Disease Control and the BC Ministry of Health has led to the creation of the Provincial Overdose Cohort, which includes linked administrative data on health care use. While these robust databases delineate where and how many drug overdoses take place, not much is known about the contextual circumstances that explain why they are occurring. It is in this context that we undertook to interview survivors of opioid overdose in the Fraser Health region to record their stories, how they grew up, what led them to take illicit drugs, and their experiences of opioid overdose prior to and during the COVID pandemic. This included contextual data (whether they took drugs alone, the type of drugs taken, and the frequency and location of drug use).

Methods

Research team

The research team included an internal medicine consultant and clinical faculty member at the University of British Columbia (R.S.), an epidemiological consultant (J.C.), and an undergraduate student

Mr Maniani is a BSc graduate from the Department of Microbiology and Immunology at the University of British Columbia. Mr Chan is a PhD candidate in the Experimental Medicine Program at UBC. Dr Shaw is an internal medicine consultant at Delta Hospital and a clinical assistant professor in the Department of Medicine at UBC.

This article has been peer reviewed.

(A.M.). All three participated in the interviews and performed data analysis, including interpretation and manuscript writing, and all are males. Training included completion of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans—TCPS CORE-2022 Course on Research Ethics.

Participant recruitment

Residents of the Fraser Health region who had experienced at least one overdose event since 2015 and were 18 years of age or older at the time of the overdose met the inclusion criteria and were recruited into the study between December 2020 and May 2021. Access to appropriate videoconferencing technology was also required to participate. Recruitment flyers were posted in hospitals and regional clinics. Regional community action teams were also contacted, informed of our study, and asked to share recruitment details. Participants freely contacted our team, after which we screened for the inclusion criteria and proceeded with informed consent and the goals and reasons for undergoing this research as appropriate.

Interview procedures

A semi-structured interview was performed where participants were invited to share their overdose experience. The interviewers (A.M., R.S., and J.C.) asked open-ended questions related to three broad categories: opioid and opioid overdose knowledge, medication history, and personal story. Participants were initially asked about their upbringing and exposure to drugs. Next, they were asked to share details about their overdose experience and details surrounding their knowledge of opioid use. Last, they were asked to share any experience with prescribed opioids and whether that played any role in their overdose. Participants were also asked to share their experiences on the impact that COVID has had on the opioid overdose epidemic. All 10 interviews were audio recorded and transcribed. Interviews were conducted once and ranged in length from 25 minutes to 76 minutes (with an average of 43 minutes). The interviews were

conducted using Zoom software (version 5.4.6 [59296.1207]). At the end of each interview, the participant received a cash honorarium.

Data analysis

All interviews were audio recorded and transcribed verbatim by Google Recorder in offline mode without field notes. The transcripts were manually reviewed for accuracy through a line-by-line comparison with the audio recordings by at least two individuals on the research team. Transcripts were analyzed via thematic analysis in the context of interpretive description in a method outlined by Wicklow and colleagues.⁷

All research team members conducted line-by-line readings of the transcripts to identify five main themes and categorize quotes into these themes. Themes were identified via extensive discussion between research team members using the research questions and aims as a guide. Participants' quotes were selected based on details of their first-person experiences over comments about others, proximity to the overdose event, and relation to opioid drug use over other drug use.

Ethics approval

We obtained ethics approval for the study from the Fraser Health Research Ethics Board (2020-65).

Study design and theoretical framework

We employed the Consolidated Criteria for Reporting Qualitative Research (COREQ),⁸ which contains a checklist for explicit and comprehensive reporting of qualitative studies, to provide a guideline for our study. Ours is mostly a descriptive study, focused on meaning and significance of experiences of our subjects; hence phenomenological research. Deep engagement with the data via reading, writing, rereading, and rewriting is foundational in both hermeneutic and transcendental phenomenologies.

We were also informed by the Dislocation Theory of Addiction posited by Bruce Alexander (2008), which sees addiction as neither a disease nor a moral failure, but

as an adaptation to sustained social, familial, and personal dislocation wrought by globalized capitalism.⁹ Within the general population, adverse childhood experiences, negative emotional states, and sexual abuse are all associated with higher rates of addiction.⁹

Results

Demographics and drug use history

Ten participants were recruited into the study, and none dropped out. The majority of the participants were Caucasian and self-identifying males [Table 1]. Participants had a mean age of 19.6 years for their first exposure to drugs. All participants were residents of the Fraser Health region due to our inclusion criteria, but many used drugs in Vancouver as well. Surrey and Vancouver were the most common sites of drug use for

Table 1. Demographics and drug-use history of participants.

Demographics and drug-use history	Mean, proportion, or range
Male	6/10
Race/ethnicity	
White	8/10
Asian	1/10
Indigenous	1/10
Immigrant	1/10
Opioid prescription for pain in lifetime	6/10
Nonopioid drug use prior to overdose	10/10
Two or more overdoses in lifetime	6/10
Age (years) at first exposure to drugs (mean)	19.6
Range	12–48
Location of drug use	
Surrey	6/10
Vancouver	5/10
Maple Ridge	2/10
Port Coquitlam	1/10
Port Moody	1/10
New Westminster	1/10
Langley	1/10
Richmond	1/10
White Rock	1/10

TABLE 2. Descriptive data of first overdose event of participants.

