

BCMJ

A Doctors of BC Publication

The triple burden experienced by incarcerated people in BC: Mental illness, substance use, and poverty

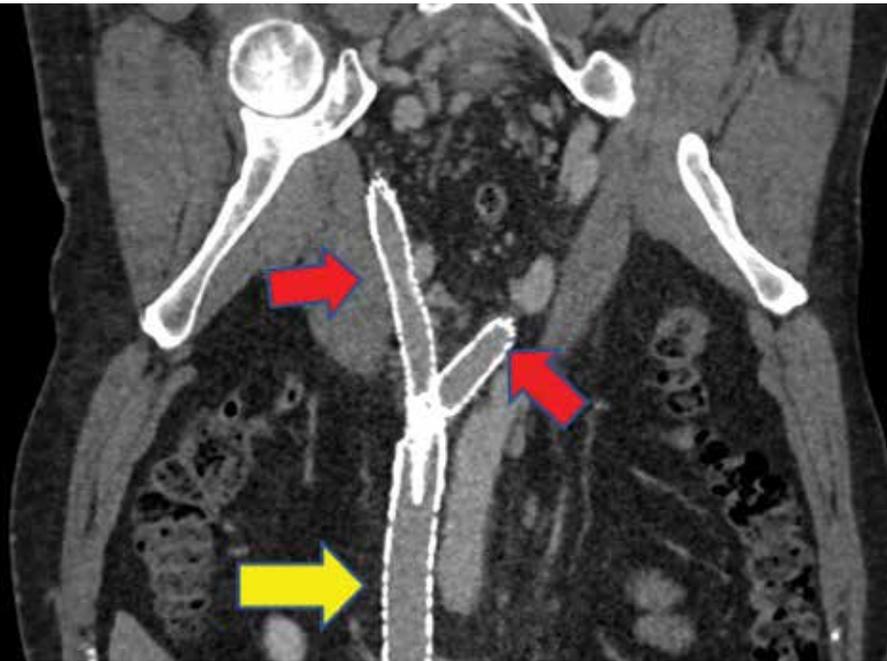


IN THIS ISSUE

Case Report: Iliocaval reconstruction for the treatment of postthrombotic syndrome

Beyond Medicine: Commemorating 2 centuries since the death of the inventor of the stethoscope

Editorial: Fertility preservation options for people with cancer



CT scan showing patent inferior vena cava (yellow arrow) and bilateral common iliac vein (red arrows) stents. "Iliocaval reconstruction for the treatment of postthrombotic syndrome" begins on page 96.

Mission: The *BCM J* is a general medical journal that shares knowledge while building connections among BC physicians.

Vision: The *BCM J* is an independent and inclusive forum to communicate ideas, inspiring excellent health care in British Columbia.

Values

Quality: Publishing content that is useful, current, and reliable.

Connections: Sharing diversity of thought and experiences from across the province and promoting communication between BC doctors.

Impact: Striving for healthier patients and communities by amplifying physicians' voices, opinions, research, and news.

Print: Distributed 10 times per year.

Web: All content is available at www.bcmj.org.

Subscribe to notifications: To receive the table of contents by email, visit www.bcmj.org and click on "Free e-subscription."

Unsubscribe from print: Send an email with your name and address and the subject line "Stop print" to journal@doctorsofbc.ca.

Prospective authors: Consult "Submit content" at www.bcmj.org/submit-content.

88 Editorials

- Fertility preservation options for people with cancer

Caitlin Dunne, MD

- Cutting the Interim Federal Health Program is the wrong prescription for cost savings in health care

Kristopher Kang, MD

91 President's Comment

Our role in planetary health
Adam Thompson, MD

93 Beyond Medicine

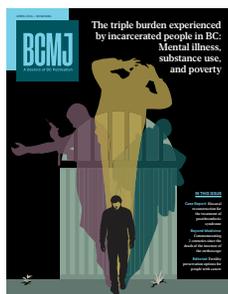
Commemorating 2 centuries since the death of the inventor of the stethoscope
Amir Dolatabadi, MD

CLINICAL

CASE REPORT

96 Iliocaval reconstruction for the treatment of postthrombotic syndrome

Anand Dhatt, MD
Manraj K.S. Heran, MD
Stephen Ho, MD
Nevin de Korompay, MD
Adam Min, MD
Leslie Zypchen, MD
Erica Peterson, MD
Chieh Min (Benjamin) Lai, MD
Ravjot Dhatt, MD



ON THE COVER

Comprehensive treatment for mental illness and substance use disorder is needed in provincial correctional centres, and postrelease supports must link people with housing, education, and employment opportunities. Article begins on page 100.

Editor-in-chief
Caitlin Dunne, MD

Editorial Board
Terri Aldred, MD
Denise Jaworsky, MD
Kristopher Kang, MD
Sepehr Khorasani, MD
Inderveer Mahal, MD
Michael Schwandt, MD
Yvonne Sin, MD

Executive editor
Jay Draper

Associate editor
Joanne Jablkowski

Production editor
Tara Lyon

Copy editor, scientific content
Tracey D. Hooper

Proofreader and web coordinator
Amy Haagsma,
West Coast Editorial Associates

Cover art
Zara Contractor,
Designer and design researcher

Design and production
Laura Redmond,
RetroMetro Designs Inc.

Advertising
Tara Lyon, 604 638-2815
journal@doctorsofbc.ca

ISSN 0007-0556 (print)
ISSN 2293-6106 (online)
Established 1959

Open access policy
The *BCM J* is a Diamond Open Access peer-reviewed journal. All content is available for free at www.bcmj.org. Authors pay no fees and retain copyright of their work.





Two early stethoscopes—one made of tightly rolled paper and one made of wood. “Commemorating 2 centuries since the death of the inventor of the stethoscope” begins on page 93.

ORIGINAL RESEARCH

100 The triple burden experienced by incarcerated people in British Columbia: Mental illness, substance use, and poverty
 Amanda K. Slaunwhite, PhD
 Kim Rondeau, MSc
 Kate Roth, MA
 Juls Budau, MSW
 Ever Sabadash
 Tonia L. Nicholls, PhD
 Ashok Krishnamoorthy, MD
 Amanda Butler, PhD
 Annabel Mead, MBBS
 Lisa McQuarrie, MSc

105 BCCDC
 From global threats to local practices: The important role British Columbian clinicians play in world health security
 Jat Sandhu, MPH

106 COHP
 Where there’s smoke, there’s fire: The harms of vaping and British Columbia’s efforts to tackle this growing issue
 Hamza Ballouk, MD
 Aven Poynter, MD
 William Liu, BHSc

107 JCCs
 CanScreen: Making cancer screening more accessible for patients without a family doctor
 Stuart Bax, MBCChB
 Cal Shapiro, MD

108 WorkSafeBC
 Patients can now easily report most work-related injuries to WorkSafeBC online
 Angelo Cabalfin

110 Obituaries

- Dr Terrence (Terry) F. Rutherford
- Dr Gordon E. Dower
- Dr Joseph (Joe) Frank Schweigel
- Dr Charles Peter Stockdill

113 Classifieds

Environmental impact

The *BCMJ* seeks to minimize its negative impact on the environment by:



- Supporting members who wish to unsubscribe from print and read online at bcmj.org instead*
- Avoiding routine bag and envelope use, and using recyclable paper envelopes when needed
- Offsetting biomass consumed for printing through certified reforestation with PrintReleaf
- Printing locally using paper made in BC
- Working with Mitchell Press, winner of the Most Environmentally Progressive Printing Company award at the Canadian Printing Awards in 2023

*Send an email with your name and address and the subject line “Stop print, start online” to journal@doctorsofbc.ca

Postage paid at Vancouver, BC. Canadian Publications Mail, Product Sales Agreement #40841036. Return undeliverable copies to *BC Medical Journal*, 115–1665 West Broadway, Vancouver, BC V6J 5A4; tel: 604 638-2815; email: journal@doctorsofbc.ca.

Advertisements and enclosures carry no endorsement of Doctors of BC or the *BCMJ*. The *BCMJ* reserves the right to refuse advertising.

We humbly acknowledge the traditional territories of First Nations within British Columbia and that our offices are situated on the unceded territories of the x̱məθkʷəy̱əm (Musqueam), Skwxwú7mesh (Squamish), and səliwətaʔ (Tseil-Waututh) Nations. For Doctors of BC, acknowledging the traditional territories is an expression of cultural humility that involves recognizing our commitment to support the provision of culturally safe care to Indigenous Peoples in BC.

© 2026 by article authors or their institution, in accordance with the terms of the Creative Commons Attribution (CC BY-NC-ND 4.0) licence. See <https://creativecommons.org/licenses/by-nc-nd/4.0/>. Any use of materials from the *BCMJ* must include full bibliographic citations, including journal name, author(s), article title, year, volume, and page numbers. If you have questions, please email journal@doctorsofbc.ca.

Statements and opinions expressed in the *BCMJ* reflect the opinions of the authors and not necessarily those of Doctors of BC or the institutions they may be associated with. Doctors of BC does not assume responsibility or liability for damages arising from errors or omissions, or from the use of information or advice contained in the *BCMJ*.

Fertility preservation options for people with cancer

April is Cancer Awareness Month in British Columbia.

