

# BCMj

BC Medical Journal

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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.

**Print:** The *BCM J* is distributed monthly, other than in January and August.

**Web:** Each issue is available at [www.bcmj.org](http://www.bcmj.org).

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Canada per year: \$60.00

Foreign (surface mail): \$75.00

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ISSN 0007-0556 (Print)  
ISSN 2293-6106 (Online)  
Established 1959



*Dr Terri Aldred is a Dakelh (Carrier) family physician living and practising in Lheidli T'enneh traditional territory and new member of the BCMJ Editorial Board. Profile begins on page 46.*

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# Die with zero

**H**ow much money is “enough”? Are you working toward a specific number in order to retire? Perhaps you think you’ll know when the right time comes? Or maybe you’re so busy with your office, patients, mortgage, and student debt that you haven’t had time to consider it. And if someone asked you what your savings were for, how would you respond? To enjoy retirement? Invest? Donate?

In his book *Die with Zero: Getting All You Can from Your Money and Your Life*, Bill Perkins suggests that we should all aim to die with as little money in the bank as possible. I read the book last year, and it had an enduring influence on how I think about building my “wealth.” The premise of the book (as I adopted it) is that we need to redefine wealth. Wealth is not the same as net worth. Net worth refers to your assets minus liabilities, whereas wealth should encompass a more holistic view of how you spend your life’s resources. I should clarify that this book was not written for millionaires; its philosophy is meant for anyone who is working and has savings.

The author, an electrical engineer turned hedge-fund manager, proposes a strategy to avoid “over-saving and under-living.” He explains that most of us are saving now in order to give the money to our older, richer selves. Considered in this way, saving is a form of delayed gratification. We invest money to earn dividends so that we will have more money to spend on positive experiences later in life. However, as the book describes, there is a fundamental problem with this approach—wealth is nothing without health. Some experiences either cannot be enjoyed or would be less enjoyable when we are older. Early in his finance career, the author turned down an

opportunity to backpack through Europe with a buddy because the \$10 000 loan and high interest rate seemed irrational. Looking back on it as a financially secure 30-year-old, he realized that he had lost the opportunity to broaden his horizons with hostels, sightseeing, parties, and new friends, because that no longer appealed to him in his current stage of life. He was troubled by the fact that when he finally decided he could “afford” the trip, it no longer had the same value. This resonated with me. Is anyone else hoping to trek in El Salvador, learn to play tennis, or build a cabin during retirement?

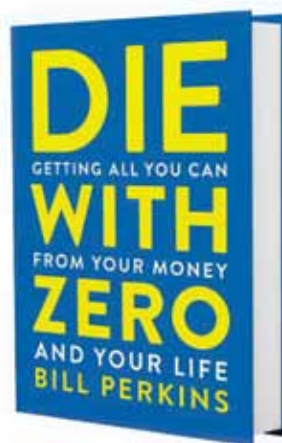
To me, the most metamorphic concept in *Die with Zero* was “experience dividends.” In this nontraditional view of wealth, the author posits that experiences are *investments*, rather than expenses. For example, imagine you are a 50-year-old physician who invested in a family trip to Disneyland when your children were young. The initial experience created a surge of joy, but so does each recollection of the trip. Your memory pays you dividends in the form of smaller surges of joy each time you recall the kids happily screaming on the teacup ride or holding a melted ice cream while asleep in the stroller. If you envision the initial experience as the highest bar on a chart and each subsequent memory comprising a tail of smaller bars, the memory dividends may, summated over a lifetime, even surpass the value of the original experience. My goal is to be experientially wealthy.

**In this nontraditional view of wealth, . . . experiences are investments, rather than expenses.**

Dying with zero does not mean spending your kids’ inheritance or wasting money on frivolous pursuits. The book simply encourages you to make donations and gifts when you can, rather than waiting until death. Charities can make a bigger impact if you give them your money today, instead of at some undetermined time in the future. They, too, are investing for experience dividends.

Time is a nonrenewable resource. However, many of us are too busy working to thoughtfully consider how to use the money we accumulate while we are spending our time. *Die with Zero* proposes that we think of the phases of our life as buckets, make a wish list of experiences, and then figure out which bucket each experience should fall within. Invest in creating memories today that will make you happier in the future. I think Drake said it best: YOLO. ■

—Caitlin Dunne, MD, FRCSC



# Our health ministers need to take a lesson from hockey coaches

Those of you who are tired of my rants about the demise of our once great health system will be pleased to know that this is my last editorial. I am retiring from the *BCMJ* Editorial Board; currently, I am the longest-serving member (more than 20 years). I have been a supporter and fan of the journal for even longer; my first *BCMJ* article was published in 1981.<sup>1</sup>

It will surprise no one that I will end my term with a commentary on the state of medicare. The topic has gathered a lot of media attention recently, related to the nationwide suffering of patients. Ironically, the Conservative premier of Ontario, Doug Ford, has been attacked for contracting out procedures to private clinics, something that was started under the BC NDP government of the 1990s and continues today. His decision resulted in me being deluged with many media interviews and caused me to write an editorial in a national newspaper.<sup>2</sup> My philosophy is largely based on the premise that no monopoly serves the recipients of its services well. The evidence is clear that competition in health care saves lives and reduces costs.<sup>3</sup>

The five principles of the Canada Health Act are public administration, comprehensiveness, universality, portability, and accessibility. But governments are not conforming to the latter four, and even the first principle should be renamed “state control.”

The principle of comprehensiveness is not respected. Physicians understand that excluded provisions such as medications, ambulances, physiotherapy, artificial limbs, psychologic counseling, speech therapy, preventive care, and even dentistry (an abscess in a wisdom tooth may penetrate to the brain) are more “medically necessary” than the diagnosis or treatment of tennis elbow in a recreational tennis player with a sore elbow after a 4-hour game or a mild case of

plantar fasciitis after running back-to-back marathons.

Most Canadians are unaware that virtually all the excluded services listed above are covered in every developed country that offers universal health care.

As president of the Canadian Medical Association (CMA) in 2007–2008, I lobbied hard for prescription drugs to be

**My philosophy is largely based on the premise that no monopoly serves the recipients of its services well.**

available for all. Canadians are 3 to 5 times more likely than residents of comparable countries to skip prescriptions because of cost issues. A 2012 Ontario study<sup>4</sup> estimated that the lack of insurance for medications for working-age individuals with diabetes was associated with 5000 deaths and nearly 2700 heart attacks over a 6-year period. Nationally, of course, this toll would be far greater. Physicians are aware that many Canadian patients (a CMA report revealed it was 1 in 3) who do not have private extended health insurance go without necessary care.

However, my recommendation on extended coverage was intended not to expand state bureaucratic control, but to fund premiums to existing independent providers for the minority who lack and cannot afford such coverage. I can illustrate my concerns with a hypothetical three-phase scenario.

Phase 1: In a pre-election speech, the Minister of Health announces that, if re-elected, his party will add coverage for all currently excluded services (as listed above) to the existing medicare system.

Phase 2: The promise leads to re-election with a massive majority. Extended health plans and self-funding for such services are all rendered unlawful since the state will now cover them all.

Phase 3: Within 2 years the costs have become so high that the government caps funding and rations access to pharmacists, physiotherapists, ambulance services, dentists, prosthetic limb suppliers, etc. Long wait lists to access those services result, and those in need suffer.

The above accurately describes the current state of our medicare system regarding physician and hospital services. I view the elimination of choice in the presence of enforced rationing as unethical and immoral. I hope the highest court in the land will also find it unlawful.

Our governments have historically deemed the concept of equality as paramount, when in fact, Canada ranks very low among its peers in terms of equality and equity. This is not a rich versus poor discussion. There is no health care system in the world in which the rich suffer. An Italian law expert described Canada’s health care system as being designed for the wealthy who can afford to travel to the US if they really need care.<sup>5</sup> Many politicians have extolled the virtues of our system while following that route themselves.

If there is a perception that a private option offers better care, the state has two choices. Make the public sector better and eliminate the need for private care or pay the premiums for those who can’t afford them. Australia has a publicly funded system but also subsidizes private insurance premiums for 9 million lower-income families.

The Commonwealth Fund ranks Canada next to last and the United States last of 11 developed countries. Of the 10 countries

with universal care (i.e., excluding the US), Canada was last overall and tellingly last in equity and outcomes. It was also the most expensive.<sup>6</sup> The head coach of the bottom teams in hockey looks to emulate the top teams. Let's do the same for our health system. ■

—Brian Day, MB

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# A fond farewell to Dr Brian Day, and a warm hello to Dr Michael Schwandt



Dr Brian Day



Dr Michael Schwandt

After more than 20 years of service to BC doctors as a member of the *BCMJ* Editorial Board, Dr Brian Day is retiring from the position, with his final editorial appearing in the March 2023 issue. A well-known orthopaedic surgeon, his passion for the state of medical care in Canada has been reflected over the years in his rousing editorials, provocative to some. His thoughtful contributions to the *BCMJ* have also included scientific articles, physician profiles and interviews, and obituaries, illustrating his deep caring for his colleagues and patients and his talents as a writer. His article reviews at the Editorial Board table were swift and decisive, as one would expect from a surgeon.

We are excited to welcome Dr Michael Schwandt to the Editorial Board as its newest member.

Dr Schwandt is a medical health officer with Vancouver Coastal Health and

a clinical assistant professor in the UBC School of Population and Public Health. He entered practice in 2013, after training at the University of Manitoba, the University of Toronto, and the Harvard School of Public Health. As a specialist in public health and preventive medicine, Dr Schwandt works to protect and promote health at the population level, providing leadership in areas including emergency preparedness, healthy environments, and climate change adaptation. Committed to promoting health equity, Dr Schwandt works with partners including local governments and community-based organizations to identify and act on root causes of illness and wellness. Dr Schwandt regularly shares public health information through scientific journals and media conversations, and his interest in healthy public spaces extends to pastimes as an avid runner and fan of local music.

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## Trust is the glue of life

Whenever polling firms across the nation ask Canadians which profession they most trust, doctors perennially rank in the top five and often in the top two. In 2022, nurses, paramedics, firefighters, and farmers rounded out the top five. Our patients continue to trust us and generally continue to respect us. This is a privilege.

Yet, how easy is it for *us* to extend trust to others? Do we trust ourselves? Do we lead with trust when we interact with our patients, allied health professionals, health authorities, administrators, or government? I think the answer can be complicated, and it depends on the situation.