Descriptive at first overdose event	Mean, proportion, or range
Age (years; mean) Range	33.1 14–50
Opioid usage alone	0/10
Use of naloxone (Narcan) to revive	4/10

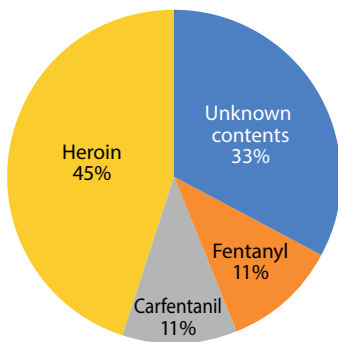


FIGURE 1. Description of opioid taken at the time of the first overdose as reported by participants.

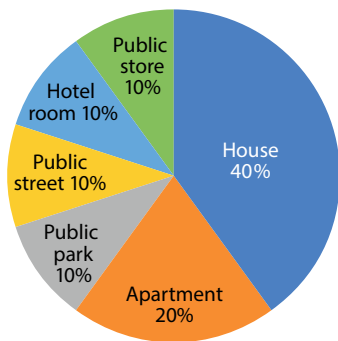


FIGURE 2. Site of first overdose as detailed by participants.

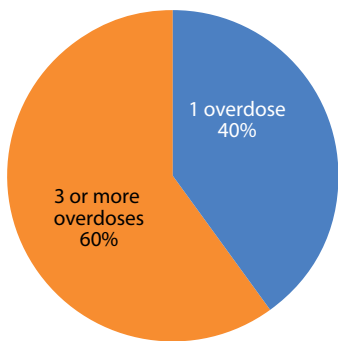


FIGURE 3. Frequency of drug use as quantified by number of overdoses experienced by participants.

our participants. Approximately half of the participants had been prescribed opioids for pain in their lifetime.

Data surrounding overdose events

Participants had a mean age of 33.1 at the time of their first overdose [Table 2]. However, no participants used alone and naloxone (Narcan) was used to revive approximately half of our cohort at the time of their first overdose.

The most common opioid substance taken by participants at the time of first overdose was heroin, followed by unknown contents, fentanyl, and carfentanil [Figure 1]. Additionally, the site of first overdose was a home for the greatest number of participants (4/10), followed by an apartment (2/10), a public park (1/10), a public street (1/10), a public store (1/10), and a hotel room (1/10) [Figure 2]. Frequent drug use or multiple overdoses were common in this cohort; 60% of participants experienced three or more overdoses [Figure 3].

Themes from interviews

Difficult upbringing

The theme of a difficult upbringing was found in many participants’ recollections of their life events leading up to their overdose. This included physical and sexual abuse, family dysfunction, and bullying.

“Yeah there was abuse in my real family before I went into custody before like I was about three. Lot of physical abuse and sexual abuse and my parents were, I think, drug abusing.” (Participant 3)

“My dad . . . wanted to kill my mom so that’s why we had to run away from him.” (Participant 4)

“My father shortly after that, robbed a bank and was sentenced to 10 years in prison. . . . He was a heroin addict and a heroin dealer, and you know, like at first he hid the fact that he did heroin shots like two or three times a day. . . . I tried heroin for the first time when I was 14, shooting it.” (Participant 7)

“I was bullied a lot in school. I was overweight. Bullied a lot and very shy. So I went to high school and then I got pregnant

when I was 13 . . . I was working in the street . . . and I was only like 16.” (Participant 8)

History of drug use

Many participants had an extensive history of illicit drug use leading up to their overdose event. This primarily included the use of non-opioid drugs such as LSD, MDMA, crack cocaine, and crystal methamphetamine at a very early age, later evolving into the use of opiate drugs such as fentanyl and heroin.

“I moved out to Surrey and I got into crystal meth out here and then into heroin and fentanyl a couple years after that.” (Participant 3)

“I tried the meth—didn’t like that, and then marijuana. But basically the crack and then of course somebody switched it for one day, it’s called white China and it looked like crack. We smoked it and then I died. I had whatever was in there, the hostel did a toxicology whatever that’s called and it was the fentanyl in there.” (Participant 5)

“I started using LSD, I used that when I was 12 and then I think when I was 14 I started using cocaine and MDMA and then around 14, 15 I started using crystal meth.” (Participant 9)

“I was such a hardcore cocaine crack addict. Opioids were never my thing for the longest time. . . . The next thing you know, you’re smoking that stuff and I stayed away from heroin or on the streets, specifically called down . . . but it came to a point for me, I would get so jacked up on that stuff. I smoked a little bit of opiate or heroin or whatever it would bring me down, allow me to sleep.” (Participant 10)

Mental health

Diagnoses of mental disorders were common among the interview participants. These diagnoses were often made during the period of illicit drug use but before their first overdose event.