When a young person is diagnosed with cancer, conversations about survival, staging, and treatment timelines understandably dominate early visits. In busy oncology clinics, discussions about future fertility can feel secondary—especially when care pathways are complex and time-sensitive.

In British Columbia, hundreds of individuals of reproductive age are diagnosed with cancer each year. Survival rates are high, and many will live long lives after treatment, but infertility becomes an unexpected and devastating consequence of cure.

Breast cancer is the most common cancer diagnosed in individuals of reproductive age—affecting over 4200 people in British Columbia in 2025,¹ 10% to 15% of whom are estimated to be of reproductive age. Hematologic malignancies; colorectal, thyroid, and testicular cancers; and melanoma are also among the most prevalent cancers in younger patients referred for fertility preservation. Encouragingly, 5-year survival rates are over 80% for children and adolescents and over 70% for adults.² With improved survival comes a responsibility to address life after cancer, including the possibility of biological parenthood.

Many cancer treatments, including chemotherapy and ionizing radiation, can significantly compromise future reproductive potential or cause permanent sterility. A 2024 clinical practice guideline from the Canadian Fertility and Andrology Society provides an excellent framework for fertility preservation in patients facing gonadotoxic treatment.²

First and foremost, it's essential to acknowledge that coordinating care between medical, radiation, and surgical

oncology teams is complex and involves difficult conversations. Survival takes precedence, but fertility and future childbearing should be included in any informed-consent discussions for those facing gonadotoxic therapies. Even when family building feels distant, research consistently shows that many cancer survivors want biological children.² The psychological impact of infertility after cancer can be devastating, contributing to depression, anxiety, grief, and reduced quality of life.³

Fertility preservation for people with ovaries

Ovaries contain a finite number of eggs at birth, so approaches to protect and/or cryopreserve eggs are important to consider before beginning cancer treatment. High-dose alkylating agents, such as cyclophosphamide for breast cancer, are particularly gonadotoxic and can damage ovarian reserve and future reproductive potential. Although menses may resume after chemotherapy, this does not reliably indicate ongoing fertility. Long-term follow-up studies consistently demonstrate poorer reproductive outcomes among childhood cancer survivors.² Pelvic radiation or radiation prior to bone marrow transplant can reduce ovarian reserve, and uterine exposure can complicate future pregnancy.²

Considerations:

- Egg freezing is the most common option for reproductive-aged patients with ovaries. Ovarian stimulation with gonadotropins typically takes 8 to 14 days and, if necessary, can begin at any time of the menstrual cycle. Fertility clinics prioritize oncology referrals and can often initiate treatment promptly to avoid delaying cancer therapies.⁴

- Embryo freezing may be preferred when a patient has committed to a sperm source. Embryos provide additional prognostic information, allow for preimplantation genetic testing, and generally demonstrate stronger survival than eggs in freeze-thaw.
- Gonadotropin-releasing hormone agonist therapy (e.g., leuprolide acetate) during chemotherapy for breast cancer may offer ovarian protection.⁵
- Ovarian transposition can reduce radiation exposure in patients requiring pelvic radiation.
- Ovarian tissue freezing is currently the only fertility preservation option for prepubertal patients. Tissue is removed laparoscopically and frozen for future transplantation.⁶

Fertility preservation for people with testes

Spermatogenesis takes about 70 days and continues throughout life. Although a normal semen sample contains more than 40 million sperm, counts may be reduced due to illness or treatment, so reassessment over time may be appropriate.

Considerations:

- Sperm freezing remains the standard approach for postpubertal patients. Even very low numbers may be sufficient for future in vitro fertilization (IVF). Banking multiple samples can improve prognosis and give the flexibility to use the sample for insemination or IVF.
- For patients unable to produce a semen sample, sperm-retrieval techniques are available.
- Testicular tissue freezing in prepubertal patients remains experimental.

Ideally, fertility preservation would occur before exposure of the gonads to cancer treatment. However, discussions about reproductive health are valuable at any stage of care. The updated 2025 American Society of Clinical Oncology guideline reiterates that people with cancer should be counseled about reproductive implications throughout treatment and survivorship.⁷ Despite advocacy, fertility preservation is not covered under the Medical Services Plan. Fertility clinics and pharmaceutical companies often substantially reduce fees for fertility preservation in cancer patients, and there are also charitable organizations that assist with fees in eligible patients.

Oncology care is demanding, and clinicians are rightly focused on timely treatment in a resource-constrained environment. Yet, as survival rates continue to improve, fertility conversations are increasingly a part of comprehensive cancer care. For many young patients, the possibility of a future

family represents hope, normalcy, and life beyond cancer.

To my oncology colleagues, thank you. The emotional and clinical weight of your work is immense. Making space for fertility discussions, when possible, is a powerful extension of the compassionate care you already provide. ■

—Caitlin Dunne, MD

References

1. Canadian Cancer Statistics Advisory Committee, Canadian Cancer Society, Statistics Canada, Public Health Agency of Canada. Summary of projected number of cancer cases and deaths in British Columbia (BC) in 2025. BC-specific stats 2025. 2025. Accessed 2 March 2026. <https://cdn.cancer.ca/-/media/files/research/cancer-statistics/2025-statistics/2025-province-specific/bc-specific-stats-2025.pdf>.
2. Roberts JE, Benoit J, Foong S, et al. Fertility preservation in patients undergoing gonadotoxic treatments: A Canadian Fertility and Andrology Society clinical practice guideline. *Reprod Biomed Online* 2024;48:103767. <https://doi.org/10.1016/j.rbmo.2023.103767>.

3. Ussher JM, Perz J, Australian Cancer and Fertility Study Team. Threat of biographical disruption: The gendered construction and experience of infertility following cancer for women and men. *BMC Cancer* 2018;18:250. <https://doi.org/10.1186/s12885-018-4172-5>.
4. American Society for Reproductive Medicine. Planned oocyte cryopreservation to preserve future reproductive potential: An ethics committee opinion. Accessed 2 March 2026. www.asrm.org/practice-guidance/ethics-opinions/planned-oocyte-cryopreservation/.
5. Munhoz RR, Pereira AAL, Sasse AD, et al. Gonadotropin-releasing hormone agonists for ovarian function preservation in premenopausal women undergoing chemotherapy for early-stage breast cancer: A systematic review and meta-analysis. *JAMA Oncol* 2016;2:65-73. <https://doi.org/10.1001/jamaoncol.2015.3251>.
6. Canadian Fertility and Andrology Society. Position statement on ovarian tissue cryopreservation. August 2020. Accessed 2 March 2026. https://cfas.ca/_Library/2020positionstatements/CFAS-Position-Statement-Ovarian-Cryo-Formatted.pdf.
7. Su HJ, Lacchetti C, Letourneau J, et al. Fertility preservation in people with cancer: ASCO guideline update. *J Clin Oncol* 2025;43:1488-1515.

GROW YOUR PRACTICE WITH BOTOX

Therapeutic & Aesthetic Injectables Training

- Train to the highest Standard of Practice in Canada for facial aesthetics
- The most clinically based training Inject 8+ patients at the hands-on
- Anatomy-based training 25 hrs in Level 1 online

SAVE
\$500
LEVEL 1

START TODAY WITH THE ONLINE LEVEL 1 ANATOMY COURSE (25 CE)

USE "SAVENOW" PROMO CODE. EXP APR 30, 2026

PACIFIC TRAINING INSTITUTE
for FACIAL AESTHETICS & THERAPEUTICS

Level 2 clinical hands-on training available in the following cities:
Vancouver • Calgary • Saskatoon • Montreal • Toronto • Halifax • St. John's

PTIFA.com | 1-855-681-0066

Cutting the Interim Federal Health Program is the wrong prescription for cost savings in health care

The strength of a health care system can be measured by its commitment to those who need it most. For decades, the Interim Federal Health Program (IFHP) has served as a critical, albeit temporary, safety net for refugees, asylum seekers, and others fleeing violence while they await provincial coverage. Many of these families are fleeing persecution and humanitarian disasters in settings where health care and social systems are non-existent or inaccessible. Often, prioritizing safety and other basic needs means that physical and mental health concerns have gone unmet. For these families, Canada offers the promise of a new start.

The federal government's recent announcement to introduce co-payments for "supplemental" health care products and services, effective 1 May 2026, marks a concerning shift that risks the health and well-being of these newcomers.¹ Patients will be required to cover a \$4 co-payment for every prescription and 30% of the cost of supplemental services, including dental care, vision care, and mental health counseling. Immigration, Refugees and Citizenship Canada (IRCC) has framed these changes as necessary for "long-term sustainability."

Professional associations and advocacy groups have spoken out about the deep problems inherent in the IRCC's position, decrying the negative impact on affected families and underscoring the duty to uphold basic rights to health care.² The policy change is wrong, not only from a human rights perspective, but also from an economic one. While the revised program provides funding for doctor and hospital visits, co-payments for the treatments we prescribe constitute a major barrier to

accessing the medicine patients need to stay healthy. We know that co-payments prevent the use of essential treatments and have measurable morbidity and mortality risks.^{3,4} Social determinants of health such as poverty and trauma, which affect many IFHP beneficiaries, amplify those effects. The combined impact will result in a need for more emergency room visits, more inpatient hospital stays, more physician time, and, ultimately, higher costs overall. Shifting the financial load from one silo to another is cost shuffling, not cost saving.