In his book *The Speed of Trust*, author Stephen M.R. Covey says that trust is the most essential ingredient for effective communication and is foundational in all relationships. In fact, relationships move at the speed of trust. When establishing a new relationship, it takes time to build trust, incrementally at first with shared experiences that provide the opportunity to build a positive connection. When relationships fail, it is usually as a consequence of negative experiences or actions that are deemed to lack trust, which in the end derail communication and ultimately the connection. “Trust is the glue of life,” says Covey. And trust itself is the combination of character and competence—character being the sum of integrity and intent, and competence being the sum of capabilities and results. If any one of those is missing, it is difficult to build meaningful trust.

Simply put, trust takes time to build, but moreover, trust takes character and

competence. When I look at the current landscape of our profession, I recognize that we don't always feel as though we are trusted. We endeavor to exhibit good character; our years of education and subsequent experience give us unique competencies to be seen as experts in our chosen fields. Yet,

**Over this year, with time, I will ask you to trust in me, to trust in your association, to trust each other, and to foster trust within the profession.**

sometimes when we interact with patients, whether in our practice, in hospitals, or in our communities at large, I am not convinced that we believe we are trusted. And I don't know if we lean in from a starting position of trust.

I wonder, if we applied Covey's lens of trust—character (integrity plus intent) and competence (capability plus results)—to our relationships with our partners, patients, colleagues, and collaborative partners, would we accelerate the pace of trust in those relationships? If we trust others' intent and integrity from the outset, would we build a deeper understanding? Does deeper understanding build commonality, commonality build connection, and connection then build trust? I presume the answer is still that it can be complicated. If we viewed this from an introspective angle, would we be more trusting of others? Would we become

more trusted? More trustworthy? If trust is the glue, would it be strong enough to hold us together, both individually and as a profession?

Over the coming year, I commit to demonstrating trust. I hold my personal integrity of paramount importance and welcome direct conversation if you feel I am falling short. I am intent on being intentional. I bring with me to the presidency and to Doctors of BC a determined authenticity of character and truthfulness and will strive for shared capabilities and, consequently, tangible results.

Trust is the glue of life; therefore, trust is the glue that holds us together. Over this year, with time, I will ask you to trust in me, to trust in your association, to trust each other, and to foster trust within the profession. My year will focus on our continued journey as an association that strives to be trustworthy, a leadership that can be trusted, and a profession that perennially holds the trust of our patients, something that is invaluable and needs to be held as a continued privilege. ■

—Joshua Greggain, MD  
Doctors of BC President

# Letters to the editor We welcome original letters of less than 500 words; we may edit them for clarity and length.

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

## Re: WorkSafeBC and your patients with workplace injuries

Thank you for the helpful explanations in your article “WorkSafeBC and your patients with workplace injuries: Frequently asked questions” [*BCMj* 2022;64:432].

Regarding Form 8, you indicate that “If you are seeing a patient with a workplace injury or you suspect a workplace injury or condition, please fill out and submit a Form 8.”

This is slightly different from the instructions on your website,<sup>1</sup> which state that Form 8/11 needs to be sent “within three business days of the patient’s first visit if the physician suspects the worker may be disabled beyond the day of injury or if the claim is for a hernia, back condition, shoulder or knee strain/sprain, occupational disease, or mental disorder.”

Could you please clarify if the form should now be sent for *every* workplace injury or only for injuries that cause disability beyond the day of injury?

—**Simon Moore, MD, CCFP**  
**Clinical Associate Professor**  
**Specialist Physician, Family Medicine**

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### Authors reply

Thank you for your query, Dr Moore. You are correct: Form 8 is required if you suspect the worker may be disabled beyond the day of injury or if the claim is for a hernia, back condition, shoulder or knee strain/sprain, occupational disease, or mental disorder.

However, if you choose to send in a Form 8 following the worker’s first visit to your office/facility when the above conditions are not met, that form is appreciated and will also be paid. Form 11 is required if your patient’s condition or treatment has changed since the last report or if your patient is ready for a return to work. The intent is that the physician does not feel obligated to send a Form 11 at every follow-up patient encounter. However, we appreciate a form being submitted if there is some change or your patient is not progressing in their recovery.

—**Olivia Sampson, MD, CCFP, MPH, RCPSC**  
**Medical Services Manager, WorkSafeBC**  
—**Celina Dunn, MD, CCFP, CIME**  
**Medical Services Manager, WorkSafeBC**

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## Dr Terri Aldred: A new voice and perspective on the Editorial Board

Dr Aldred tells us about her background, what motivates her, and what she'd like to accomplish on the *BCMJ* Editorial Board.

Tara Lyon

In fall 2022, the *BC Medical Journal* welcomed a new member to its Editorial Board: Dr Terri Aldred, a family physician who lives on Lheidli T'enneh traditional territory (Prince George). Dr Aldred joins six other Board members and editor Dr Caitlin Dunne to peer-review manuscripts for publication consideration in the journal, often a dozen manuscripts or more per month.

Dr Aldred's journey to her career in medicine and, ultimately, to her role on the Editorial Board has led her to develop unique learning approaches and viewpoints that will bring a fresh perspective.

Dr Aldred is Dakelh (Carrier) from the Tl'azt'en Nation and grew up rurally, until moving to Prince George at age 14. Her family experienced poverty—she describes her childhood self as a “head in the clouds” girl who loved singing, daydreaming, and imaginary play. Although she is now an avid reader, that wasn't always the case. In school, she found it challenging to learn to read

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*Ms Lyon is a staff member of the British Columbia Medical Journal.*

aloud phonetically and sound out words but discovered that she could make better progress learning to read independently, through graphic novels and comics. With the help of the pictures, she familiarized herself with the words, although she still has to look words up at times and play with them to know how they sound.

Dr Aldred's academic path to medical school was somewhat unconventional. Always a good student, she had a passion for science and wanted to get a good job to break the poverty cycle she experienced while growing up. She was also keen to enter a career that would enable her to give back to her community. She earned a scholarship to the University of Northern British Columbia (UNBC), where she initially planned to pursue a medical trade like lab technology, but her focus shifted once she started university. "I moved around quite a bit for my undergrad," she explains. "I did my first year at UNBC, which is where I decided to pursue a career in pharmacy, as opposed to a medical trade. I then spent the next 2 years at community colleges before being accepted into the pharmacy program at the University of Alberta." Dr Aldred ultimately chose medicine over pharmacy when two of her teacher mentors learned of her career goals and encouraged her to become a doctor. Although Dr Aldred felt medicine might not be for her, her teachers convinced her and wrote reference letters for her, and she was accepted into medical school.

That's when Dr Aldred's independent approach to learning once again came into play. "I became aware of the concept of career succession in medicine," she says. "Physicians breed physicians; if you don't know the process, where do you start? I Googled everything . . . I didn't own my own computer, though, and I almost missed my acceptance deadline!" Through the process of navigating medical school with no early mentorship to speak of, she learned that almost anybody can go into medicine. "Although, depending on your abilities, you may have to work harder," she says. "You have to really want to do it, and you have to make sacrifices."

Harking back to her experience learning vocabulary words in elementary school, Dr Aldred found some medical terminology challenging in university—particularly the Latin terms. "There were a couple of embarrassing moments where I would try to say something and it would come out wrong, but I worked through the embarrassment . . . you just have to shrug it off," she says.

Those challenges are now long behind her. These days, Dr Aldred counts reading and writing as two of her favorite pastimes. "I definitely always take time for reading," she says. "I'm a self-help junky, so I don't read a lot of fiction these days. I'm currently reading Dr Gabor Maté's new book, *The Myth of Normal: Trauma, Illness and Healing in a Toxic Culture*, and will be writing a review for publication in an upcoming issue of the *BCMJ*."

**Dr Aldred would like to use her *BCMJ* Editorial Board platform to encourage authors to submit manuscripts on topics such as cultural safety and humility, critical race theory and analysis, and changes to the health care system.**

When it comes to medical writing and research, Dr Aldred is passionate about studies that incorporate lived experience and storytelling—a natural fit with her Indigenous heritage. "Data are powerful tools to invoke policy change, and as part of that, we need to tell our stories," she explains. "We need to do that in a way that inspires changes to systems and structures." She feels a responsibility to encourage research like this as part of her role at the journal, saying, "Even though I wouldn't say I'm a researcher, or that this [role with the *BCMJ*] would be the direction I'd have seen myself choosing in the past, it's so important. Indigenous people wouldn't necessarily see themselves in this research space, or in the realm of health care policy change, and I want to highlight and encourage that."

Although Dr Aldred acknowledges that the work she's doing now for Indigenous health is inspiring, it hasn't always been so. Similar to how the health care system is traumatizing (and retraumatizing) for many Indigenous people, she found medical school had the same lasting impact, in ways she is still dealing with. "It impacted my health; my nervous system will always carry that effect," she says. "I've spent a lot of time trying to heal. I wouldn't change it, though. I went through periods of anger, and then I had a physician mentor who taught me that you can't make something wrong and help it, or fix it, at the same time. I've worked hard on forgiveness, and part of the reason I'm here is to help people, to give back, and to provide the care that Indigenous people need and deserve."

Dr Aldred would like to use her *BCMJ* Editorial Board platform to encourage authors to submit manuscripts on topics such as cultural safety and humility, critical race theory and analysis, and changes to the health care system based on recommendations from the *In Plain Sight* report by Mary Ellen Turpel-Lafond. "I'd like to see more articles highlighting Indigenous-specific cases," she says. "And I'd love to see authors use the journal as a platform to raise awareness of the Indigenous health landscape in Canada, of what's been done so far, and that we still have a long way to go."

Read Dr Aldred's first editorial in the January/February issue of the *BCMJ* [2023;65:5]. ■

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*To learn more about Dr Aldred, read her BC Medical Journal Proust Questionnaire (2022;64:414), check out her DocTalks podcast episode, "Putting Indigenous cultural safety into practice" ([www.doctorsofbc.ca/news/doctalks-podcast-putting-indigenous-cultural-safety-practice](http://www.doctorsofbc.ca/news/doctalks-podcast-putting-indigenous-cultural-safety-practice)), and read her profile in Doctors Making a Difference ([www.doctorsofbc.ca/news/dr-terri-aldred-doctors-making-difference](http://www.doctorsofbc.ca/news/dr-terri-aldred-doctors-making-difference)).*

Brendan Tao, BHSc, Saundarai Bhanot, BHSc, Vivian W.L. Tsang, MD, MPH

# 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.

**ABSTRACT:** With the increasing potency of substances in British Columbia and ever-evolving substance use patterns, many British Columbians continue to present to hospitals with unspecified psychosis. It is unclear what portion of these cases is attributable to substance use or medical etiologies rather than a primary psychotic disorder on initial clinical presentation. Stimulants, in particular, account for many substance-induced psychosis cases. Differentiating stimulant-induced psychosis from other etiologies of psychosis in emergency department settings can streamline pharmacotherapy and health management decisions, such as addressing underlying substance use behaviors and using antipsychotic medications to improve patient outcomes. Further, many patients who experience stimulant-induced

psychosis are at increased risk of later developing primary psychosis should their substance use continue. Psychoeducational and medical interventions may reduce the possibility of transformation. In this commentary, we discuss stimulant use trends and associated nuances in BC.