“[I was diagnosed] with depression and ADHD.” (Participant 2)

“I suffered from depression.” (Participant 5)

“I had a very serious depressive episode when I was around 18. I was trying to stop

using speed. My mom took me to the doctor then and she diagnosed me with generalized anxiety disorder and gave me some Ativan and things like that and . . . from about 13 or so I was on Prozac as well.” (Participant 9)

“I had a suicide attempt . . . I’ve finished up in a psych ward. . . . The psychiatrists figured I was bipolar depressed.” (Participant 10)

Awareness of overdose risk

Participants showed that they were aware of the increased chances of overdose but decided to continue with their drug use. This was detailed implicitly or explicitly during the interviews.

“I know it’s gonna happen if I do it . . . I’ve been dead seven times in the last I guess 17 months. I’ve been dead seven times and twice on purpose.” (Participant 2)

“We had like a Narcan kit and it was all ready, the syringe was already filled and it was ready to go because by then we were using and avidly seeking carfentanil. Like we didn’t want heroin anymore, we didn’t want just fentanyl, we wanted carfentanil.” (Participant 6)

“People are shocked when I say this. I’ve lost count of the amount of times I’ve overdosed, like it’s well into the double digits, so there’s like a few different times.” (Participant 6)

“I wanted somebody to be there just in case something went wrong.” (Participant 8)

“Somebody had some pink stuff that one of my colleagues, my drug checking colleagues had said was really dangerous and not to do it but I was kind of desperate and they traded me some of that for something else and so I did it and then I ended up again overdosing. . . . If I had access to safe supply that I could just go and I knew it was there.” (Participant 9)

Impact of COVID-19

COVID had a multifaceted impact on participants’ experiences surrounding their drug use. Some cited reduced access to treatment groups and gatherings while others cited a decline in mental health that made them more likely to use.

“Some organizations are not open to us right now after the COVID.” (Participant 1)

“For a while the addicts were cut off and we were like pushed, you know quietly to the side there and it wasn’t anywhere we could gather.” (Participant 2)

“It’s been really busy [treatment and counseling]. They used to have walk-ins so you can just walk in there and get a counselor.” (Participant 8)

“Then COVID came and everything was just so incredibly stressful and so like just melt down and felt super apocalyptic and I just kind of started using every day and got off my Suboxone.” (Participant 9)

Discussion

We identified and interviewed 10 residents in the Fraser Health region who had experienced opioid overdose to obtain contextual data to inform future research and community response to the opioid crisis. The life stories of these 10 overdose survivors of diverse backgrounds provide personal narratives that have been lacking in current literature. In contrast to other cohorts of drug users (Vancouver Injection Drug Users Study, AIDS Care Cohort, At-Risk Youth Study),¹⁰ this cohort drew from outside of downtown Vancouver in the Fraser Health region, which experienced more fatal opioid overdoses than any other health region in BC.

Five themes emerged from our interviews with opioid overdose survivors: difficult childhood upbringing, history of mental illness, prevalent history of multi-drug use, awareness of overdose risk, and impact of the COVID pandemic.

Notably, none of the survivors used drugs alone at the time of the overdose, regardless of the location, whether it was in a house, apartment, public park, public street, hotel room, or even public store. This differs from the data from the Provincial Overdose Cohort, in which 40% of nonfatal overdoses self-reported using alone.¹¹ None of the participants overdosed alone, highlighting the importance of the sense of community among survivors of opioid overdose. Participants overwhelmingly described to us how

they grew up in dysfunctional households and were exposed to domestic violence, parental substance abuse, and bullying. As a result, they sought to use drugs and alcohol to escape the constant threat of physical and sexual violence, but also to join a community, albeit a community of drug users. A qualitative study done in Mexico among teenagers also revealed “family roughness” as a theme among adolescent drug users.¹²

By not using drugs alone, our participants counted on their partners and friends to rescue them with naloxone kits or call the ambulance if they suffered an overdose. Several participants suspected that their opioids were tainted, and had already had previous overdoses, but they ignored the risk because they were not alone. This finding potentially differs from a survey of drug users in Vancouver that found that most overdose participants did not suspect that the drugs were tainted prior to overdose.¹⁰ However, this agrees with the 2022 Report to the Chief Coroner of BC, which revealed an increasingly toxic drug supply and concurrence of mental health disorders in drug toxicity deaths.¹³

Finally, our participants reported that the COVID pandemic resulted in a decrease in social services and an increase in isolation, stress, and drug use. In particular, participants noted increased use alone, such as in single-occupancy rooms, due to distancing measures. In a cohort that relies on community and taking opioids with others to mitigate risk, both the physical and mental isolation of the pandemic may partly explain the almost doubling of illicit drug toxicity deaths from 983 in 2019 to 1734 in 2020, the highest total recorded yet in British Columbia.⁶

Study strengths

This is the first study to report on contextual data from opioid overdose survivors during the COVID pandemic. This qualitative data provides lived experience and deeper insight into the issues surrounding the opioid crisis and exacerbation due to the COVID pandemic. This study highlights the need for further contextual data

SPECIAL FEATURE

to complement robust health administrative database reports. As the study describes a snapshot during the peak of the COVID pandemic (early 2021), a follow-up study as the COVID pandemic ameliorates in BC would prove valuable.