While the harm will be felt most directly by IFHP patients whose supports are cut, the wider threats to Canadian health care will affect us all.

None of this is new. In 2012, the federal government repealed the IFHP, once again claiming that cuts would decrease health care costs. Research from Ontario following those cuts found that while the number of emergency room visits by refugee children decreased, the admission rate nearly doubled, from 6.4% to 12.0%.⁵ Children were presenting sicker, because they could no longer access or afford the preventive care and medications that keep chronic conditions stable.

While the harm will be felt most directly by IFHP patients whose supports are cut, the wider threats to Canadian health care will affect us all. By pushing people who are unable to afford entry-level access to

care into clogged emergency departments and hospitals bursting with patients, the IRCC decision tightens critical bottlenecks in an already overstretched health system and makes it harder for everyone to access what they need.

To sustain the health care system for future generations, there is no doubt that we need innovation to address the rising costs and demands; however, limiting the care provided through the IFHP is not the answer. ■

—**Kristopher Kang, MD, FRCPC**

References

1. Immigration, Refugees and Citizenship Canada. Changes to the Interim Federal Health Program. 27 January 2026. Accessed 27 February 2026. www.canada.ca/en/immigration-refugees-citizenship/news/notices/changes-ifhp.html.
2. Sauvé L, Hui C, Suleman S, et al. Letter to Hon. Lena Metlege Diab, Minister of Immigration, Refugees and Citizenship. Canadian Paediatric Society. 20 February 2026. Accessed 1 March 2026. https://cps.ca/uploads/advocacy/Changes_to_IFHP.pdf.
3. Newhouse JP, Insurance Experiment Group. Free for all? Lessons from the RAND Health Insurance Experiment. Cambridge, MA: Harvard University Press; 1993.
4. Chernew M, Gibson TB, Yu-Isenberg K, et al. Effects of increased patient cost sharing on socioeconomic disparities in health care. *J Gen Intern Med* 2008;23:1131-1136. <https://doi.org/10.1007/s11606-008-0614-0>.
5. Evans A, Caudarella A, Ratnapalan S, Chan K. The cost and impact of the Interim Federal Health Program cuts on child refugees in Canada. *PLoS One* 2014;9:e96902. <https://doi.org/10.1371/journal.pone.0096902>.



Our role in planetary health

On 22 April, we mark Earth Day. For those of us living in British Columbia—a province defined by forests, rivers, mountains, and coastline—it is increasingly difficult to ignore the changes unfolding around us. Shifting weather patterns, more frequent extreme events, and disrupted seasons are no longer abstract projections; they are lived realities. Climate change is not something we are preparing for in the future. It is something we are responding to now.

My interest in climate health began in the early 2000s, shortly after I became a father. Like many parents, I began thinking differently about the future—not only in terms of opportunity, but also in terms of responsibility. We hope to leave our children something meaningful, and that inheritance must include a stable, habitable world where they can thrive.

Over time, I've tried to align my actions with those values. While working in the UK, I led changes that reduced our clinic's energy use and operating costs. Today, both of our family vehicles are electric. Whenever possible, I drive to Vancouver rather than flying. Over a year of board meetings, that choice reduced my carbon footprint by the equivalent of driving a gasoline vehicle more than 10 000 km. It also brought unexpected benefits: a calmer journey and time to reflect or work. These are modest steps, but they reinforce an important truth: many climate solutions also improve quality of life.

Unfortunately, as my interest deepened, I watched climate change become increasingly politicized. That is profoundly frustrating. Climate change should not be a

political issue—just as vaccines should not be. The science is clear. The health impacts are well established. And many solutions are already available.

Climate change does not exist in isolation. Biodiversity loss is now recognized as a national security risk. Recent assessments have highlighted how climate change and ecological degradation—including threats

Doctors of BC is actively promoting sustainability by making it a core principle of our strategic plan and embedding environmental responsibility across all aspects of our work.

to boreal forests in countries like Canada—can contribute to food insecurity, water shortages, pandemics, economic instability, forced migration, and conflict. These pressures deepen polarization and destabilize systems globally.

We are already living the consequences. Wildfires have forced evacuations of long-term care facilities and hospitals. Flooding has closed emergency departments. The 2021 heat dome contributed to the deaths of 619 British Columbians, many of them elderly or vulnerable. Climate change is altering disease patterns, worsening respiratory illness, exacerbating chronic conditions, and placing new strain on already stretched systems.

Health care itself is also a significant contributor to carbon emissions. At the same time, it is recognized as a pillar of national security—now explicitly linked to climate stability. Climate change affects supply chains, infrastructure, workforce resilience, and system readiness. Suggesting it falls outside our mandate is no longer tenable.

So, what are we doing at Doctors of BC? In 2021, our Council on Health Promotion (COHP) developed a policy statement on climate change and human health.¹ That was an important step, and aspects will continue to be updated as new supports and evidence emerge. Through COHP, we also encourage broader systemic change toward a health care system that is environmentally responsible and resilient.

Doctors of BC is also actively promoting sustainability by making it a core principle of our strategic plan and embedding environmental responsibility across all aspects of our work. We support physicians in adopting more sustainable practices; reduce demand for health services through chronic disease management; and reduce emissions where possible by sharing resources, tool kits, and educational opportunities for physicians. You can learn more about this work and access guides, tool kits, and webinars on our sustainability web page.²

The Association of Faculties of Medicine of Canada has also developed the *Roadmap for Planetary Health and Sustainable Health Systems for Canadian Medical Professionals*, which aims to map out where we stand today, identify effective interventions, and enhance collaboration across all

PRESIDENT'S COMMENT

levels of medical education and health care delivery.³

But it's important that we keep building upon these initiatives. Through our strong relationship with government, I will do all I can to ensure that physician leaders are meaningfully engaged with and included in climate initiatives. I will also continue ongoing conversations with provincial and territorial medical associations and the Canadian Medical Association, supporting collaboration and shared responsibility for a challenge that transcends regions.

Climate change is not a future problem. It is a present reality—one that sits squarely within our responsibility as health care leaders and advocates. I hope you will join me in acting with urgency and purpose. ■

—Adam Thompson, MD
Doctors of BC President

References

1. Doctors of BC. Climate change and human health. Policy statement. Updated June 2021. Accessed 13 February 2026. www.doctorsofbc.ca/sites/default/files/2021-06/climate_change_and_human_health.pdf.
2. Doctors of BC. Sustainability. Accessed 13 February 2026. www.doctorsofbc.ca/about-us/what-we-stand/sustainability.
3. Howard C, Marks R. Roadmap for planetary health and sustainable health systems for Canadian medical professionals. Version 2. Association of Faculties of Medicine of Canada. 8 November 2024. Accessed 13 February 2026. www.afmc.ca/wp-content/uploads/2025/09/AFMC-Roadmap-on-Planetary-Health-EN-Reformatted.pdf.

Additional reading

His Majesty's Government. Global biodiversity loss, ecosystem collapse and national security: A national security assessment. Updated 2 February 2026. https://assets.publishing.service.gov.uk/media/696e0eae719d837d69afc7de/National_security_assessment_-_global_biodiversity_loss__ecosystem_collapse_and_national_security.pdf.

RSRS since 1997
SECURE • COMPLIANT • TRUSTED



**CLOSING or TRANSITIONING
YOUR
MEDICAL PRACTICE?**

We ensure the transition is simple,
seamless, secure and... compliant.

- PRACTICE CLOSURE
- NOTIFICATION
- COMPLIANT STORAGE
- RECORD TRANSFERS
- PATIENT PLACEMENT



Protect Your Patients. Protect Your Legacy.

Safe & Secure | Fast & Searchable | Across Canada

1.888.563.3732 | www.RecordSolutions.ca

Passport to prizes contest

Enter to win one of five
\$10,000 travel vouchers.*



Scan the QR code and
enter to win one of five
\$10,000 vouchers.

belairdirect.
travel insurance



Commemorating 2 centuries since the death of the inventor of the stethoscope

The life and contributions of René-Théophile-Hyacinthe Laennec, one of medicine's greatest figures.

Amir Dolatabadi, MD



FIGURE 1. Engraving of Laennec from the *Centenaire de la Faculté de médecine de Paris (1794–1894)*, published in 1906.

This year marks the bicentennial of the death of René-Théophile-Hyacinthe Laennec (1781–1826), who revolutionized medicine with the invention of the stethoscope in 1816 and his pioneering studies in auscultation. By integrating clinical observation with pathological anatomy, Laennec transformed the practice of medical diagnosis. His seminal work, *De l'auscultation médiate ou Traité du diagnostic des maladies des poumon et du cœur*

(1819), was a comprehensive treatise on diseases of the chest and the diagnostic value of auscultation.