**P**sychois can manifest with what are classified as positive symptoms, such as delusions, hallucinations, and disorganized thought or behavior, and negative symptoms, such as avolition, apathy, affective flattening, and anhedonia.<sup>1</sup> Approximately 1.5% to 3.5% of the general population is estimated to meet the diagnostic criteria for psychosis within their lifetime.<sup>1</sup> However, psychosis is far more common among people who use drugs, including 10% of cannabinoid users, more than 33% of methamphetamine users, and most lifelong cocaine users.<sup>2</sup> During restrictions on support and harm reduction services in 2020 due to the COVID-19 pandemic, many people who use drugs returned to or escalated their substance use.<sup>3</sup> Partly due to the pandemic, infrastructure fragility has led to health care staff shortages and a reduction in equitable access to harm reduction services.<sup>4</sup> The use of stimulants has become a major problem in the past decade due to their low cost and increasing potency.<sup>5,6</sup> With reduced care services and increasing rates of

substance use, especially stimulants, people who use drugs are increasingly at risk for stimulant-induced psychosis. This commentary is meant to raise awareness about current substance use trends, specifically stimulant-induced psychosis, in BC.

## Substance use in BC since 2007

More than a decade of evidence indicates that substance use trends are perpetually volatile. According to the Canadian Institute for Substance Use Research at the University of Victoria, hospitalizations across BC due to stimulant use (excluding cocaine) more than tripled from 10.13 per 100 000 in 2007 to 34.16 per 100 000 in 2019.<sup>7</sup> Likewise, between 2007 and 2019, opioid- and cannabis-related hospital admissions increased by approximately 28% and 35%, respectively.<sup>7</sup> However, during that same time frame, hospitalizations related to the use of cocaine and sedatives (excluding opioids) declined by approximately 58% and 24%, respectively.<sup>7</sup>

Despite decreases in cocaine-related hospitalizations, the rise in stimulant-related hospitalizations is driven by the rapid increase in methamphetamine use in BC.<sup>7</sup> Among more than 300 harm reduction sites across BC, between 2012 and 2015, the portion of people who use drugs that reported using methamphetamine within the previous 7 days increased from 20% to 47%.<sup>8</sup> Increased use of methamphetamines

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*This article has been peer reviewed.*

in Canada is most notable in BC and Alberta, with possession violations increasing by 590% between 2010 and 2017.<sup>5</sup> More recently, among British Columbians who attended harm reduction services between 2018 and 2019 (excluding for tobacco), crystal methamphetamine was reportedly the most commonly used drug in the previous 3 days (up to 71.7% of attendees) and was frequently paired with opioid use.<sup>9</sup> In 2019, 3.2 users per 1000 across Canada used methamphetamines.<sup>10</sup>

In Canada, between 2014 and 2021, there was a coinciding increase in hospitalizations for amphetamine-related psychotic disorders.<sup>11</sup> One Canadian study reported that amphetamine-related emergency department visits increased more than fivefold between 2014 and 2021, and the prevalence of related psychotic disorders doubled between 2015 and 2021.<sup>11</sup> This increase in substance-induced psychosis is a reflection of multiple underlying causes, such as increasing potency of substances, increased local prevalence of drugs, increased opioid contamination and toxicity of available drug supplies, and a potentially greater population of people who use drugs.<sup>12-14</sup>

### Continued pandemic effect

According to the Canadian Centre on Substance Use and Addiction and the Mental Health Commission of Canada, nearly 50% of Canadians with a history of substance use disorder who responded to an online survey conducted between 13 October and 2 December 2020 reported moderate to severe depressive symptoms since the onset of the pandemic.<sup>12</sup> Increased stress has been linked to further substance use and relapse among people who use drugs.<sup>15</sup> Pandemic stressors have amplified the two-way relationship between substance use and poor mental health.<sup>12</sup> One Canadian study that characterized substance use patterns during the pandemic reported that stimulants were the most common psychoactive drug used (74%), followed by opioids (60%).<sup>16</sup> There is also evidence of increased illicit drug toxicity and adulteration, which confers added harm potential to these drugs.<sup>17</sup>

In 2020, the Canadian Centre on Substance Use and Addiction introduced increased access to treatment and harm reduction services related to the use of methamphetamines.<sup>18</sup> However, harm reduction services have been unable to meet the increased demand; approximately 20% of patients reported difficulties accessing care.<sup>12</sup> Only 24% of respondents with problematic

**Hospitalizations across BC due to stimulant use (excluding cocaine) more than tripled between 2007 and 2019 (from 10.13 to 34.16 per 100 000).**

substance use and 22% of respondents with mental health symptoms who answered an online survey conducted between 13 October and 2 December 2020 reported being able to access treatment since March 2020.<sup>12</sup>

These findings exemplify the unstable nature of substance use trends over short periods. With respect to Metro Vancouver hospitals, further research on current trends is recommended. Now, amid new individual and supply chain stressors imposed by the COVID-19 pandemic, current illicit drug trends have likely shifted and remain uncharacterized.<sup>19</sup>

### Challenges in diagnosing stimulant-induced psychosis

The *Diagnostic and Statistical Manual of Mental Disorders* (fifth edition) defines substance-induced psychosis based on four main criteria: manifestation of hallucinations or delusions, symptoms developed during or soon after intoxication or withdrawal from a substance capable of producing psychosis, no alternative evidence of primary psychotic disorder, and an absence of delirium.<sup>20</sup> For the third criterion, a primary psychosis is more likely when symptoms precede the onset of

substance use or they persist for more than 1 month or when there is other evidence of a nonsubstance-induced psychotic disorder.<sup>20</sup> However, when patients who are suspected of substance-induced psychosis present to the emergency department with altered mental status, it may be difficult to ascertain a reliable history. As a result, unspecified psychosis is frequently diagnosed in emergency department settings when ambiguous history and collateral do not meet criteria for a specific psychotic disorder.<sup>21</sup> In one 2020 study, difficulty ruling out substance-induced psychosis was the most common reason (28%) for a diagnosis of unspecified psychosis.<sup>22</sup> Substance-induced psychosis is also difficult to distinguish from primary psychotic disorders because both can manifest with delusions, grandiosity, suspiciousness, and hallucinations.<sup>6</sup> While urine toxicology screens may identify potential substance use, a positive result cannot rule out primary psychosis. Finally, it can be difficult to ascertain the specific offending substance; although one study reported that methamphetamine dependence induced more positive symptoms of psychosis than did cocaine dependence, such differentiation may be ambiguous to the practitioner in emergency department settings.<sup>23</sup>

### Relationship between substance-induced psychosis and primary psychosis

Evidence suggests that patients with substance-induced psychosis, such as that related to stimulant use, are at higher risk of developing primary psychotic disorders than are patients without substance-induced psychosis.<sup>24-26</sup> A leading hypothesis suggests that among people who use drugs and have a higher familial risk of primary psychosis, ongoing substance use triggers the transformation of substance-induced psychosis into primary psychosis.<sup>27</sup> A study of 6788 patients demonstrated a strong association between substance-induced psychosis and the development of schizophrenia-spectrum or bipolar disorders.<sup>24</sup> In some studies, between 15.0% and 32.3% of patients diagnosed with stimulant-induced psychosis

developed schizophrenia; this occurred most commonly in men within 3 years of index treatment.<sup>24,28,29</sup> A recent meta-analysis reported a similar pooled rate of 22% (95% CI, 14%–34%) for conversion to schizophrenia after amphetamine-induced psychosis.<sup>30</sup> Younger age and initial hospital admissions that lasted between 1 and 4 weeks have been linked to higher risk of conversion.<sup>29</sup> However, patients with initial hospital admissions between 1 and 4 weeks likely presented with a greater severity of symptoms and a slower return to baseline, which suggests that their presentation may also have been more in keeping with the prodrome, or the first episode, of a primary psychotic disorder that was simply exacerbated by substance use.<sup>29</sup>

### Management of substance-induced psychosis

Substance-induced psychosis requires management strategies that differ from those for primary psychotic disorders. Urine drug screening is useful for identifying patients who are using substances, as are self-report and collateral information.<sup>31</sup> However, because psychosis may persist for long periods following substance use, patients who present days after their last drug use may have a negative urine drug screen.<sup>32</sup> Positive results also do not typically change the immediate management plan for patients who present with substance-induced psychosis in the emergency department.<sup>32</sup> However, urine drug screens may aid long-term prognosis, where a positive result may indicate a higher risk of later substance-specific problems; for example, rates of conversion to primary psychosis can vary depending on the type of substance implicated in substance-induced psychosis.<sup>24</sup> Mild cases of substance-induced psychosis are sufficiently treated with supportive care, short-term antipsychotic medications, and abstinence from substances until recovery.<sup>31</sup> Patients who exhibit acute agitation, violence, or severe functional impairments may require additional pharmacotherapy with benzodiazepines and antipsychotic medication use.<sup>31</sup>

Psychosocial treatments are indicated to mitigate stimulant use relapse and inhibit recurrence of stimulant-induced psychosis.<sup>31</sup> One meta-analysis revealed that a combination of contingency management and community care approaches was most effective in patients who were dependent on cocaine or amphetamines.<sup>33</sup> Treatment of comorbid psychiatric disorders, such as anxiety and depression, may also reduce rates of substance resumption.<sup>31</sup>

**In some studies, between 15.0% and 32.3% of patients diagnosed with stimulant-induced psychosis developed schizophrenia.**

Pharmacotherapy options remain limited for patients with substance-induced psychosis. However, a large nationwide Swedish cohort study showed an association between lisdexamfetamine prescription and improved outcomes in people with methamphetamine-use disorders, but the study excluded people with schizophrenia and bipolar disorders, which further highlights a treatment gap for populations with psychosis.<sup>34</sup> As well, a recent meta-analysis provided preliminary evidence that promoted the use of prescription psychostimulant substitution therapy to treat psychostimulant use disorder.<sup>35</sup> However, more evidence is needed because this review was constrained by a limited sample size, a lack of subgroup analyses among psychiatric comorbidities that often accompany psychostimulant use disorder, a lack of comparison with higher dosages of prescription psychostimulants, and the possibility of detection bias in trials, which limits the quality of currently published evidence.<sup>35</sup>

Despite management, patients with substance-induced psychosis often return to the emergency department.<sup>36</sup> In two urban centres in BC, between 2018 and 2019, after initial management for

substance-induced psychosis and discharge, 40% of patients returned to the emergency department within 30 days, and nearly half of them returned multiple times.<sup>36</sup> More than 30% of those returns were for recurrence of substance-induced psychosis.<sup>36</sup> Also, approximately 50% of those patients stayed between 5 and 15 hours during their index emergency department visit, and nearly half of them were admitted to hospital.<sup>36</sup> Another investigation revealed that the 1-year mortality of patients who presented to the emergency department with substance-induced psychosis was 4.3%, for which schizophrenia was a significant risk factor when controlled for age.<sup>37</sup>

Food insecurity and severe mental disorders such as psychosis share a bidirectional relationship, with the former disproportionately affecting homeless individuals.<sup>38</sup> Thus, in addition to direct clinical management, improved supports for stable housing and food security may help prevent new onset or recurrent substance-induced psychosis.