Study limitations

A lack of access to digital video conferencing technology may have excluded otherwise eligible participants from participating. While the semi-structured nature of the interview allowed for the collection of abundant data in general, some participants shared more than others, leading to variability among participants in the amount of data collected. Additionally, recall bias where participants did not accurately remember event details or left out certain details is likely, given perceived stigma related to illicit drug use and the amount of time that had passed between the events and the interview. Finally, most of the participants came from community action team or treatment group referrals, a cohort that actively seeks support, which may not be representative of the wider overdose population.

Conclusion

Opioid overdose survivors value community to mitigate the risk of frequent overdose, which has been disrupted by isolation due to the COVID pandemic. We hope our qualitative study will encourage others to involve opioid overdose survivors to tell their stories and to involve them in patient-centred interventions and policymaking to alleviate the overdose crisis. ■

Competing interests

None declared.

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Hand-arm vibration syndrome in the workplace

Hand-arm vibration syndrome (HAVS) is a condition caused by exposure to hand-arm vibration, primarily from the use of vibrating tools.¹ Exposure occurs most commonly in a workplace setting.

Prolonged contact with a vibrating tool or surface can result in exposure to vibration over a broad frequency range. The exposure action value is the daily amount of vibration exposure above which employers are required to act to control exposure. For hand-arm vibration, the exposure action value is a daily exposure of 2.5 m/s²A(8).²

The risk of developing HAVS depends on the intensity, frequency, and duration of vibration exposure.¹ These make up what is known as the “vibration dose” and are shown to be critical factors for developing HAVS.³

Pathophysiology

The three systems most commonly impacted are:

- **Vascular:** It has been proposed that hand-arm vibration likely causes local endothelial damage through mechanical trauma and oxidative stress and leads to peripheral vasoconstriction by activating the sympathetic nervous system.⁴
- **Neurological:** Vibration exposure might damage both large (myelinated) and small (unmyelinated and myelinated) nerve fibres of the fingers.
- **Musculoskeletal:** Symptoms might occur through direct vibration-induced damage to musculoskeletal tissues or sometimes secondary to local nerve damage.⁵

High-frequency vibration, largely absorbed by the fingers and hands, appears to be associated with vascular and sensorineural symptoms of HAVS,¹ while low-frequency vibration, transmitted to the arms and shoulders, might be associated with musculoskeletal symptoms.

According to the International Organization for Standardization, the risk of the vascular component of HAVS is largely determined by the cumulative exposure to hand-arm vibration over a working lifetime. The prevalence of HAVS in workers regularly exposed to vibration averages 50%. This increases over time if corrective measures are not implemented early and definitively. If exposure levels are high, latency can be quite short, with HAVS developing in less than 2 years.

Undiagnosed, uninvestigated, and more advanced cases of HAVS are associated with work-related disability, mainly involving the upper limbs, and a subsequent impact on other activities of daily living.

Clinical manifestations and measurement

The adverse effects of HAVS in the vascular, neurological, and musculoskeletal systems are as follows.

Vascular

The clinical outcome most associated with HAVS from a vascular perspective is secondary Raynaud’s phenomenon. This, in addition to being present as a symptom in scleroderma and other connective tissue diseases that involve vascular system abnormalities, such as systemic lupus erythematosus, is a recognized occupational disorder that develops in individuals who use vibrating hand tools and machinery. It manifests as blanching of the fingers, either induced by cold or triggered by exposure to vibration.

It begins in the tips of exposed fingers and may progress to involve the entire finger.

Cold exposure may be associated with cyanosis, with reactive hyperemia during rewarming. In severe cases, trophic changes take place in the fingers, which may become gangrenous, resulting in loss of digits.¹

Clinically, workers may present with fingers becoming white, then red, and being painful on recovery. This will initially involve fingertips and be more pronounced in cold temperatures or when wet. Notably, the thumbs are least affected.

Measurement includes:

- A clinically relevant history of cold-induced finger blanching.
- Asking the worker to take color photographs of the hands, especially when symptomatic.
- Standard color photographs of blanched hands at different stages of HAVS have been developed. At the clinical assessment, workers can be asked to identify which image resembles the appearance of their hands when exposed to cold.
- Objective tests, including:
 - Digital plethysmography to assess the degree of cold-induced dampening of the finger or toe waveforms.
 - Arterial peripheral study, including ankle-brachial indices and triphasic to biphasic spectral waveform measurement.

Neurological

HAVS can cause damage to sensory nerve fibres in the fingers, producing digital sensory neuropathy.

The neurological component includes both a diffuse peripheral neurosensory injury and an entrapment of the median nerve at the wrist, entailing a symptom complex covered by carpal tunnel syndrome.⁶

Clinically, workers may present with tingling, numbness, and paresthesia in the fingers, independent of cold temperatures.