Childhood

Laennec [Figure 1] was born on 17 February 1781 in Quimper, Brittany, in northwestern France. He was the first child of Théophile-Marie Laennec (1747–1836) and Michelle-Gabrielle-Félicité Guesdon (1754–1786). He had one brother, Michel (known as Michaud) (1782–1810), and one sister, Marie-Anne (1785–1853). His mother died when he was 5 years old. Both sides of his family included distinguished figures, some of whom served as mayors of Quimper, and others as lawyers.^{1,2}

Laennec's father was a lawyer, intelligent but also selfish and opportunistic. Unable to care for his children, he entrusted them to relatives. The two sons lived with their uncle, a priest, for a year. When this uncle was transferred to another city, he asked his other brother, Guillaume François Laennec (1748–1822), a physician in Nantes, to take charge of the boys.

The brothers arrived in Nantes on 15 May 1788. Théophile (as he was known to his close relatives) did not see his father for 9 years, until 1797. In the meantime, in 1794, his father remarried.

Laennec was profoundly influenced by his physician-uncle. Two of his cousins, Ambroise and Mériadec, also pursued careers in medicine. Mériadec became Laennec's most devoted student, his *chef*

de clinique, and the custodian of his scientific papers.³

Politics in his time

Laennec grew up during a period of great upheaval, witnessing the French Revolution, the First French Empire, and the Bourbon Restoration. To maintain control of France and combat both internal and external enemies, the revolutionary government instituted the Reign of Terror, one of its principal instruments being execution by guillotine. In Nantes, the guillotine was installed directly in front of Laennec's uncle's house in March 1793.

Brittany was home to numerous counter-revolutionary insurgents known as *Chouans*, and frequent clashes took place between them and government forces. To suppress the uprising, the National Convention dispatched Jean-Baptiste Carrier, who committed numerous atrocities in the region.

At 14 years of age, Laennec enlisted in the Revolutionary Army as a medical aide (1795–1800). The family's economic situation was difficult, and in Laennec's letters to his father, he frequently requested financial assistance. His father occasionally sent money, but it was never sufficient.

Medical studies

In April 1801, Laennec left Nantes for Paris to complete his medical studies. He proved to be a brilliant student and graduated from medical school in 1804. Deeply devoted to Hippocrates, he dedicated his thesis, *The*

Dr Dolatabadi is a neurology consultant in Medicine Hat, Alberta.

This article has been peer reviewed.

Doctrine of Hippocrates and Its Relation to Practical Medicine, to his physician-uncle.

Laennec studied under several of the most important physicians of the time, including Jean-Nicolas Corvisart, Jean-Noël Hallé, Philippe Pinel, and Guillaume Dupuytren. He also formed friendships with other prominent physicians, such as Gaspard-Laurent Bayle. Under the influence of Bayle, Laennec became a Royalist and a devout Catholic. Both men were members of the Congregation, a Catholic society. These convictions were not widely welcomed in postrevolutionary France.

Laennec worked at the Hôpital de la Charité de Paris under Corvisart. As a student, he meticulously recorded the case histories and physical examinations of nearly 400 patients. In 1802, he began publishing some of these observations; his first report concerned a patient with a remarkable cardiac condition. That same year, he described six patients who died of a disorder he termed *peritonitis*. This article brought him recognition and led to his appointment in Dupuytren's pathology laboratory.

In 1803, he won two major prizes in medicine and surgery, respectively. At the same time, he began publishing articles on a wide range of subjects, including the tunics enveloping certain viscera, the lining membranes of the cerebral ventricles, the capsule between the acromion and the clavicle, the classification of parasites, and pathological anatomy, along with reviews of other physicians' work. In addition to his superior knowledge of his native Breton language (a Celtic tongue), he had an excellent command of Latin and Classical Greek.

Medical career

Following graduation, Laennec aspired to become a professor, although this did not occur until after the Restoration. In the meantime, he practised medicine and continued to publish scholarly articles. He introduced a new classification for parasites and identified cirrhosis of the liver. He coined the term *cirrhosis*, from the Greek κίρρος, meaning "tawny" or "yellowish-brown," referring to the characteristic color of a cirrhotic liver. Laennec's

cirrhosis is synonymous with alcoholic cirrhosis. He also published the first description of metastatic melanoma, which he termed *melanosis*.

These years marked a turning point in medicine, as new ideas began to replace long-standing beliefs. For centuries, the cause of disease had been attributed to imbalance in the four humors. Dissection was uncommon, and diagnosis relied primarily on limited inspection, pulse description, and urine observation. Significant change began with the study of human anatomy through careful dissection by Andreas Vesalius, whose work *De Humani Corporis Fabrica Libri Septem* (1543) challenged Galen's anatomical assumptions. With enhanced anatomical knowledge, progress in physiology was made by William Harvey, who discovered the circulation of blood, and in anatomical pathology by Théophile Bonet and Giovanni Battista Morgagni.

A major advancement in physical examination came with the invention of percussion by Leopold Auenbrugger, published in

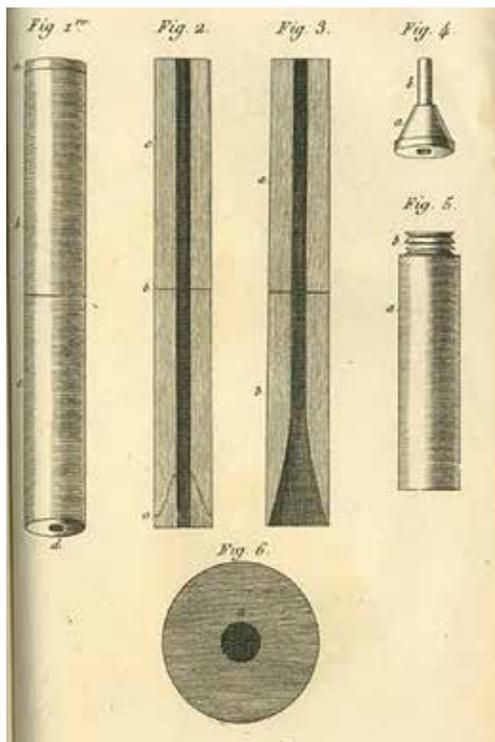


FIGURE 2. An early wooden stethoscope from the 1st edition of *De l'auscultation médiate*, 1819.

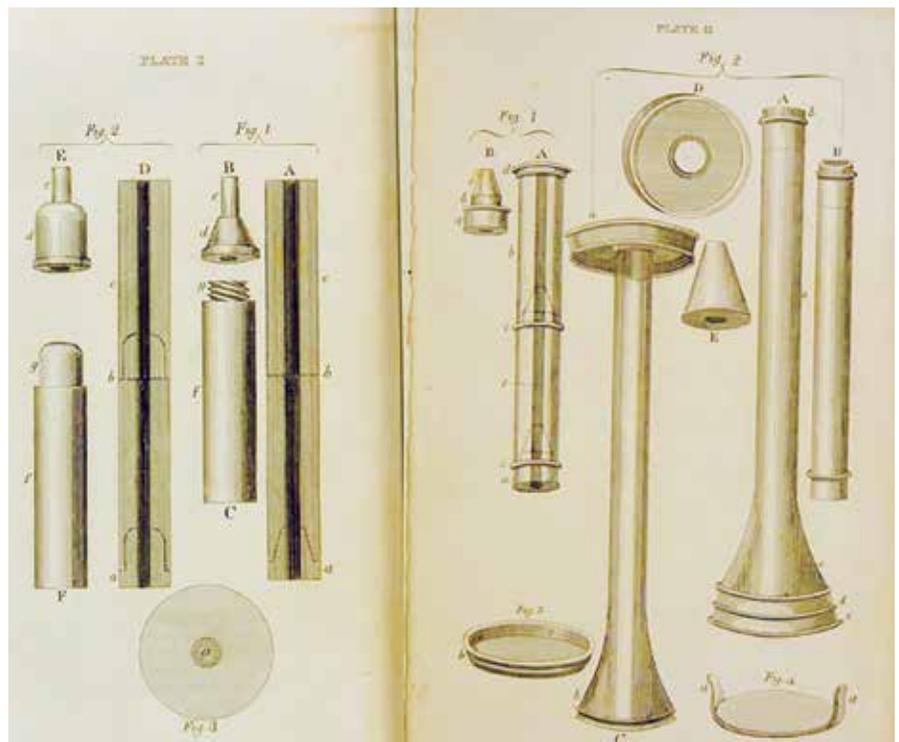


FIGURE 3. Two early wooden stethoscopes from the 4th edition of *De l'auscultation médiate*, 1834.



FIGURE 4. Two early stethoscopes. The one at the front of the shelf is made of tightly rolled paper, and the one at the back is made of wood and was used by Laennec.

Source: Musée d'histoire de la médecine, Université Paris Cité (<http://himetop.wikidot.com/rene-laennec-s-original-stethoscopes>).

his *Inventum Novum* (1761). This technique fell into relative obscurity until rediscovered by Corvisart. By the turn of the 19th century, France had become the centre of the medical world with the establishment of the French Clinical School, a term used by medical historians to describe the approach French physicians took in diagnosing patients at that time (i.e., diagnosis through detailed patient history and physical examination, subsequently confirmed by autopsy). Corvisart made extensive use of percussion, and it was said that he could predict pathological findings later confirmed at autopsy.

At the time Laennec entered medical school, diseases were classified primarily by symptoms. One authority in this approach was Pinel, who described his method in *Nosographie philosophique ou La méthode de l'analyse appliquée à la médecine*. Young physicians of the period, including Laennec's friend Gaspard-Laurent Bayle (in his 1802 thesis), criticized Pinel and advocated for disease classification based on anatomical localization.