### Call to action

While rates of stimulant use and stimulant-induced psychosis had been increasing before the pandemic, the rates of problematic substance use in BC have continued to rise since then.<sup>12</sup> Among people who use drugs, pandemic stressors have increased the risk for substance use relapse and worsened mental health.<sup>12</sup> In addition, the increased need for mental health service outpaces supply; only 24% of people who struggle with substance use reported having access to treatment during the height of the pandemic.<sup>12</sup> Increasing access to mental health and harm reduction services is needed to address the rising rates of substance use, which remains a main modifiable and preventable risk factor for substance-induced psychosis and transformation into primary psychosis. In addition to advocacy for increased infrastructural health care and mental health resources, patient-specific interventions are an integral part of the management of substance-induced psychosis. According to reviews of the use of evidence-based

psychotherapy for substance use disorders, motivational interviewing may help shift patients from precontemplative to contemplative stages of change and reduce the extent of drug use, especially when combined with other treatment modalities.<sup>39,40</sup> As well, abundant evidence supports the efficacy of cognitive-behavioral therapy for reducing the use of a variety of substances, including amphetamines, cannabis, alcohol, cocaine, and opioids.<sup>39</sup> Other evidence suggests that relapse prevention, a component of cognitive-behavioral therapy, is protective against substance use relapse after treatment conclusion and improves overall psychosocial adjustment.<sup>39</sup> Further, patients should be presented with resources on supportive employment, housing, peer support, and self-management programs.<sup>41</sup>

For patients who present to the emergency department with substance-induced psychosis, several medical management steps can be taken to reduce symptoms. Initial history, safety, and neuropsychological assessments are recommended to inform subsequent care planning.<sup>42</sup> For most mild cases, supportive care can be supplemented with short-term antipsychotic medications.<sup>31</sup> In severe cases, when patients present with agitation, violence, or severe functional impairments, seclusion and restraints in hospital and sustained antipsychotic use for both prevention and treatment purposes may be required.<sup>31</sup> Some patients may eventually require long-term injection medications due to the volatility of their lifestyle and substance use patterns.<sup>43</sup> Choice of antipsychotic agents should be made collectively by the patient and physician, with consideration of the benefits and side effects of each drug.<sup>44</sup> Brief hospitalization may be required in patients with psychosis, particularly those who need urgent medical assessment, have severe psychiatric symptoms, or pose an imminent safety risk to themselves or others.<sup>41</sup> However, it is also important to consider the psychosocial effect of involuntary admission on the patient.<sup>41</sup> For patients with comorbid opioid substance use disorders, referral to addiction services, provision of

take-home naloxone kits, and consideration of opioid-agonist therapy are recommended to reduce the risk of later opioid overdose.<sup>45</sup>

Physicians and providers are encouraged to consult Canadian guidelines for further comprehensive recommendations, including “Canadian Guidelines for the Assessment and Diagnosis of Patients with Schizophrenia Spectrum and Other Psychotic Disorders,” “Guidelines for the Pharmacotherapy

**Only 24% of people who struggle with substance use reported having access to treatment during the height of the pandemic.**

of Schizophrenia in Adults,” and “Canadian Practice Guidelines for Comprehensive Community Treatment for Schizophrenia and Schizophrenia Spectrum Disorders,” all of which are available with other supplementary guidelines through the *Canadian Journal of Psychiatry*.<sup>41,42,44</sup> Physicians are also encouraged to continue educating patients about the risk of substance-induced psychosis, most notably the rates of transformation to primary psychosis with continued substance use. Further research is needed to characterize the current situation of substance-induced psychosis in BC, especially in rural communities.

## Conclusions

Stimulant-induced psychosis is an increasing problem in BC. Clinicians should be aware of this condition and key management strategies, including supportive care, drug abstinence, antipsychotic and sedative medications, and psychosocial therapies, to improve patient outcomes. Clinicians should also continue to follow evolving evidence on management alternatives. ■

## Competing interest

None declared.

## Acknowledgments

The authors thank Drs Julius Elefante and Frank Scheuermeyer for reviewing this commentary.

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**Stimulant-induced psychosis is an increasing problem in BC. Clinicians should be aware of this condition and key management strategies.**



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# Physician burnout during the COVID-19 pandemic

Possible interventions for addressing high burnout rates among physicians include providing higher financial remuneration, improving patient access to resources, enhancing staff support, and providing better support for work-life balance.

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*This article has been peer reviewed.*

## ABSTRACT

**Background:** Physician burnout is associated with reduced quality of care and patient satisfaction and increased costs. We sought to quantify professional fulfillment levels and burnout rates and identify drivers of burnout among physicians within Vancouver Coastal Health during the COVID-19 pandemic.

**Methods:** Members of the Vancouver Physician Staff Association were surveyed in the fall of 2020. The Stanford Professional Fulfillment Index was used to assess physician professional fulfillment and burnout. Physicians were also asked to assess the effect of the COVID-19 pandemic on their physical and mental health, determine psychological safety within their department, and identify interventions to improve their well-being.

**Results:** Of the 1949 physicians contacted, 566 (29%) responded to the survey. Results were analyzed for 84% of the responses (475/566); the completion rate was 24% (475/1949). The overall professional fulfillment level was 25.3%, and the overall burnout rate was 51.4%. Interventions that physicians felt would improve their well-being included providing higher financial remuneration, improving patient access to resources, enhancing staff support, and providing coaching sessions and better support for work-life balance.

**Conclusions:** Further work is needed at every level—individual, departmental, and systemic—to address physician burnout. It is our hope that these survey results will help drive systemic, cultural, and organizational changes to improve physician well-being.

## Background

Physician burnout, a growing concern, has been defined as a work-related syndrome characterized by exhaustion, cynicism, and reduced effectiveness.<sup>1</sup> Burnout is associated with reduced quality of care and patient satisfaction.<sup>2-5</sup> National studies conducted in the United States during the 2010s documented a physician burnout rate of at least 50%.<sup>6,7</sup> A Canadian Medical Association survey conducted in 2018 reported a physician burnout rate of 30%.<sup>8</sup> In this study, we sought to determine professional fulfillment levels and burnout rates among physicians working within the Vancouver Coastal Health Authority during the COVID-19 pandemic, identify the drivers of burnout, assess the effect of COVID-19 on physician well-being, and examine psychological safety within different medical departments.

British Columbia has a population of approximately 5 million and is served by seven health authorities, including Vancouver Coastal Health. The largest community of care within Vancouver Coastal Health is Vancouver Acute/Vancouver Community,

which employs more than 1900 physicians and comprises care provided by Vancouver General Hospital, UBC Hospital, GF Strong Rehabilitation Centre, and Vancouver Community. Our community of care is the largest in both British Columbia and Western Canada and is the second largest in Canada. In 2016, the Vancouver Physician Staff Association was formed to bolster the activities of the medical staff association representing these physicians. It seeks to increase meaningful physician involvement in creating an optimal work environment for the delivery of patient care.

In 2019, several physicians in the Vancouver Physician Staff Association raised the issue of burnout. The Vancouver Coastal Health senior executive team responded by partnering with the Vancouver Physician Staff Association to establish a steering committee to address physician burnout. As a first step, the steering committee designed and administered the 2020 survey to measure physician professional fulfillment and burnout, examine drivers of burnout, and assess psychological safety within departments.

## Methods

### Survey design and administration

After conducting a systematic review of the literature, we selected the Stanford Professional Fulfillment Index<sup>9</sup> to assess physician professional fulfillment and burnout. The Stanford Professional Fulfillment Index is a 16-item instrument and includes three scales: professional fulfillment, work exhaustion, and interpersonal disengagement. The professional fulfillment scale is used to assess the degree of positive intrinsic reward the individual derives from their work, including happiness, meaningfulness, contribution, self-worth, satisfaction, and feelings of control when dealing with difficult problems at work. The work exhaustion scale is used to assess symptoms of exhaustion and is analogous to the emotional exhaustion scale of the Maslach Burnout Inventory. The interpersonal disengagement scale is used to assess empathy and connectedness

with others, particularly patients and colleagues. Burnout is assessed by combining the work exhaustion and interpersonal disengagement scales.

Two other questions were included in the survey to assess the effect of the COVID-19 pandemic on physician wellness. Respondents were asked to compare their physical and mental health at the time

**The Vancouver Physician Staff Association . . . seeks to increase meaningful physician involvement in creating an optimal work environment for the delivery of patient care.**

of the survey to that prior to the pandemic and then choose the top five options from two lists of interventions they thought would best improve their workplace and personal well-being. Interventions included “a lighter workload,” “a more efficient electronic medical record,” and “a longer vacation.” These interventions were adapted from a list of drivers of burnout based on the Mayo Clinic’s wellness framework.<sup>1</sup> Respondents could also enter their own interventions. Finally, respondents were asked two questions about psychological safety within their department in order to develop future strategies for reducing burnout. Psychological support was available to all physicians who participated in the survey.