Measurement includes:

- A clinically relevant history of tingling, numbness, and paresthesia in the fingers.
- A neurological exam at the clinical assessment, including tactile sensory evaluation and reflexes.
- Objective tests, including:
 - Electromyography.
 - Nerve conduction studies to measure nerve conduction velocity, latency, and amplitude in large myelinated nerve fibres. This is especially useful for measurement of neuropathy proximal to the hand, such as median or ulnar neuropathy at the wrist.
 - Current perception threshold to measure the threshold of current perception of the distal digital branches of the ulnar and median nerves at three frequencies: 2000 Hz, 250 Hz, and 5 Hz. These correspond to large myelinated (A-beta), small myelinated (A-delta), and unmyelinated (C) fibres, respectively.

Musculoskeletal

Decreased grip strength is commonly reported by workers with HAVS and is related to a combination of direct muscle injury and nerve injury due to vibration. There is evidence to suggest vibration exposure is associated with direct damage to muscle via necrosis, fibrosis, and structural disorganization, as well as motor nerve injury.¹

Clinically, workers may present with loss of strength in hands (mainly grip strength).

Measurement includes:

- A clinically relevant history of loss of strength in hands (mainly impacting grip strength).
- A thorough musculoskeletal exam of the upper extremities, including power and tone assessment.
- Objective tests, including:
 - Manual dexterity assessment using a Purdue Pegboard.

- Grip strength, measured using a Jamar dynamometer, with three attempts, in both hands.

Clinical assessment in workers

The Stockholm Workshop scale for staging HAVS was the result of a 1986 workshop in Stockholm titled Symptomatology and Diagnostic Methods in Hand-Arm Vibration Syndrome. Classifications were developed based on history and physical examination. Objective tests are also needed to measure the various components of HAVS.

Clinical assessment of HAVS begins with a thorough and detailed occupational history. The history should determine the nature of work and the tools used, as well as the duration and intensity of exposure to vibrating tools. Actual measurements of hand-arm vibration from the work site also help in estimating exposure.

Industries most commonly involved include mining, construction, agriculture and forestry, foundries, shipbuilding and repair, motor vehicle manufacture and repair, and engineering. The tools considered to be high-frequency for vibration include impact drills, grinders, power and scaling hammers, mowers, floor saws, floor polishers, milling machines, sanders, and power saws, to name a few.

The clinical and medical history will identify the nature of symptoms, specifically any blanching, numbness, and tingling in the fingers and any additional musculoskeletal symptoms in the upper limbs. A history of other medical concerns associated with HAVS should also be assessed.

The physical examination should focus on the vascular, neurological, and musculoskeletal systems and is essential for diagnosis.

Blood tests help identify other causes of Raynaud’s phenomenon, such as connective tissue disease, causes of neuropathy like diabetes mellitus, and any musculoskeletal comorbidity such as rheumatoid arthritis. Suggested blood tests include antinuclear antibody, rheumatoid factor, serum cryoglobulin, cold agglutinins, thyroid function (thyroid-stimulating hormone), blood glucose, complete blood count with erythrocyte

sedimentation rate, vitamin B12, and red blood cell folate.

Objective assessment of the components of HAVS is conducted using the tests listed above.

Prognosis and management

The prognosis for HAVS depends on the cumulative effects of vibration exposure. If exposure continues, the severity of HAVS would be expected to worsen; if exposure is identified early and mitigated, some improvement may be expected within the different components of HAVS.

The clinical management of workers diagnosed with HAVS has two components: preventive, to stop ongoing exposure and deterioration of function, and symptom control, to improve functionality.

The more effective of the two might well be prevention. Identifying workers who are at risk of developing HAVS and providing advice on preventive measures can be helpful in limiting ongoing vibration exposure.

Prevention strategies aim to reduce the amount, duration, and intensity of vibration a worker is exposed to. These include using antivibration gloves, better-designed tools, and vibration-damping techniques such as gripping tools lightly, alternating hand positions on a tool, and limiting the time spent doing a task with high vibration exposure potential.

Temporary work modification to reduce exposure to cold temperatures and high-amplitude, low-frequency vibrating handheld tools may be helpful.⁷ In the workplace, threshold limit values based on International Organization for Standardization recommendations should be observed.⁸ The US Occupational Safety and Health Administration also recommends periodic rest breaks away from vibratory tool use for 10 to 15 minutes every hour to perform nonvibratory tasks.⁹

Treatments for secondary Raynaud’s phenomenon, such as vasodilation medications (e.g., calcium channel blockers), may also be tried. In all cases, workers who smoke tobacco are encouraged to seek smoking cessation strategies.

For further assistance

If you have questions about your patients and occupational diseases, 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. ■

—Shobhit Maruti, MD, MPH (OEM),
DABPM, FRCPC

Medical Specialist, Occupational Disease
Services, WorkSafeBC

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Additional reading

Health and Safety Executive. Hand-arm vibration at work: A brief guide. Accessed 24 January 2023. www.hse.gov.uk/pubns/indg175.pdf.

Recently deceased physicians

March 2022–February 2023

The following Doctors of BC members died between March 2022 and February 2023. Thank you to their families for sharing this information with the Membership Department. If you knew any of the deceased, please consider submitting an obituary for the *BCMJ* to journal@doctorsofbc.ca.