Laennec's primary field of study was pathological anatomy. He lectured on the subject, attempted to classify diseases by their anatomical basis, and even intended to publish a book on the topic, although he never completed it.

In 1816, Laennec was appointed chief physician at the Hôpital Necker-Enfants

malades. Seeking a more effective method for chest examination, he found the traditional approach—placing the ear directly on the patient's chest—crude and uncomfortable. According to his friend Jacques Alexandre Lejumeau, one day, while observing children playing in the Louvre, he noticed one child strike one end of a long wooden stick while another placed their ear at the opposite end, successfully perceiving the transmitted sound. Inspired, Laennec applied the principle to his medical practice: he rolled a piece of paper, placed one end on the chest of a young female patient with cardiac symptoms and the other to his ear, and noted that the sound was transmitted more clearly than with the traditional method.⁴

Laennec named the instrument the *stethoscope* [Figures 2 and 3] and the technique *auscultation*. He subsequently refined the device using various woods [Figure 4] and examined numerous patients, systematically correlating auscultation findings with autopsy results. These investigations culminated in his seminal work, *De l'auscultation médiate*, published in 1819.⁵

Dr Ralph H. Major wrote: "It was far more than a manual for the stethoscope. It was also a treatise on diseases of the lung and the heart, a mine of information on the clinical aspects of pulmonary and cardiac disease, with an accurate description of the pathological anatomy of these conditions. Laennec heard with his stethoscope sounds never before heard or described and for which no terms existed in medical literature. He was the creator of a large number of words now commonly used in physical diagnosis."⁶

At first, this invention was viewed with suspicion and even ridicule; some physicians called it a "French toy." However, unlike Auenbrugger's percussion, it was soon accepted in France and other countries.

Laennec put great effort into the publication of his book and became quite exhausted and ill. In a letter to his father, he wrote: "I knew I was risking my life, but the book I am going to publish will, I hope, sooner or later be useful enough to be worth more than a man's life, and therefore

it was my duty to finish it, whatever might happen to me."⁷

He went to Brittany to rest and later returned to Paris to continue his work. Shortly afterward, his teacher and patron, Hallé, passed away, and Laennec succeeded him as professor of medicine. He was also admitted to the Légion d'honneur.

In 1823, Laennec began working at the Hôpital de la Charité. Medical students as well as physicians from France and abroad attended his classes to learn firsthand about his invention and his approach to patients. He was very kind and courteous to foreigners, particularly the English. At the same time, he was preparing the second edition of his book, which he published in May 1826.

End of life

Suffering from the terminal stage of tuberculosis, Laennec returned to his home in Brittany and died on 13 August 1826,⁸ at the age of 45. No postmortem examination was performed.⁹

He married Jacquemine Guichard (1779–1847) 2 years before his death. The couple had no children.

Legacy

A devout Catholic and a compassionate physician, Laennec remained dedicated to his patients until his death. His name was immortalized by the invention of the stethoscope and the publication of his seminal book, and his legacy endures. The stethoscope continues to serve as a universal symbol of the medical profession. Major medical schools now conduct "stethoscope ceremonies" to welcome new students into the profession. ■

References

1. Rouxeau, A. L'enfance et la jeunesse d'un grand homme: Laennec avant 1806, Quimper, Nantes, Paris, 1781-1805, d'après des documents inédits. Paris: J.-B. Baillière et fils; 1912. pp. 10-16.
2. Saintignon H. Laennec: Sa vie et son œuvre. Paris: J.-B. Baillière et fils; 1904. pp. 17-24.
3. Duffin J. To see with a better eye: A life of R.T.H. Laennec. Princeton, NJ: Princeton University Press; 1998. p. 111.

References continued on page 109

Iliocaval reconstruction for the treatment of postthrombotic syndrome

The case of a complex venous reconstruction procedure involving recanalization, mechanical thrombectomy, and stenting highlights evolving techniques for the management of postthrombotic syndrome.

Anand Dhatt, MD, Manraj K.S. Heran, MD, FRCPC, Stephen Ho, MD, FRCPC, Nevin de Korompay, MD, FRCPC, Adam Min, MD, FRCPC, Leslie Zypchen, MD, FRCPC, Erica Peterson, MD, MSc, MHSc, FRCPC, Chieh Min (Benjamin) Lai, MD, PhD, FRCPC, Ravjot Dhatt, MD, FRCPC

Dr Anand Dhatt is a resident physician in the Department of Radiology, Faculty of Medicine, University of British Columbia.

Dr Heran is a staff interventional neuroradiologist in the Department of Radiology at Vancouver General Hospital. Dr Ho is a staff interventional radiologist in the Department of Radiology at VGH. Dr de Korompay is a staff interventional radiologist in the Department of Radiology at Kelowna General Hospital. Dr Min is a staff interventional radiologist in the Department of Radiology at St. Paul's Hospital. Dr Zypchen is a staff hematologist in the Department of Hematology at VGH. Dr Peterson is a staff hematologist in the Department of Hematology at VGH. Dr Lai is a staff hematologist in the Department of Hematology at VGH and a clinical associate professor at the Centre for Blood Research, UBC. Dr Ravjot Dhatt is a staff interventional radiologist in the Department of Radiology at VGH.

Corresponding author: Dr Ravjot Dhatt, Ravjot.Dhatt@vch.ca.

This article has been peer reviewed.

ABSTRACT: Postthrombotic syndrome is the result of chronic venous obstruction causing symptoms of pain, heaviness, cramping, edema, pruritus, and venous claudication. We present the case of a patient with severe postthrombotic syndrome as a result of chronic deep vein thrombosis of the inferior vena cava, bilateral iliac veins, and infrainguinal deep venous system, secondary to compression by a large conglomerate of lymph nodes due to non-Hodgkin lymphoma. The patient was successfully treated with a complex venous reconstruction procedure involving recanalization, mechanical thrombectomy, and stenting. This case highlights evolving techniques for the management of postthrombotic syndrome.

Background

Deep vein thrombosis is the development of thrombus in the deep venous system, typically in the legs. Conventional first-line therapy is management with oral anticoagulants or occasionally parenteral anticoagulants in specific populations. Up to 50% of patients with deep vein thrombosis have residual vascular obstruction despite adequate anticoagulation.¹⁻⁴ Residual vascular obstruction is associated with adverse events, which include a 3-times-higher risk of death, a 3-times-higher risk of recurrent deep vein thrombosis, and a greater risk of developing postthrombotic syndrome.^{1-3,5} Up to 50% of patients with deep vein

thrombosis develop postthrombotic syndrome;⁶ symptoms include lower extremity pain, heaviness, cramping, edema, pruritus, and venous claudication (including venous leg ulcers).⁷ These symptoms can be severely debilitating: patients with severe postthrombotic syndrome have a quality of life that is comparable to that of patients with congestive heart failure or cancer, and 90% of patients are unable to work 10 years after their diagnosis.^{8,9} Thus, it is imperative to recognize and manage the disease early. As endovascular equipment and techniques have evolved, more procedural options have become available as adjuncts to standard treatment.

We present a case report of endovascular iliocaval reconstruction for the management of a patient who presented with severe postthrombotic syndrome secondary to a deep vein thrombosis due to a large conglomerate mass in the context of stage 4 non-Hodgkin lymphoma. This case report presents an emerging technique in the management of an underrecognized pathology and underscores the importance of multidisciplinary collaboration in the management of complex pathology.

Case description

A 46-year-old patient was diagnosed with stage 4 non-Hodgkin lymphoma after presenting with a large nodal conglomerate

retroperitoneal mass. They subsequently underwent an extended course of chemoimmunotherapy for the treatment of their lymphoma. However, the retroperitoneal mass caused compression on adjacent vasculature and resulted in occlusive thrombus formation within the deep venous system, extending from the inferior vena cava to the ankles [Figure 1]. This required therapeutically dosed anticoagulation, and although the lymphoma went into remission, the thrombus remained. The patient developed significant postthrombotic syndrome as a result of this residual thrombus and experienced symptoms of chronic swelling, pain, heaviness, and, most importantly, venous claudication. These symptoms significantly impacted their quality of life, because daily activities such as walking short distances and exercising were intolerable. Their symptom severity correlated with a severe Villalta score of 22.

The patient's CT scan showed chronic occlusion of the infrarenal inferior vena cava and bilateral iliac system, with extensive pelvic, paralumbar, retroperitoneal, and abdominal wall venous collaterals. The patient's hematologist consulted interventional radiology for endovascular management options. After a detailed discussion of the proposed procedural intervention, the importance of postprocedural antithrombotics, and long-term follow-up, the patient was keen to proceed.