The draft survey was field-tested by the 15 physician members of the Vancouver Acute/Vancouver Community Physician Wellness Steering Committee via SurveyMonkey, and their feedback was used to create the final survey. In compliance with health authority privacy guidelines, the link to the final survey via SurveyMonkey was emailed to the Vancouver Physician Staff Association membership of 1949 physicians in the fall of 2020. The survey was promoted via a series of events from October to November 2020, including weekly Vancouver

Physician Staff Association email communications, wellness posters, and departmental emails. Respondents were given 4 weeks to complete the survey.

### Survey analysis

All survey responses were anonymous. Standard descriptive statistics were used to describe professional fulfillment and burnout scores, the effect of COVID-19 on wellness, workplace and personal well-being interventions, and psychological safety. Within the 16-item Stanford Professional Fulfillment Index, respondents could score 0 to 4 for each item, with 0 being complete disagreement with the statement and 4 being complete agreement. Scores for each scale were calculated by averaging the scores of all the items within the scale.

Dichotomous burnout categories (burnout vs no burnout) were determined from the average item score across the work exhaustion and interpersonal disengagement scales; an average score of 1.33 or higher was defined as burnout. Dichotomous professional fulfillment categories (professionally fulfilled vs not professionally fulfilled) were determined from the average item score within the professional fulfillment scale; an average score of 3.0 or lower was defined as not professionally fulfilled. Respondents who answered fewer than 50% of the items for any scale were deemed to have provided inadequate data, so their responses were removed from the final analysis. Responses from respondents who did not consent to including their data in the final analysis were also removed. Thematic analyses were conducted on all qualitative data.

The University of British Columbia Clinical Research Ethics Board deemed this study to be a quality improvement project; therefore, it was exempt from ethics review under Guidance Note 4.4.1.

## Results

Of the 1949 physicians who received the survey, 566 (29%) responded. The responses of 91 of those participants were removed, which resulted in 475 responses analyzed (24% completion rate). There was

considerable variation in survey completion rates across departments [Table]. Emergency medicine physicians had the highest completion rate (58%), followed closely by anesthesiologists (56%). The department of medicine had the lowest completion rate (10%).

The overall level of professional fulfillment was 25.3%. Pathology and laboratory medicine physicians had the highest level of professional fulfillment (35.0%); family practice physicians had the lowest (22.3%) [Figure 1].

The overall burnout rate was 51.4%. Family practice physicians had the highest rate (63.1%); pathology and laboratory medicine physicians had the lowest (40.0%) [Figure 2].

Participants were asked to rate their mental and physical health at the time of the survey compared with before the pandemic. Sixty-four percent indicated that their mental health was “slightly worse” or “much worse” than before the pandemic; 51% said their physical health was “slightly worse” or “much worse.”

The top five interventions chosen by physicians to improve mental well-being were “more resources available for my patients,” “higher remuneration,” “more efficient electronic medical record,” “more control of my work environment,” and “more support staff at work.” The top five interventions chosen to improve personal well-being were “system change to allow for better support of work-life balance,” “more financial support,” “personal fitness training,” “coaching sessions,” and “more physical activities facilitated outside of work.”

In terms of psychological safety within their department, 29% of physicians disagreed or strongly disagreed that they felt safe to express their opinions to their department/division members, and 23% disagreed or strongly disagreed that they were able to bring up problems and tough issues.

Analysis of the qualitative data from the survey revealed some recurring themes: high workload is a significant stressor; there is a need for more patient resources; trust, respect, and accountability between

TABLE. Survey completion rates by department (n = 475).

Department	Number of respondents	Survey completion rate (%)
Overall	475	24
Emergency medicine	57	58
Anesthesia	49	56
Diagnostic imaging/radiology	15	28
Pathology and laboratory medicine	20	26
General/family practice (including community physicians)	130	21
Psychiatry	52	20
Ophthalmology	15	19
Gynecology/obstetrics	15	18
Orthopaedics	10	18
Surgery	29	17
Medicine	55	10
Unidentified	28	N/A

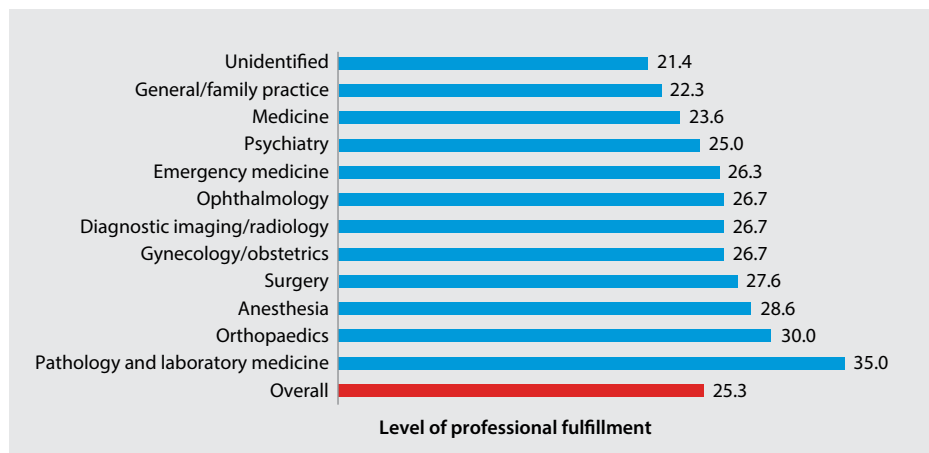


FIGURE 1. Professional fulfillment levels by department (n = 475).

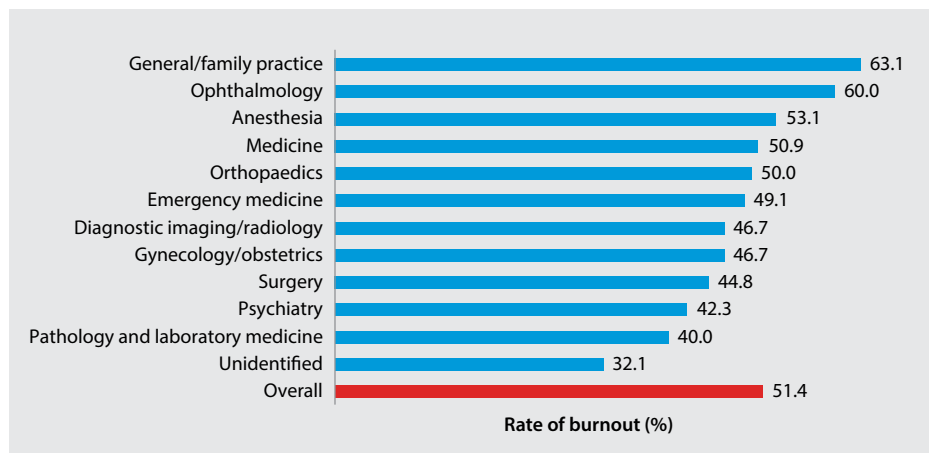


FIGURE 2. Burnout rates by department (n = 475).

physicians and leadership is essential; good communication and psychological safety are needed; and physician recognition, wellness resources, and diversity, equity, and inclusion initiatives are vital.

## Discussion

Increasingly, health care institutions are embracing the quadruple aim,<sup>10</sup> which emphasizes the need for the best patient experience, better outcomes, lower costs, and the best clinician experience. Best clinician experience, in particular, seeks to improve the well-being of health care staff, because higher burnout rates are correlated with poorer patient experience,<sup>5,11</sup> poorer outcomes,<sup>12-14</sup> and increased costs.<sup>15</sup>

We chose to administer the Stanford Professional Fulfillment Index because its burnout measures correlate highly with the Maslach Burnout Inventory.<sup>9</sup> Furthermore, the Stanford Professional Fulfillment Index is easy to administer and captures a broad assessment of physician well-being by focusing on both physician burnout and professional fulfillment within the preceding 2 weeks, and it can be readministered on a regular basis to assess the effectiveness of wellness interventions.

The overall rate of physician burnout in our survey (51.4%) was higher than that of some recent national surveys. In a 2018 Canadian Medical Association survey, the burnout rate was 30.0%.<sup>8</sup> In a national survey conducted in the United States in 2020 during the COVID-19 pandemic, the overall burnout rate was 42.0%, but there was variation in burnout rates between specialties.<sup>16</sup> The COVID-19 pandemic has brought unprecedented challenges to the health care profession and may affect different specialties in different ways and to varying degrees. Most respondents in our survey felt that their mental and physical health had deteriorated since the start of the pandemic.

In other studies,<sup>17</sup> lower professional fulfillment was generally correlated with higher burnout. In our study, interventions that physicians selected to improve well-being included recommendations for

organizational change to improve patient access to resources and to enhance staff support, as well as for coaching sessions and better support for work-life balance. Physicians also indicated that inadequate financial remuneration was a source of burnout. Physician wellness is a shared responsibility, and organizational support is key.<sup>18</sup> The Mayo Clinic Program on Physician Well-Being identified seven drivers of phy-

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sician burnout and engagement: workload and job demands, efficiency and resources, meaning in work, organizational culture and values, control and flexibility, social support and community at work, and work-life integration.<sup>1</sup> Many individual wellness strategies, including mindfulness training and self-care workshops, have helped physicians combat stress.<sup>19</sup> However, although important, individual physician wellness programs will not reduce burnout on their own<sup>20,21</sup> and must occur in conjunction with organizational strategies. Four organizational strategies for reducing burnout are developing quality leaders, creating a supportive community and organizational culture, improving practice efficiency, and optimizing administrative policies.<sup>18</sup>

Themes identified in our survey include the importance of trust and respect between physicians and leadership and the need for clear communication; psychological safety; and diversity, equity, and inclusion initiatives. In our survey, 29% of respondents did not feel safe to express their opinions to department/division heads and fellow members, which indicates this is an area that needs additional attention. Psychological

safety is the foundation wellness and organizational resilience are built on, and the level of psychological safety will help direct strategies to reduce burnout. Ensuring that the best diversity, equity, and inclusion practices are established will also promote psychological safety.<sup>22</sup>

In recognition that physician wellness is a growing issue, the Canadian Medical Association has recommended the development of a national service to support the mental health of physicians.<sup>23</sup> In BC, the Physician Health Program, which is available to all physicians, medical students, and residents, as well as their partners and children, provides a 24-hour confidential help line to address issues related to mental health, relationship stress, and career and life transitions. In Vancouver Coastal Health, during the COVID-19 pandemic, physicians also had access to an employee and family assistance program. Recently, a new model of wellness-centred leadership has been proposed, which recognizes that leadership directly affects physician wellness.<sup>24</sup> Wellness-centred leadership emphasizes the need to “care about people always, cultivate individual and team relationships, and inspire change.”<sup>24</sup> To this end, we are thankful for the collaborative partnership between our medical staff association and regional health authority leaders that allowed us to design, distribute, and analyze this survey.