Dr Glen John Ankenman

21 February 1926–6 November 2022

Obituary: www.dignitymemorial.com/obituaries/vancouver-bc/glen-ankenman-11005820

Dr Vivian Baker

16 March 1930–29 November 2022

Obituary: <https://vancouver.sunandprovince.com/remembers.ca/obituary/vivian-baker-1086766996>

Dr Roger Kingswell Crittenden

30 November 1950–23 January 2023

Obituary: www.dignitymemorial.com/obituaries/kelowna-bc/roger-crittenden-11121614

Dr Paul Joseph Dubord

5 May 1951–5 September 2022

Obituary: <https://globalsurgery.med.ubc.ca/remembers-dr-paul-dubord>

Dr H. Martin Gough

23 June 1927–26 June 2022

Obituary: www.dignitymemorial.com/obituaries/victoria-bc/hugh-gough-10811758

Dr Donald Gene Hedges

15 July 1950–30 December 2022

Dr Brenda Anne Huff

22 December 1961–22 January 2023

Dr Lee-Anna Huisman

1 August 1981–3 November 2022

Dr Chong Won Lim

20 June 1932–4 June 2022

Dr James Robert MacLean

1 July 1925–14 March 2022

Dr Michael Mbuye Mthandazo

7 March 1981–30 July 2022

Dr Mairi MacDonald Narod

28 October 1927–3 September 2022

Obituary: www.surreynowleader.com/obituaries/dr-mairi-macdonald-narod/

Dr Jaime Patricio Paredes

4 March 1943–16 December 2022

Dr Colin Paul Sabiston

21 September 1954–8 November 2022

Obituary: www.echovita.com/ca/obituaries/bc/west-vancouver/colin-paul-sabiston-15489511

Dr Michael Templeton Scott-Kerr

19 October 1935–26 February 2023

Dr David Smit

4 June 1935–9 January 2023

Dr Edwin Stockdale

29 August 1931–22 September 2022

Obituary: <https://vancouver.sunandprovince.com/remembers.ca/obituary/dr-edwin-stockdale-1086369610>

Dr Lionel Tenby

11 April 1932–22 December 2022

Dr Esias Renier van Rensburg

6 September 1963–2 November 2022

Obituary: www.dignitymemorial.com/obituaries/burnaby-bc/esias-van-rensburg-10998686

Dr Upendra Kumar Vyas

10 October 1941–30 October 2022

doctors
of bc

Supporting BC youth at risk of drug poisoning from unregulated supply

In 2022, 34 youth under 19 years of age died of illicit drug poisoning in BC.¹ Deaths are a result of increasing toxicity of the unregulated drug supply. For youth using substances, access to harm reduction services and programs can help reduce the risk of injury and fatality. Services and programs must provide a continuum of support, and for some youth, this means rapid access to treatment. Youth across BC face many barriers to accessing harm reduction and overdose prevention services, and the barriers are even greater for Indigenous youth; youth who experience poverty and homelessness; youth living in rural, remote, and isolated communities; youth in and from care; and 2SLGBTQIA+ youth.

Accessing harm reduction and overdose prevention services

Youth under 19 years of age can access harm reduction supplies, naloxone, overdose prevention services, and, in appropriate circumstances, witnessed consumption² by a regulated or nonregulated health or social service provider, without a capacity assessment. If youth are denied access to services, this can create a lasting imprint on the relationship between the youth and the health system, delaying access to care and potentially leading to other negative health outcomes, including death.

Duty to report: Caution needed

According to Section 14 of the Child, Family and Community Service Act,³ if a

provider believes a youth under 19 years of age is in need of protection, there is a legal duty to report their concerns to the Ministry of Children and Family Development (MCFD) or Indigenous Child and Family Service Agencies (ICFSA). However, reporting to authorities such as the police or the MCFD/ICFSA should be considered

There is no duty to report youth merely for using substances or accessing harm reduction supplies, drug checking services, or naloxone.

carefully and done with caution. A youth has a reasonable expectation of privacy and confidentiality when accessing health services. Making a premature or inappropriate report could damage a therapeutic relationship developed with the youth and impact future decisions about accessing care.

There is no duty to report youth merely for using substances or accessing harm reduction supplies, drug checking services, or naloxone. Youth are taking care of themselves by accessing harm reduction services.

If there are additional concerns for a youth, including lack of food, shelter, clothing, or medical care, discuss with the youth about making a report or requesting support services from the MCFD/ICFSA. If available, connect with a youth outreach team or other supportive people identified by the youth.

Youth accessing prescribed safer supply

In BC, there is no set age at which an individual is considered a mature minor, which means there is no set age at which youth may access safer supply medications from a regulated health care provider following a capacity assessment. To assess capacity, a clinician must explain to the youth the nature and consequences of the proposed health care intervention, as well as the reasonably foreseeable benefits and risks. The clinician should be satisfied that the youth understands and is able to apply the information to their own situation.