In December 2024, the patient was brought to the angiography suite at Vancouver General Hospital and placed under general anesthesia. Under fluoroscopy, catheter-directed venography showed chronic right lower extremity deep vein thrombosis and ilio caval occlusion with extensive venous collaterals [Figure 2]. Mechanical thrombectomy of the right iliofemoral deep vein thrombosis was performed with subsequent recanalization of the occluded ilio caval veins and venous reconstruction with stents extending from the infrarenal inferior vena cava into the bilateral external iliac veins. On day 1 post-procedure, check venography was performed with augmentation of the stent constructs

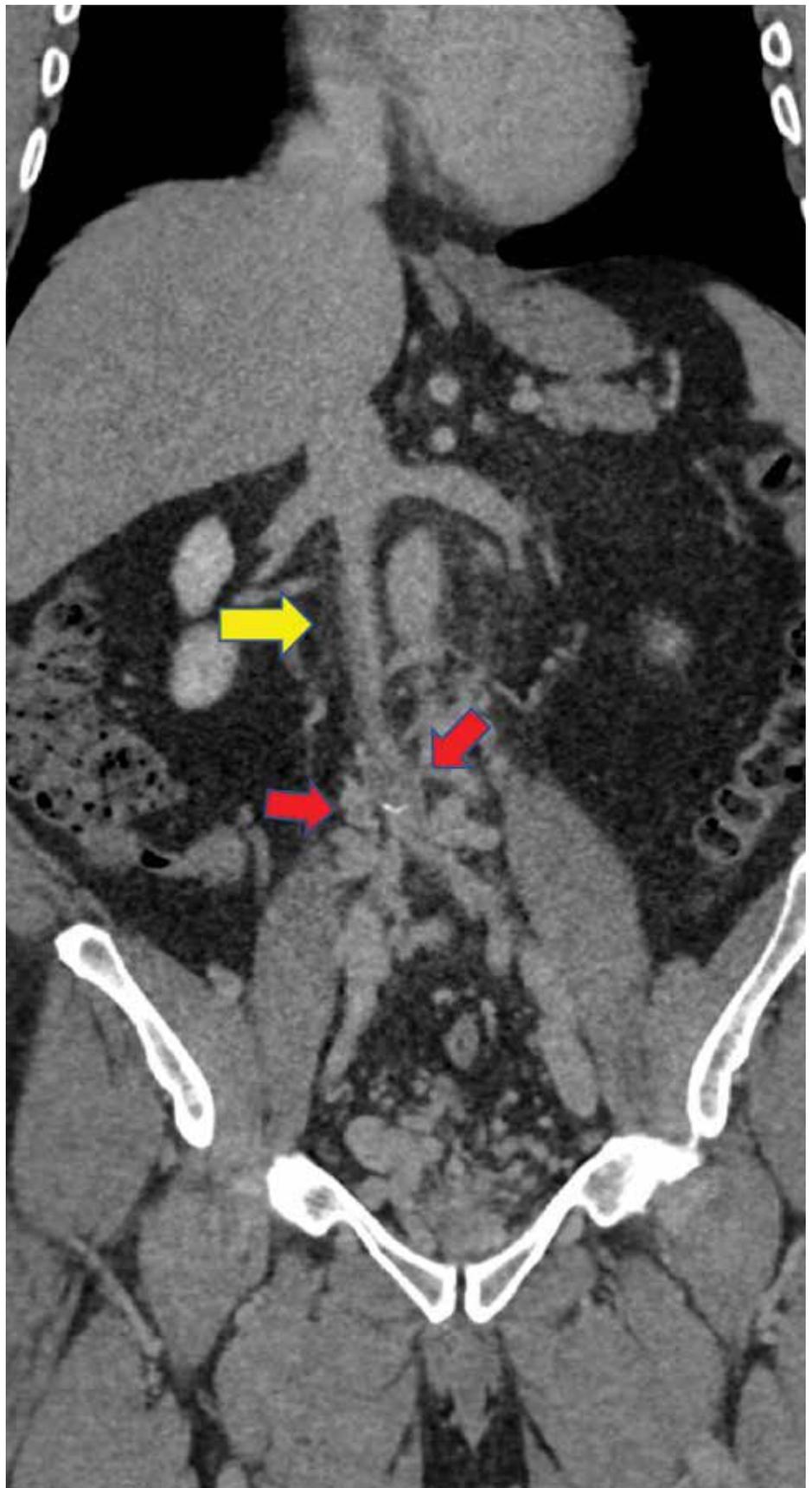


FIGURE 1. CT scan showing chronic occlusion of the inferior vena cava (yellow arrow) and bilateral common iliac veins (red arrows).

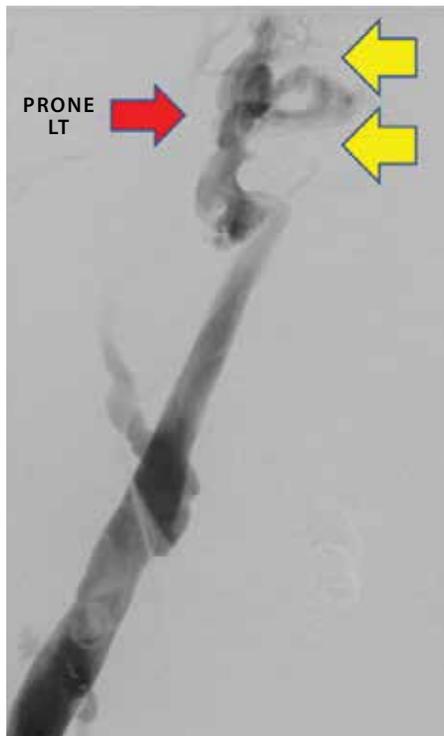


FIGURE 2. Venogram showing ilio caval occlusion (yellow arrows) with extensive abdominopelvic collaterals (red arrow).

through balloon dilation, which resulted in widely patent stents and antegrade flow with no residual filling of the collaterals. The patient was discharged 1 day later with daily low-dose aspirin and therapeutically dosed low-molecular-weight heparin.

The patient lost 13 kg in 3 weeks due to improvement of their venous hypertension and resultant reduction in edema. They were able to advance from walking with a cane to hiking and biking without assistance. They returned to a fit and active lifestyle, nearing their prelymphoma diagnosis status, with a Villalta score of 1. Follow-up assessment 1 year postintervention demonstrated ongoing patency of the stents [Figure 3]. The patient is managed by our multidisciplinary hematology and interventional radiology team and continues to do very well, with no lifestyle limitations.

Discussion

With an estimated annual incidence of deep vein thrombosis being approximately 100 cases per 100 000 person years and post-thrombotic syndrome developing in up to

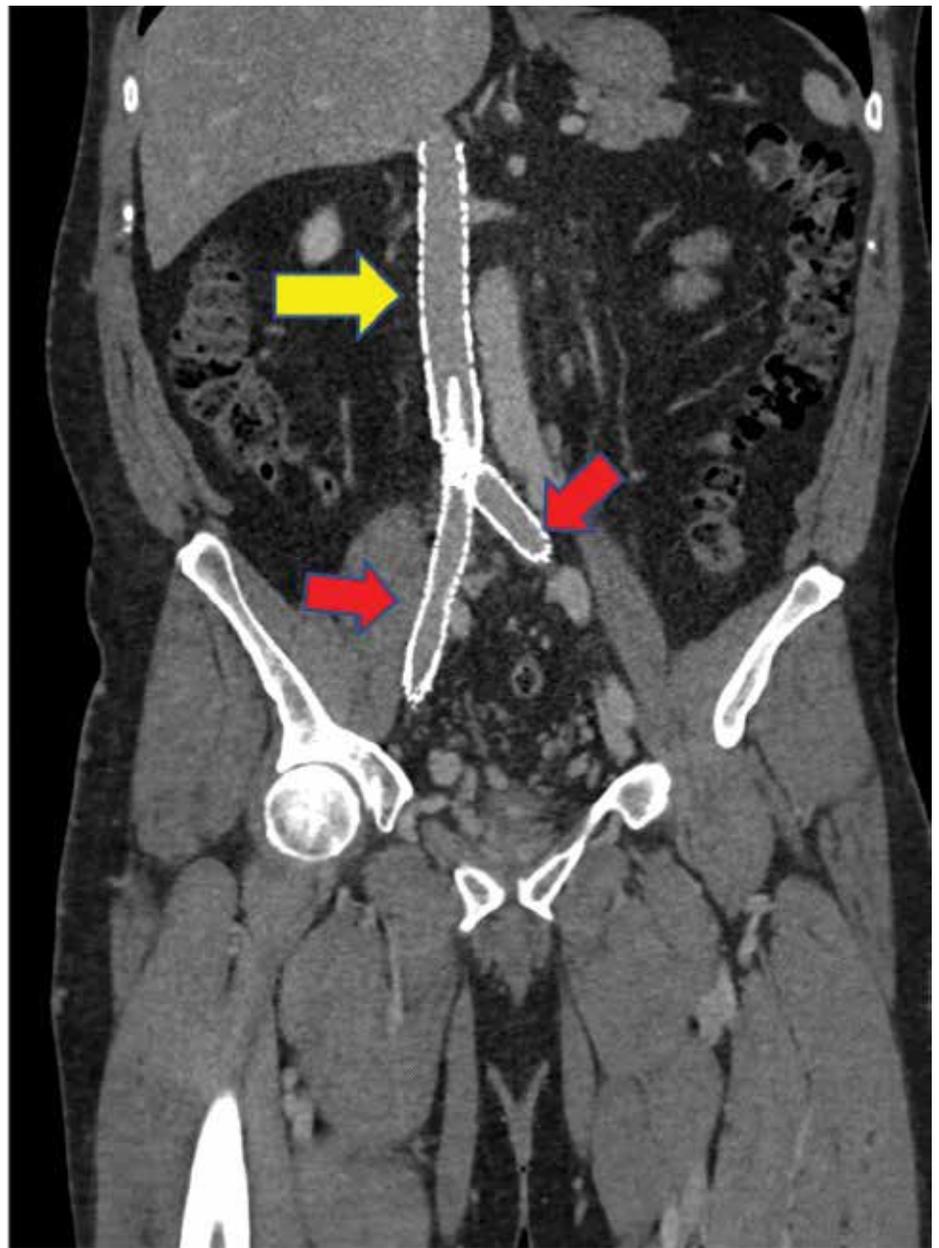


FIGURE 3. Follow-up CT scan showing patent inferior vena cava (yellow arrow) and bilateral common iliac vein (red arrows) stents.