## Study limitations

Due to the confidential nature of our survey and because some departments were quite small, we elected not to collect age, gender, and other personal data to ensure anonymity. This limited our ability to identify demographic factors associated with professional fulfillment and burnout. Also, recall bias may have factored into physician responses; however, we believe that its effect was limited because we used the Stanford Professional Fulfillment Index, which asks physicians to respond to questions based on their experiences in the previous 2 weeks, whereas the Maslach Burnout Inventory focuses on the previous 12 months.

Our survey completion rate was 24%, which is consistent with other large wellness surveys.<sup>25,26</sup> Response rates varied between 10% and 58% depending on the department. It is possible that the overall burnout rate may not be representative of our entire physician group. Finally, our survey was limited to members of Vancouver Acute/Vancouver Community; therefore, our findings may not be representative of physicians in other communities of care in BC.

## Conclusions

In our survey, the physician burnout rate was unacceptably high. This not only affects physician health but also detrimentally affects patient outcomes. During the COVID-19 pandemic, physician mental and physical health worsened. In collaboration with senior health authority leadership and with support from Doctors of BC, we were able to quantify burnout rates and are now planning data-driven departmental wellness initiatives. Remaining challenges include developing strategies to meet the varying needs of vastly different departments and establishing a central strategic plan and office for physician wellness at the regional level. ■

## Competing interests

None declared.

## Acknowledgments

We would like to thank all our physician survey participants, Vancouver Acute/Vancouver Community Physician Wellness Steering Committee members, senior leadership within Vancouver Coastal Health, the Vancouver Physician Staff Association, and Doctors of BC for their support.

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**In our survey, the  
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# Clinical support for obesity management

The *Canadian Adult Obesity Clinical Practice Guidelines* published in 2020 define obesity as a complex chronic disease, characterized by abnormal or excessive body fat (adiposity) that impairs health.<sup>1</sup> Like any other chronic disease, it is progressive and recurrent. The guidelines provide a comprehensive evidence- and experience-based, patient-centred framework for health care professionals, patients, and policymakers.<sup>1</sup> The chapters on medical nutrition therapy in obesity and pharmacotherapy in obesity management were updated in 2022. The guidelines have received international acclaim and have been adapted for use in Chile and Ireland.<sup>2,3</sup>

The guidelines present a framework for obesity management in adults based on three pillars of intervention: psychology, pharmacotherapy, and bariatric surgery. Healthy behavior changes (medical nutrition therapy and physical activity) are fundamental to successful weight management and can improve health independently of changes in weight. Alone, they are generally associated with weight loss of only 3% to 5%, which is often not sustained.<sup>4</sup> The main goal of psychological and behavioral interventions is to help people living with obesity to implement sustainable life changes; promote positive self-esteem; and improve health, function, and quality of life. In British Columbia, there is no public coverage

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*This article is the opinion of the authors and not necessarily the Council on Health Promotion or Doctors of BC. This article has not been peer reviewed by the BCMJ Editorial Board.*



for dietitian, psychological, or counseling services to address the behavioral and mental health aspects of obesity. At this time, the BC health care system does not adequately support the multidisciplinary models of care that are the recommended standard for obesity management. Lack of access to care compounds the stigma associated with obesity.<sup>5</sup>

Pharmacotherapy for obesity management is a safe and effective means of achieving long-term weight management and is approved for use among individuals with a BMI  $\geq 30$  kg/m<sup>2</sup> or a BMI  $\geq 27$  kg/m<sup>2</sup> with adiposity-related complications, in conjunction with nutrition, physical activity, and/or psychological interventions.<sup>6</sup> There are four

medications approved by Health Canada for long-term obesity management in Canada: liraglutide 3.0 mg, naltrexone-bupropion in a combination tablet, orlistat, and semaglutide 2.4 mg. These medications can assist in achieving and maintaining weight loss ranging from 6% to 15% at 1 year, with associated improvement in overall health. Even modest weight loss of 5% to 10% can produce clinically important improvements in health parameters such as glycemia, blood pressure, lipids, and nonalcoholic steatohepatitis.<sup>6,7</sup> Despite the evidence supporting the efficacy of these medications in treating obesity and the associated comorbidities, obesity medications are not covered on

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assist in achieving and maintaining weight loss ranging from 6% to 15% at 1 year, with associated improvement in overall health. Even modest weight loss of 5% to 10% can produce clinically important improvements in health parameters such as glycemia, blood pressure, lipids, and nonalcoholic steatohepatitis.<sup>6,7</sup> Despite the evidence supporting the efficacy of these medications in treating obesity and the associated comorbidities, obesity medications are not covered on

provincial formularies in BC, and for those with private coverage, these medications are prescribed far less frequently than medications for other chronic medical conditions.<sup>8</sup>

Recognition of obesity as a chronic disease was a necessary first step to facilitate policies that advocate for access to effective interventions for patients living with obesity. In 2020, Doctors of BC passed a resolution recognizing obesity as a chronic medical disease requiring enhanced research, treatment, and prevention efforts. This resolution has been passed in only seven provinces and territories.<sup>9</sup> More advocacy is needed to ensure that we develop models of health care to accommodate the multidisciplinary approach required to manage obesity and obesity-related diseases.

The 8th Canadian Obesity Summit is being held 14–17 May 2023 in Whistler, BC. This forum would be an excellent opportunity for health care professionals and policymakers to innovate and collaborate on strategies for promoting multidisciplinary models of care for chronic disease management in BC. Register for the summit at <https://obesitycanada.ca/cos>. ■

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# Assessing tinnitus and disability

From a workers' compensation standpoint, assessing tinnitus poses challenges. The subjective nature of tinnitus makes measurement difficult, and the medical literature related to tinnitus and disability does not lend itself to meta-analysis. However, a systematic review of the literature allows us to address several relevant questions:

- How do we evaluate tinnitus causality?
- How do we fairly represent the evidence for impairment and disability due to tinnitus?
- What is the evidence that tinnitus, by itself, causes measurable disability?
- What is the evidence for treatment?

## Measurement and assessment tools

Testing definitions include reproducibility (the test provides very similar results when administered to the same population twice), accuracy (the test measures what it is supposed to), and appropriateness (the test result addresses a question involved in this project). Accuracy is a minimum requirement.

With respect to accuracy, it is important to measure the amount of tinnitus present, not the effect of depression, anxiety, hearing loss, or other factors. For the most part, it is not possible to measure the amount of tinnitus, so accuracy is in significant doubt. This is a major problem in assessing disability due to tinnitus.

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



All the methods of assessing tinnitus are based on subjective responses like questionnaires and self-reporting scales. Some measure the loudness or sound frequency of tinnitus by matching sounds presented by the tester or the ability of presented sounds to mask the tinnitus. Test reliability is poor even in the same subject. The Tinnitus Handicap Inventory is the most appropriate scale with the best validation.

## Causality

The literature is consistent in concluding that acoustic trauma causes tinnitus, which may persist even if the hearing loss resolves. The threshold of acoustic trauma in most of the literature is about 115 dB for 15 minutes, or 140 dB of impact trauma.

Tinnitus can also result from causes other than noise-induced hearing loss. The evidence for causation of tinnitus is adequate for sensorineural hearing loss, high-dose ASA, and NSAIDs.

Occupations with greater intensity and duration of noise exposure are associated with greater incidence of tinnitus. There is no particular employment that causes tinnitus, apart from association with noise-induced hearing loss.

There is no evidence that the quality of tinnitus varies according to cause. Some

papers suggest that the frequency of tinnitus is predicted by the frequency of hearing loss, but this is not consistent.

## Disability

In tinnitus discussions, handicap refers to impairment that substantially limits one or more of life's activities, which could be overcome by special compensation such as assistive listening devices or hearing aids.

There is no evidence to support the idea that tinnitus alone causes disability. Most patients with tinnitus do not request treatment; only about 10% report severe or disabling tinnitus. Some of the best data suggest that tinnitus loudness correlates well with disability.

Depression, anxiety, and other psychological factors frequently coexist with and strongly affect the reported magnitude of tinnitus. Some tools measure tinnitus and some measure impairment, after controlling for depression.

Because of the limitations of available assessment tools, it is not possible to define a threshold measure at which tinnitus causes impairment. For the same reason, there is no evidence that impairment from tinnitus alone varies according to its cause. This does not mean that tinnitus does not cause impairment, only that the tools are inadequate.



## Treatment

Cochrane reviews consistently report no effective treatment for tinnitus.<sup>1</sup> Many reviews consider all patients together without differentiating based on severity. Several papers have specifically addressed the use of antidepressants in severely affected patients and reported efficacy.

A Cochrane review in 2006 did not find support for the treatment of tinnitus with antidepressants, but this review considered all tinnitus patients together, not differentiating severely affected ones. Other Cochrane reviews included betahistine,

gingko, carbamazepine/gabapentin, zinc, cognitive-behavioral therapy, and tinnitus retraining therapy/masking therapy. These reviews showed no treatment effect. Cognitive-behavioral therapy appeared to improve quality of life and depression, but not tinnitus loudness.