If the clinician has made reasonable efforts to determine, and has concluded, that prescribed safer supply is in a mature minor's best interests, then the clinician should administer care if appropriate consent has been given. Consent from the youth's parent or legal guardian is not required.

When determining if prescribed safer supply is in a mature minor's best interests, clinicians should consider the potentially fatal consequences of not providing care. Youth report barriers to accessing prescribed safer supply and a preference among clinicians to prescribe opioid agonist therapy instead of or in combination with prescribed safer supply medications. Opioid agonist therapy may not meet the needs of the youth, and youth may continue to access unregulated supply, remaining at risk of preventable overdose.

Learn about services, and offer choice and meaningful supports

It is recommended that providers familiarize themselves with the full spectrum of services available in their communities,

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including treatment, harm reduction, community services, and Indigenous cultural supports. Actual or suspected coercion by health and social service providers toward abstinence-based treatment can erode youths' trust in health care and prevent them from accessing further services. Offering choice is a principle of trauma-informed practice that engages youth in health care decision-making and can improve adherence to patient-identified goals. ■

—Kali Sedgemore

Member, Professionals for Ethical Engagement of Peers

—Alexis Crabtree, MD, MPH, PhD, CCFP, FRCPC

Public Health Physician, Harm Reduction and Substance Use Services, BCCDC

—Blake Stitilis, MPH

Project Manager, Harm Reduction and Substance Use Services, BCCDC

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2. BC Ministry of Health. COVID-19: Provincial episodic overdose prevention service (e-OPS) protocol. Updated 26 June 2020. Accessed 8 March 2023. www.bccdc.ca/Health-Professionals-Site/Documents/COVID19_EpisodicOPSProtocolGuidelines.pdf.
3. Child, Family and Community Service Act [RSBC 1996] Chapter 46. Accessed 16 February 2023. www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/96046_01.

Resources

- Ministry of Mental Health and Addictions: Pathways to mental health and substance use supports (<https://wellbeing.gov.bc.ca>).
- BCCDC Harm Reduction Services: Harm reduction site finder (<https://towardtheheart.com/site-finder>).
- First Nations Health Authority: Mental health and substance use (www.fnha.ca/what-we-do/mental-wellness-and-substance-use).

Virtual care resources

Virtual care has become a common occurrence in modern health care; however, determining the best way to start or refine a virtual practice is not always clear. Get started with some books and resources from familiar organizations.

For a topic as vast as virtual care, two general texts to start with are:

- *Telemedicine, Telehealth and Telepresence: Principles, Strategies, Applications, and New Directions* (e-book; <https://szasz.catalogue.libraries.coop/eg/opac/record/127343321>).
- *Fundamentals of Telemedicine and Telehealth* (e-book; <https://szasz.catalogue.libraries.coop/eg/opac/record/127340153>).

For resources beyond these general e-books, the College Library's virtual care resources list contains books, articles, and other resources covering many


virtual care situations, emphasizing virtual visits with patients, rather than remote consultations with other health care professionals (www.cpsbc.ca/files/pdf/Library-Virtual-Care-Resources.pdf).

Canadian and British Columbian resources about virtual care can also be found through the Canadian Medical Protective Association (CMPA), Doctors of BC, and the College. The collection of resources on CMPA's Telehealth and Virtual Care web page includes articles, learning activities, and FAQs to support virtual care that is safe for physicians and patients (www.cmpa-acpm.ca/en/covid19/telehealth-and-virtual-care). Doctors of BC offers how-to knowledge in its Virtual Care Toolkit (www.doctorsofbc.ca/sites/default/files/dto_virtual_care_toolkit.pdf). The College's Virtual Care Practice Standard offers regulatory insights into the practice of virtual care (www.cpsbc.ca/files/pdf/PSG-Virtual-Care.pdf).

For further information, contact the College Library at medlib@cpsbc.ca. ■

—Chris Vriesema-Magnuson
Librarian


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CME calendar

NEW: CME listings are now available at bcmj.org only. Please see bcmj.org/cme-event for listings and bcmj.org/cme-advertising for information on advertising.

NEW ARTICLE TYPE:

BC Stories

Have you heard the story about the cardiologist who came across a cougar while fly-fishing in Bella Coola? Or the pediatrician who drove from White Rock to Whitehorse to meet the brother she had been separated from at birth? No? Well, neither have we—but we want to. We're introducing a new type of article and we need your stories.

BC Stories is where you can share a personal story unrelated to practising medicine. It can be funny, topical, sad, perplexing, or just plain interesting; it can relate to the arts, humanities, BC travel, sports, or anything else you're passionate about. Stories should be written in a casual, informal tone, take place in British Columbia, and be 1000–2000 words in length. Include high-resolution photos or other images when possible.

bcmj.org/submit-article

Questions?

Email journal@doctorsofbc.ca

BCM J
BC Medical Journal

Dr Joshua Greggain, president, Doctors of BC

Dr Greggain answers the Proust Questionnaire, telling us a bit about his life and what drives him.



Where do you live?