50% of those patients, postthrombotic syndrome is an underdiagnosed condition.¹⁰⁻¹² Although there are a few objective measurement tools for grading the severity of post-thrombotic syndrome, including the Villalta score, they all have a glaring omission in that they fail to measure venous claudication, which can cause significant morbidity. Currently, the mainstays of postthrombotic syndrome management are lifestyle modifications (e.g., leg elevation, weight loss, exercise) and compression therapy.^{13,14}

However, there is growing evidence for adjunctive endovascular management of postthrombotic syndrome in patients with lifestyle-limiting disease.¹⁵

Endovascular reconstruction using recanalization techniques, balloon angioplasty, thrombectomy, and stenting are viable management options for patients with postthrombotic syndrome secondary to ilio-caval obstruction; studies have demonstrated low complication rates, high mid-term patency rates, and significant clinical

improvement.^{16,17} For advanced disease, venoplasty and stenting in patients with iliofemoral obstruction resulted in healing of venous stasis-related ulcers in 55% of cases.¹⁸ Similarly, the ACCESS PTS study demonstrated high success rates with the use of ultrasound-accelerated thrombolysis and venoplasty for recanalization of chronic venous obstructions and improved quality of life in patients during 1 year of follow-up.¹⁹ Despite the evidence supporting the additive value of endovascular management of postthrombotic syndrome, long-term management of the condition still hinges on a multidisciplinary approach that ensures appropriate patient selection, management of comorbidities, wound care, adherence to anticoagulation/antiplatelet therapy, and comprehensive collaborative follow-up.²⁰

Our patient had developed severe post-thrombotic syndrome secondary to a central venous outflow obstruction due to compression from their large conglomerate retroperitoneal nodal disease. This led to extensive thrombosis, atresia of native vasculature, and extensive collateral vessel formation. By emphasizing a patient-centred and multidisciplinary approach and having discussions with the patient and their family, the procedure was a resounding radiographic and clinical success, with profound symptom improvement. Our patient remains on aspirin and rivaroxaban. Through our established venous thromboembolism pathway, we follow patients with this pathology longitudinally. Our patient's care highlights the importance of appropriate patient selection and the use of a multidisciplinary approach for the management of complex venous pathology.

Conclusions

Endovascular techniques are a promising and evolving management option for post-thrombotic syndrome. ■

Funding

None declared.

Competing interests

None declared.

Consent statement

Written informed consent for publication of this case report was obtained from the patient.

References

- Young L, Ockelford P, Milne D, et al. Post-treatment residual thrombus increases the risk of recurrent deep vein thrombosis and mortality. *J Thromb Haemost* 2006;4:1919-1924. <https://doi.org/10.1111/j.1538-7836.2006.02120.x>.
- Yoo T, Aggarwal R, Wang T-F, et al. Presence and degree of residual venous obstruction on serial duplex imaging is associated with increased risk of recurrence and progression of infrainguinal lower extremity deep venous thrombosis. *J Vasc Surg Venous Lymphat Disord* 2018;6:575-583.e1. <https://doi.org/10.1016/j.jvsv.2017.12.059>.
- Dronkers CEA, Mol GC, Maraziti G, et al. Predicting post-thrombotic syndrome with ultrasonographic follow-up after deep vein thrombosis: A systematic review and meta-analysis. *Thromb Haemost* 2018;118:1428-1438. <https://doi.org/10.1055/s-0038-1666859>.
- Prandoni P, Lensing AWA, Prins MH, et al. Residual venous thrombosis as a predictive factor of recurrent venous thromboembolism. *Ann Intern Med* 2002;137:955-960. <https://doi.org/10.7326/0003-4819-137-12-200212170-00008>.
- Avgerinos ED, Saadeddin Z, Abou Ali AN, et al. Outcomes and predictors of failure of iliac vein stenting after catheter-directed thrombolysis for acute iliofemoral thrombosis. *J Vasc Surg Venous Lymphat Disord* 2019;7:153-161. <https://doi.org/10.1016/j.jvsv.2018.08.014>.
- Centers for Disease Control and Prevention. Impact of blood clots on the United States infographic. 15 May 2024. Accessed 17 October 2024. www.cdc.gov/blood-clots/toolkit/impact-of-blood-clots.html.
- Galanaud J-P, Bertoletti L, Amitrano M, et al. Predictors of post-thrombotic ulcer after acute DVT: The RIETE registry. *Thromb Haemost* 2018;118:320-328. <https://doi.org/10.1160/TH17-08-0598>.
- Kahn SR, Ginsberg JS. Relationship between deep venous thrombosis and the postthrombotic syndrome. *Arch Intern Med* 2004;164:17-26. <https://doi.org/10.1001/archinte.164.1.17>.
- Office of the Surgeon General (US); National Heart, Lung, and Blood Institute (US). The Surgeon General's call to action to prevent deep vein thrombosis and pulmonary embolism. Rockville, MD: Office of the Surgeon General (US); 2008. Accessed 17 October 2024. www.ncbi.nlm.nih.gov/books/NBK44178/.
- White RH. The epidemiology of venous thromboembolism. *Circulation* 2003;107(23 Suppl 1):I4-I8. <https://doi.org/10.1161/01.CIR.0000078468.11849.66>.
- Chopard R, Albertsen IE, Piazza G. Diagnosis and treatment of lower extremity venous thromboembolism: A review. *JAMA* 2020;324:1765-1776. <https://doi.org/10.1001/jama.2020.17272>.
- Kahn SR, Galanaud J-P, Vedantham S, Ginsberg JS. Guidance for the prevention and treatment of the post-thrombotic syndrome. *J Thromb Thrombolysis* 2016;41:144-153. <https://doi.org/10.1007/s11239-015-1312-5>.
- Azizar S, Appelen D, Prins MH, et al. Compression therapy for treating post-thrombotic syndrome. *Cochrane Database Syst Rev* 2019;(9):CD004177. <https://doi.org/10.1002/14651858.CD004177.pub2>.
- Kahn SR. The post-thrombotic syndrome. *Hematology Am Soc Hematol Educ Program* 2016;2016:413-418. <https://doi.org/10.1182/asheducation-2016.1.413>.
- Chaitidis N, Kokkinidis DG, Papadopoulou Z, et al. Management of post-thrombotic syndrome: A comprehensive review. *Curr Pharm Des* 2022;28:550-559. <https://doi.org/10.2174/1381612828666220131094655>.
- David A, Thony F, Del Giudice C, et al. Short- and mid-term outcomes of endovascular stenting for the treatment of post-thrombotic syndrome due to iliofemoral and caval occlusive disease: A multicentric study from the French Society of Diagnostic and Interventional Cardiovascular Imaging (SFICV). *Cardiovasc Intervent Radiol* 2022;45:162-171. <https://doi.org/10.1007/s00270-021-03038-2>.
- Rossi FH, Kambara AM, Izukawa NM, et al. Randomized double-blinded study comparing medical treatment versus iliac vein stenting in chronic venous disease. *J Vasc Surg Venous Lymphat Disord* 2018;6:183-191. <https://doi.org/10.1016/j.jvsv.2017.11.003>.
- Neglén P, Hollis KC, Olivier J, Raju S. Stenting of the venous outflow in chronic venous disease: Long-term stent-related outcome, clinical, and hemodynamic result. *J Vasc Surg* 2007;46:979-990. <https://doi.org/10.1016/j.jvs.2007.06.046>.
- Garcia MJ, Sterling KM, Kahn SR, et al. Ultrasound-accelerated thrombolysis and venoplasty for the treatment of the postthrombotic syndrome: Results of the ACCESS PTS study. *J Am Heart Assoc* 2020;9:e013398. <https://doi.org/10.1161/JAHA.119.013398>.
- Li W, Vedantham S, Jaffer FA, et al. Revisiting the open vein hypothesis to reduce the postthrombotic syndrome: Implications for multidisciplinary care and research: A scientific statement from the American Heart Association. *Circulation* 2025;151. <https://doi.org/10.1161/CIR.0000000000001330>.

The triple burden experienced by incarcerated people in British Columbia: Mental illness, substance use, and poverty

Comprehensive treatment for mental illness and substance use disorder is needed in provincial correctional centres, and postrelease supports must link people with housing, education, and employment opportunities.