Of other nonpharmacologic measures, only measures that improve hearing, such as the use of hearing aids, have credible evidence of efficacy across many patients. Beyond depression, fatigue, and other psychological factors, no other factor strongly influences the outcome for tinnitus. ■

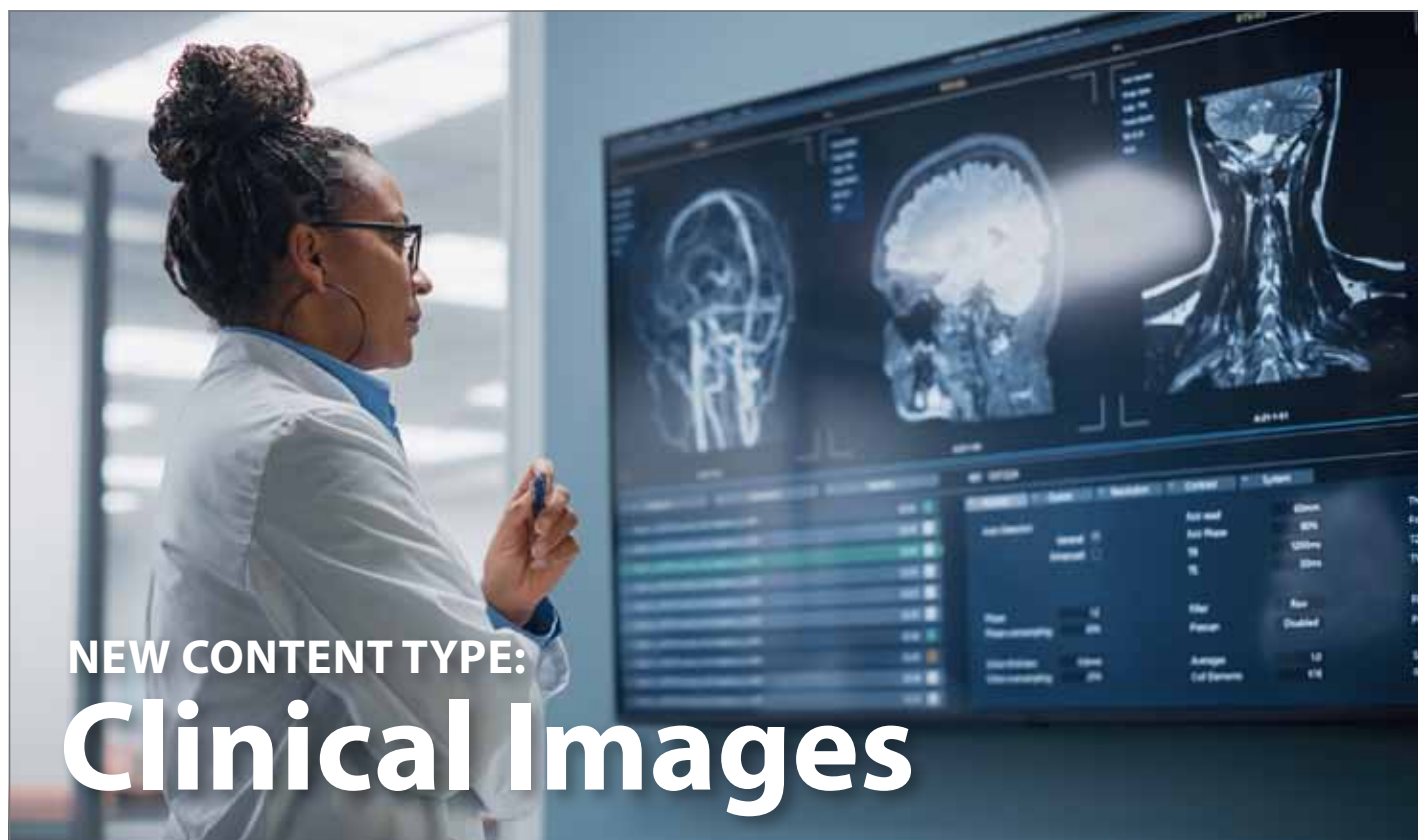
—Eytan David, MD, FRCSC  
Clinical Faculty, Department of Surgery,  
University of British Columbia

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## Additional reading

Piccirillo JF, Rodebaugh TL, Lenze EJ. Tinnitus. *JAMA* 2020;323:1497-1498.



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# The BC Drug and Poison Information Centre:

## An essential clinical resource and public health partner

Poisonings have a significant impact on the health of people in BC. In 2022, there were more than 2000 poisoning deaths due to the toxic illicit drug supply alone.<sup>1</sup> All age groups are at risk of poisoning, but the types of poisonings change over the lifespan. Exploratory ingestion of household products or medications is most common in young children. For adolescents, poisoning due to experimental or impulsive use of alcohol, medications, and other substances is more common. Poisonings due to self-harm are a significant cause of injury in adolescents and younger adults. Among older adults, prescription and other medication errors become more common.

Poison control centres are a clinical service that provide expertise in the management of poisonings for the public and health care providers. Although there are limited Canadian data on their cost-effectiveness, a comprehensive review in the United States found that each \$1 spent on poison control centres saves over \$13 in other health care costs.<sup>2</sup> The BC Drug and Poison Information Centre (DPIC) is the regional poison control service for BC and Yukon, and it has been located at the BC Centre for Disease Control (BCCDC) since 2012. The DPIC is staffed by specialists in poison information who are nurses and pharmacists certified by the American Association of Poison Control Centers. The DPIC is

also supported by physicians specializing in emergency medicine and toxicology. There are multiple DPIC programs:

- A 24/7 consultation phone service for the public and health care professionals (604 682-5050 or 1 800 567-8911).
- A weekday drug information phone service for health care professionals to receive expert advice on the safe use of medications (604 707-2787 or 1 866 298-5909).
- The *Poison Management Manual* with detailed information to assist in managing acute poisonings from many medications, consumer products, and drugs (available at [www.dpic.org](http://www.dpic.org)).
- Public campaigns and educational material to advise the public on poison prevention (available at [www.dpic.org](http://www.dpic.org)).

The DPIC receives calls about a wide range of poisonings. While most of the outcomes are mild to moderate (over 60% are managed at home), the DPIC also helps emergency room physicians and intensivists manage severe cases. The DPIC's services are particularly valuable to rural and remote communities, where urgent care can be harder to access.<sup>3</sup> The volume and complexity of poisoning cases managed by the DPIC have increased in recent years [Figure]. In part, this reflects the unregulated drug crisis in BC and resulting morbidity and mortality. Other factors driving

the increasing caseload include cannabis legalization, more cases of self-harm among young people, and the growing and aging population.

The DPIC is unique among the five Canadian poison control centres because it is embedded in the BC public health system by being physically and administratively located at the BCCDC. This provides meaningful opportunities for collaboration and cooperation between poison specialists and public health practitioners. For example,

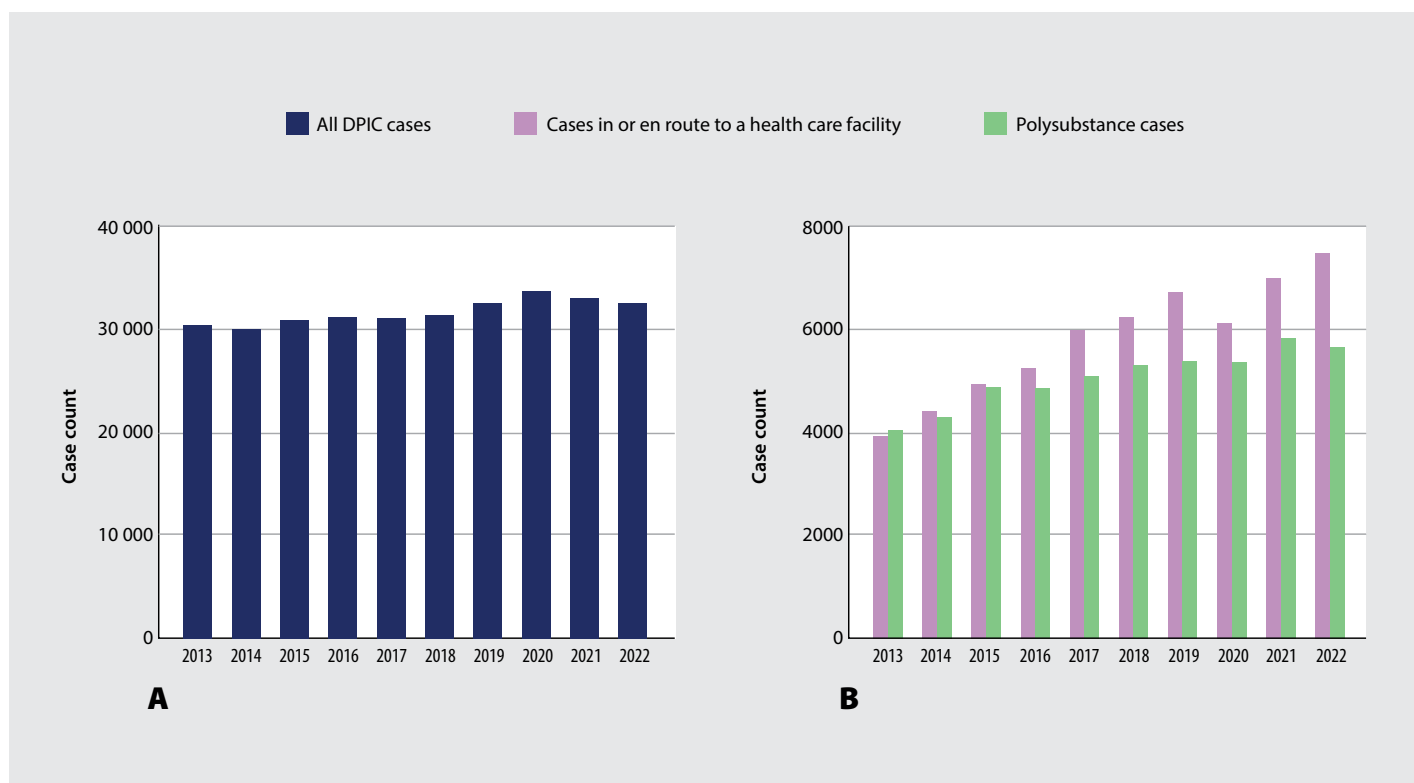
**The volume and complexity of poisoning cases managed by the DPIC have increased in recent years.**

the BCCDC routinely monitors for calls related to specific substances that might pose an immediate public hazard needing urgent intervention, such as paralytic shellfish toxins.<sup>4</sup> The close integration between the DPIC and the BCCDC also allows for rapid and effective responses to novel and high-risk toxins, such as aconitine in imported sand ginger.<sup>5</sup> In these cases, the early notification and subsequent support by poison specialists were essential components of the public health response. We encourage all clinicians to consult the DPIC when managing cases of poisoning, promote awareness of the DPIC and the services it offers, and notify the DPIC of any unusual toxic exposures so that public health response can be initiated if needed. ■

—David A. McVea, MD PhD  
Public Health Physician, Environmental Health Services, BCCDC

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*This article is the opinion of the BC Centre for Disease Control and has not been peer reviewed by the BCMJ Editorial Board.*



**FIGURE.** Annual volume (A) and characteristics (B) of cases managed by the BC Drug and Poison Information Centre (DPIC). Panel B shows the changing volume of more complex cases, including those reporting multiple exposures (green) and those requiring treatment in a health care facility (purple).