This year, I seem to live in a suitcase. I am trying to balance my time between Vancouver, Victoria, and visiting physicians, hospitals, divisions, and Medical Staff Associations across BC. I have a few locums in rural communities, as time allows. My mail, however, gets sent to Bear Mountain in Langford.

What profession might you have pursued, if not medicine?

In 1997, I spent 3 months in West Africa, trying to discern a career in health care, ministry, or global relief work. So if not medicine, one or both of the others.

Which talent would you most like to have?

I wish I could play the guitar and sing. I love to camp outdoors, on backpacking trips or in our trailer. There is something romantic about sitting by the fire, playing music together with friends and loved ones.

What do you consider your greatest achievement?

I will speak in two spheres. Professionally, my greatest achievement was being awarded the BC Family Physician of the Year award in 2021 by the BC College of Family Physicians. Personally, my greatest achievement thus far has been to be married to my wife, Jennifer, for 23 years this year, and to have raised our two children, Darren and Elizabeth.

Who are your heroes?

My wife, who continually strives for personal and professional greatness and spurs it in me. My father, who continues to be a great man, physician, and leader. My colleagues, who have stood with me over the years through ever-challenging circumstances.

What is your idea of perfect happiness?

Faith, family, and fidelity are my core values, and if I can achieve those in harmony, then perfect happiness is bound to follow.

What is your greatest fear?

Irrelevance. I was going to say loneliness, but solitude can be quite refreshing. The fear of not mattering to anyone is my greatest fear.

What is the trait you most deplore in yourself?

There is not *one* trait I deplore. Every one of my traits, done to the extreme, can be deplorable. So, I aspire to keep them in balance. My extroversion done to extreme can be overwhelming, my optimism done to extreme can be foolish, and my love of food done to extreme can be gluttonous.

What characteristic do your favorite patients share?

Gratitude. As a physician, I get to share in a lot of difficult circumstances, clinically and personally. I tend to give a lot of energy to my patients, to try to walk with them. When those patients are grateful, in word and action, I can't help but feel as though they are my favorite.

Which living physician do you most admire?

My father, who continues to devote himself to his work and his family.

What is your favorite activity?

Adventuring. Whether it be black water rafting in New Zealand, hiking the Juan de Fuca Trail on Vancouver Island, 4x4ing in Australia, or eating octopus on a stick in Kyoto, Japan, I love to adventure.

On what occasion do you lie?

I am not a good liar, but if I do attempt to lie, it is usually to protect someone from being hurt.

Which words or phrases do you most overuse?

My wife says I overuse the word *perfect* when talking about a circumstance or an outcome. However, she usually doesn't complain if I call her the same.

What is your favorite place?

Wherever my family is. Over the past 23 years together, we have lived in two provinces and eight different houses. Additionally, we have traveled either together or separately to six continents. Favorite is not a specific

PROUST FOR PHYSICIANS

location but a place where we can be together for a while.

What medical advance do you most anticipate?

The Star Trek medical tricorder that is used by doctors to help diagnose diseases and collect bodily information about a patient, with a detachable handheld high-resolution scanner stored inside. Although currently fictional, it would make diagnostics a lot easier.

What is your most marked characteristic?

I am outgoing, optimistic, and fun. I generally carry these traits into any room: an exam room, a boardroom, or a party. This makes for a good time no matter the circumstance.

What do you most value in your colleagues?

Humility, loyalty, and depth of character. I am always impressed when a highly educated physician is able to humble themselves. I am always grateful when I know that my colleagues are committed to a common

purpose. I am always astounded by the depth of my colleagues who surround me.

What are your favorite books?

1. The Bible that my grandfather annotated during the 25 years he preached in Regina. It is full of scribbles in the margins and comments that are still around years after he passed.

2. *Legacy: What the All Blacks Can Teach Us about the Business of Life*, about the All Blacks rugby team, what it took to turn around the team culture, and the ultimate success that followed.

3. *The Speed of Trust: The One Thing That Changes Everything* is a book I am currently enjoying about how trust is established and maintained between people and organizations.

What is your greatest regret?

I don't have any regrets, but I do see opportunities for reflection and growth. I wish I had grown in humility earlier in my career and life; I think I would have seen things differently at a variety of moments—with my marriage, my children, my practice, and my life.

What is the proudest moment of your career?

In 2021, I was gifted an eagle feather by the Anderson Creek Band from the Nlaka'pamux Nation. I had spent 11 years in the community, providing primary care on reserve to both Indigenous and non-Indigenous people. I was humbled to receive this gift, as it helped me reflect on everything I had learned from my patients and everything they had learned from me.

What is your motto?

Depending on the circumstances (all three may apply):

- Perfect.
- Work hard, play harder.
- If you can't change the people, then you need to change the people.

How would you like to die?

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British Columbia Medical Journal
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Unspecified psychosis and stimulant drugs:
A commentary on current trends

Strategies for managing the increasing prevalence of stimulant-induced psychosis in BC include providing supportive care, antipsychotic and sedative medications, and psychosocial therapies.

Read the article: bcmj.org/articles/unspecified-psychosis-and-stimulant-drugs-commentary-current-trends



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