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—Sarah B. Henderson, PhD  
Scientific Director, Environmental Health  
Services, BCCDC

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*Dr Alexander and Mrs Rhoda Boggie*

## **Dr Alexander Boggie** *1923–2022*

Dr Alexander Boggie was born in Vancouver and moved with his family to Murrayville during the Depression, where they ran a farm, living in a farmhouse with no electricity or running water. After a few years, the family moved back to Vancouver and Alexander went to Templeton and Britannia schools. At 18, he joined the Royal Canadian Air Force and served overseas from 1942 to 1945. After the war, he pursued an offer from the Department of Veterans Affairs to help returning veterans go to university; he applied to UBC and was accepted. In 1948 he married the love of his life, Rhoda Bowes. In 1950 he accepted a place in the first class of UBC's new medical school. After graduating from medical school in

1954, he completed an internship in Vancouver; then the family moved to Vernon, where he joined the Vernon Medical Clinic.

Back in Vancouver in 1961, Alexander completed a year of pathology at Vancouver General Hospital/UBC. This was followed by an exciting year in London, England, where he completed a year of surgical post-grad studies at Hammersmith Hospital. In 1963 the family returned to Vernon and his busy practice at the Vernon Medical Clinic.

In 1969 Alexander's career shifted back to Vancouver, where he was asked by Dr Clyde Slade to join the faculty as a full-time teacher and mentor in the new Department of Family Practice. With the job came the opportunity to be an examiner for the Certification Examination in Family Medicine, which developed a practical and reputable curriculum for undergraduate and residency programs.

Alexander spent the 8 years leading up to his retirement in 1988 practising and teaching half-time while also acting as associate dean of admissions to UBC's medical school. After retirement, he continued to be active, as demonstrated by his numerous achievements:

1989–90: Elected president of the Medical Council of Canada.

2000: Received the UBC Faculty of Medicine's Golden Jubilee Medal for exceptional and outstanding contribution to the faculty.

2001: Received the Wallace Wilson Leadership Award, presented annually to a graduate of the UBC Faculty of Medicine who has demonstrated high ethical standards and outstanding leadership to the profession.

2001: Chair of the UBC 50th Anniversary Endowment Fund Committee, which raised \$1.5 million to assist medical students.

2005: Established the Rhoda and Al Boggie MD Entrance Bursary to financially help first-year medical students.

2018: Co-chair on the board of directors that helped create the initial funding for the Friedman Award for Scholars in Health.

Alexander was predeceased by his wife, Rhoda, and his granddaughter, Sarah. He is survived by his three children, Margaret (Bruce), Trevor (Virginia), and Sandi (Steve); six grandchildren, Fraser, Spencer, Alex, Lauren, Bryce, and Claire; and three great-grandchildren, Sienna, Grant, and Ethan.

If you would like to honor Dr Boggie's legacy, please make a donation to the Rhoda and Al Boggie MD Entrance Bursary at this link: <https://give.ubc.ca/memorial/alexander-boggie>.

—**Boggie Family**



### Dr Bedford Zane “Dale” Aylward 1930–2022

It is with a heavy heart cushioned by treasured memories that I honor Dr Dale Aylward, who died peacefully surrounded by family at age 92 on 25 August 2022 at Rotary Manor in Dawson Creek, BC. He was well cared for while spending his last many months in the facility with the love of his life and wife of 66 years, Bernice.

Dale was born in Five Islands, Nova Scotia, to Herman (a painter and cook) and Melba (Corbett) on 23 July 1930. He was a teenager during the Depression, so he and his sister, June (still living and active at 90 years of age), enjoyed a very simple childhood and understood that hard work and a good education would pay off.

The clam factory at Five Islands used to pay \$1 per bushel, and Dale would often get \$5 to \$8 per day digging clams. He was a lifelong reader and learner, and he often had two or three books on the go. His kids remember complaining when he listened to his medical cassettes while he drove them to school.

Dale started work as a teacher but soon realized it would be difficult to afford to raise a family, so he applied and was accepted into medicine at Dalhousie University, sponsored by the Canadian Armed Forces. He was a noted storyteller and would regale

his classmates with a new story or joke every morning before the start of classes. They gave him the nickname “Daily.”

Bernice shortened it to Dale, and it stuck with him for the rest of his life. The only person who referred to him as BZ or Bedford was Bernice, but only when he was in for a scolding.

Dale finished his military service in Whitehorse, Yukon, and he and Bernice had three young children by that time. They drove south, ending up in Saskatchewan, visiting cities along the way. They met a group of like-minded doctors in Dawson Creek, mile zero of the Alaska Highway, and loved the farming community. They settled in for the next 60 years.

Dale became the driving force in the medical community. He started the Dawson Creek Medical Clinic and built a busy medical practice, including emergency, deliveries, and surgery (tonsillectomies, myringotomies). After taking an extra year of pediatrics, he became the support for sick children and neonates. He was chief of staff of the hospital, Pouce Coupe Care Home, and Rotary Manor. He took medical students every year and was granted a lifelong membership in the Faculty of Medicine at UBC.

Dale was a kind, caring, calm, competent, and compassionate doctor, and a perfect role model and mentor for all new doctors (including me in 1982). He was never flustered and never spoke a bad word about a colleague, patient, or anyone else. He had a ready smile and a wicked sense of humor.

He continued to do rounds at the nursing home and assists at surgery into his late 70s after retiring from his medical practice (one of his sons, Darroch, took that over).

One orthopaedic surgeon insisted that Dale be his assist. Dale had such a calming influence on the OR team and was such pleasant company. He joked that when Dale developed a slight tremor, he had to develop one as well with the same frequency to match it.

Dale loved family events, hunting, and fishing. He served several terms as a city

alderman and was on the board of the Kinsmen Club. He was an entertaining speaker and was in constant demand to serve as an emcee at community and medical events. He had an extensive library of joke books and would weave these jokes seamlessly into his monologues and introductions.

He bought a ranch and raised Black Angus cattle; he had 350 head at one time. He eventually became president of the Canadian Angus Association.

The farm was a great place to raise his four children and entertain friends and colleagues, and later his 10 grandchildren and seven great-grandchildren. The 1 July party at “Gumbo Gulch” was not to be missed. He would joke that he actually was a vegetarian but liked his vegetables transformed into something tastier.

What a legacy; what a life.

—Bob Newman, MD  
Halfmoon Bay

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# Mr Anthony Knight, new CEO of Doctors of BC

Mr Knight answers the Proust Questionnaire, telling us a bit about himself and his role, which he calls a curious mix of role-playing, politics, and science.



**What alternative profession might you have pursued, if given the chance?**

When I was a child, I loved learning about space and the work of astronauts. I've had the chance to meet Chris Hadfield, and I remain inspired by the scientific pursuits of the space program and the stamina required to become an astronaut. I was also really interested in theatre in high school; I received a scholarship and some awards but didn't see it as a career. I've also followed and been interested in the workings of governments and politics. My profession today has a curious mix of role-playing, politics, and science . . . so I may have found just the right professional pursuit.

**What is your greatest fear?**

Loss of loved ones too soon.

**What is the proudest moment of your career?**

Joining Doctors of BC.

**What do you most value in your colleagues?**

Professionalism, a sense of duty, and commitment to our members.

**Which talent would you most like to have?**

I would love to be a better golfer. I have managed to learn French as a second language and would like to have time to learn more languages. I have fun during family karaoke nights—singing terribly, according to my children.

**What is the trait you most deplore in yourself?**

Being too focused on the destination and not soaking up the joy of the journey.

**What is your most marked characteristic?**

My sense of humor.

**What do you consider your greatest achievement?**

Being a father to my children is certainly my most precious responsibility and one that I treasure deeply. As a professional, I have sought to continue to improve my skills, whether it was by completing my MBA part-time, completing my second language training, or recently completing my Institute of Corporate Directors designation. Investing in my personal development and growth is important for me and the people I lead.

**What is your favorite activity?**

Summer days on Grand Lake with my family and friends.

**What is your idea of perfect happiness?**

My family together, just being.

**What is your favorite place?**

Sitting next to a fire with my family.

**Who are your heroes?**

My father was born into a farm family. He lost his father during his teen years and was in a position to find a path for himself with the help of my grandmother and a supportive, caring uncle. He raised a family with my mother, owned a farm, and later launched a successful business while being active in the community and in politics. His love of family, determination, and focus are inspiring to me.

**On what occasion do you lie?**

To protect the ones I love from harsh realities.

**Which words or phrases do you most overuse?**

Threading the needle.

**What is your favorite book?**

*A Promised Land* by Barack Obama.

**What technological advancement do you most anticipate?**

Robots that will clean my house (well).

**What is your greatest regret?**

Not spending enough time with my children.

**What is your motto?**

Life is not a straight line. ■

NEW ARTICLE TYPE:

# BC Stories

**H**ave 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](https://bcmj.org/submit-article)

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TELUS Health MyCare™

# Help your patients connect with mental health and dietitian support

Over half of Canada's large employers (those employing more than 1000 people), and one third of employers overall, have increased their extended mental health benefit coverage during the pandemic<sup>1</sup>. However, **fewer than 40% of eligible individuals are accessing these benefits**. Many people may not know that they have options and that a service like TELUS Health MyCare is available to make mental health more accessible and to help change lives.

**TELUS Health MyCare** can help your patients and their families right from home, whether they're facing daily challenges or severe conditions. Help improve outcomes with access to trusted experts like mental health professionals and registered dietitians.



## Access Clinical Counsellors and Registered Psychologists

Your patients can choose to connect with a diverse group of mental health professionals, including registered psychologists, registered clinical counsellors, and registered social workers<sup>2</sup>.



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Your patients can video chat with a registered dietitian<sup>2</sup> to action your dietary recommendations and create healthier routines.



## Easy online booking for patients

Personalized consultations are covered by most extended health plans and can be booked and accessed from a smartphone — at their convenience and from the comfort of home.



Let your patients know they can download the app and access same day mental health and dietitian appointments

[telus.com/MentalHealth](https://telus.com/MentalHealth)

<sup>1</sup> Mental Health Commission of Canada <sup>2</sup> Users must be 16 years or older to access Registered Dietitian or counselling appointments. Dietitian and counselling appointments require an additional payment of \$120 per appointment (for counselling appointment, taxes are extra). Any payments for appointments must be paid using a valid credit card. TELUS, the TELUS Health logo, LivingWell Companion, and telus.com are trademarks of TELUS Corporation, used under license. All copyrights for images, artwork and trademarks are the property of their respective owners. All rights reserved. © 2022 TELUS. Screen images are simulated.



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