Amanda K. Slaunwhite, PhD, Kim Rondeau, MSc, Kate Roth, MA, Juls Budau, MSW, Ever Sabadash, Tonia L. Nicholls, PhD, Ashok Krishnamoorthy, MD, Amanda Butler, PhD, Annabel Mead, MBBS, Lisa McQuarrie, MSc

ABSTRACT

Background: People transitioning from incarceration into the community often experience adverse health outcomes driven by the social determinants of health. This study aimed to compare the prevalence of mental health and substance use disorders and their associations with poverty and housing instability among people incarcerated in British Columbia provincial correctional centres versus the general community population.

Methods: We used linked administrative data on a random 20% sample of BC residents enrolled in public health insurance. Individuals with any provincial incarceration in 2015 or 2021 were identified and compared with nonincarcerated individuals in those years.

Prevalence of mental illness, substance use disorders, and indicators of social disadvantage (income assistance, no fixed address) were calculated for both groups. In 2021, the sample included 1933 incarcerated people and 962 421 nonincarcerated people.

Results: Incarcerated people had significantly higher rates of mental illness and substance use disorder (including opioid and stimulant use disorders) than the community population. In 2021, 51.1% of incarcerated people had a diagnosed mental illness, 58.9% had a substance use disorder, and 41.0% had both. Co-occurring mental illness and substance use disorder were frequently associated with extreme poverty and housing instability. Nearly one-third (32.5%) of incarcerated people in

2021 had co-occurring mental illness and substance use disorder *and* either received income assistance or had no fixed address. Mental illness, substance use disorder, and poverty were much less common in the community cohort.

Conclusions: Incarcerated people in BC experience a triple burden of mental illness, substance use disorders, and socioeconomic marginalization (poverty and homelessness). There is an urgent need for targeted interventions during incarceration (e.g., evidence-based mental health and substance use disorder treatment) and greater postrelease support (housing, social services, and employment opportunities) to reduce health inequities and break the cycle of recidivism.

Dr Slaunwhite is an assistant professor at the School of Population and Public Health, University of British Columbia; a director at the Canadian Collaboration for Prison Health and Education; and a scientific director at BC Mental Health and Substance Use Services. Ms Rondeau is a PhD student at the Canadian Collaboration for Prison Health and Education. Ms Roth is a project manager at the Canadian Collaboration for Prison Health and Education. Ms Budau is a research advisor at the Canadian Collaboration for Prison Health and Education and a coordinator on

the Priorities and Engagement in Research in Correctional Health, British Columbia (PERCH BC) Advisory Committee, UBC. Mr Sabadash is a peer support worker at BC Mental Health and Substance Use Services and an advisor on the PERCH BC Advisory Committee, UBC. Dr Nicholls is a scientific director at BC Mental Health and Substance Use Services and a professor in the Department of Psychiatry, UBC. Dr Krishnamoorthy is a medical director at BC Mental Health and Substance Use Services and a clinical associate professor in the Department of Psychiatry, UBC.

Dr Butler is an assistant professor in the School of Criminology, Simon Fraser University. Dr Mead is a medical director at BC Mental Health and Substance Use Services. Ms McQuarrie is a statistician at the Canadian Collaboration for Prison Health and Education.

Corresponding author: Amanda K. Slaunwhite, Amanda.Slaunwhite@ubc.ca.

This article has been peer reviewed.

Background

Health outcomes in Canada are shaped more by social determinants such as income and housing than by genetics or access to care.¹⁻³ Social determinants are especially influential for people who are experiencing mental illness and substance use disorders.⁴⁻⁷ The COVID-19 pandemic intensified pressures on housing affordability, food insecurity, and homelessness across Canada.⁸⁻¹⁰ In British Columbia, where housing costs are the highest in Canada, these pressures have evolved into a province-wide “cost of living crisis.”⁹⁻¹² These challenges are not experienced equally across the population.¹³ People who are already experiencing social, economic, and health inequities are more likely to bear the burden of rising inequalities, which leads to outcomes such as premature mortality.¹³

Although the links between poverty, housing insecurity, and health are well established, little research has examined how these factors are associated with incarceration in Canada. Incarcerated people have distinct and often complex health profiles, but population-level evidence remains sparse.^{4,5} In 2023–2024, 96.2% of admissions to Canadian correctional centres were to provincial or territorial facilities, which house people who are awaiting trial or serving sentences of less than 2 years.¹⁴ In 2024, there were 9701 admissions to provincial correctional centres in BC.¹⁵ People incarcerated in provincial correctional centres can quickly cycle between pretrial correctional centres, hospitals, and homelessness when released back into the community, which contributes to elevated rates of overdose mortality in the 2 weeks postrelease.¹⁶ Unlike in the federal correctional system, there is no gradual return to community for people incarcerated in provincial correctional centres, and people can be released quickly from court without prescriptions or a warm handoff.¹⁷ Understanding the associations between incarceration and social determinants of health is critical for designing health and social services that address the structural inequities experienced by incarcerated people that

contribute to health outcomes, recidivism, and reintegration.

This study sought to measure the prevalence of mental illness, chronic diseases, and substance use disorder among incarcerated and nonincarcerated people in BC; assess changes in the prevalence of these conditions between 2015 and 2021; and describe how poverty and housing instability are associated with health conditions among incarcerated people.

**Health outcomes in
Canada are shaped more
by social determinants
such as income and
housing than by genetics
or access to care.**

Methods

Data source

Data were obtained from the BC Provincial Overdose Cohort (BC-ODC), a linked administrative database that includes a reference cohort that contains a 20% random sample of residents enrolled in BC’s public health insurance program. Each person was assigned a unique identifier to facilitate linkage across administrative data sets, including physician billing claims, hospitalizations, emergency department visits, pharmacy dispensations, provincial incarceration records, social assistance records, and death registrations. Longitudinal data were available from 1 January 2010 to 31 December 2021. Further details on the BC-ODC are available elsewhere.¹⁸ People included in the BC-ODC were identified as incarcerated in 2021 if they had a BC Corrections admission that year. If they did not, they were assigned to the nonincarcerated group in 2021. This was repeated for 2015 to compare results from 2021 and 2015. This study was approved by the UBC Behavioural Research Ethics Board (#H23-02009).

Measures

For each individual in the sample, data from the previous 5 years were used to determine substance use conditions, withdrawal syndrome, and social determinants of health (income assistance and no fixed address). Chronic physical health conditions (circulatory disease, diabetes, inflammatory disease, kidney disease, neurological disease, and respiratory disease) were determined using all available years of data beginning from 1 January 2010. The reference time frame ended on 31 December of the record year (2015 or 2021) for people who were not incarcerated and the day before admission to a correctional centre for people who were incarcerated. Definitions of terms used throughout the article are provided in a Supplementary Information file at bcmj.org.

Statistical analysis

Descriptive statistics were used to calculate the prevalence of health conditions and social determinants of health in the two groups (incarcerated and nonincarcerated) and for the 2 years under study (2015 and 2021). A two-sample binomial test of proportions with a two-sided alternative hypothesis was used to identify a statistically significant difference in the prevalence of a health condition between incarcerated and nonincarcerated groups. Because we aimed to describe the health status of the overall population of correctional centres and the community, we did not match or adjust for age or sex differences between the populations.

Results

The sample in 2015 included 3306 people who were incarcerated that year and 917 174 people who were not incarcerated. The 2021 sample included 1933 people who were incarcerated that year and 962 421 people who were not incarcerated. People who were incarcerated in 2021 were primarily male ($n = 1753$, 91%), and the median age was 35 years (IQR: 29, 43). In contrast, the nonincarcerated (community) group was 49% male ($n = 475 368$) and had a median age of 47 years (IQR: 32, 63).

In 2021, all substance use disorders were more prevalent among incarcerated people than those who were not incarcerated. Substance use disorder occurred among 58.9% of incarcerated people versus 3.2% of non-incarcerated people ($P < .001$). Opioid use disorder occurred in 41.4% of incarcerated people compared with 1.2% of nonincarcerated people ($P < .001$). The prevalence of chronic physical conditions was either similar between incarcerated and nonincarcerated people or higher among the nonincarcerated group, which could be attributed to population demographic characteristics. From 2015 to 2021, opioid use disorder, stimulant use disorder, substance use disorder, substance withdrawal, and mental illness all became more prevalent among incarcerated people [Figure 1].

Mental illness and substance use disorder commonly co-occurred among those with no fixed address who were receiving social assistance. In 2021, 51.1% of incarcerated people had been previously diagnosed with a mental illness, while 36.7% had a mental illness and no fixed address and/or were receiving social assistance [Figure 2]. Similarly, 58.9% of incarcerated people had substance use disorder, and 43.4% had both substance use disorder and a record of no fixed address and/or social assistance. In 2021, mental illness and substance use disorder co-occurred among 41.0% of incarcerated people, and 32.5% had co-occurring mental illness, substance use disorder, and no fixed address and/or social assistance.

Discussion

This study shows that in BC, incarcerated people face a disproportionate burden of mental illness, substance use disorders, and socioeconomic disadvantage compared with people who are not incarcerated. Incarcerated people were younger than nonincarcerated people, and although they had fewer chronic physical conditions, they had a far higher prevalence of mental illness and substance use disorder. These conditions were frequently associated with income assistance and housing instability, which

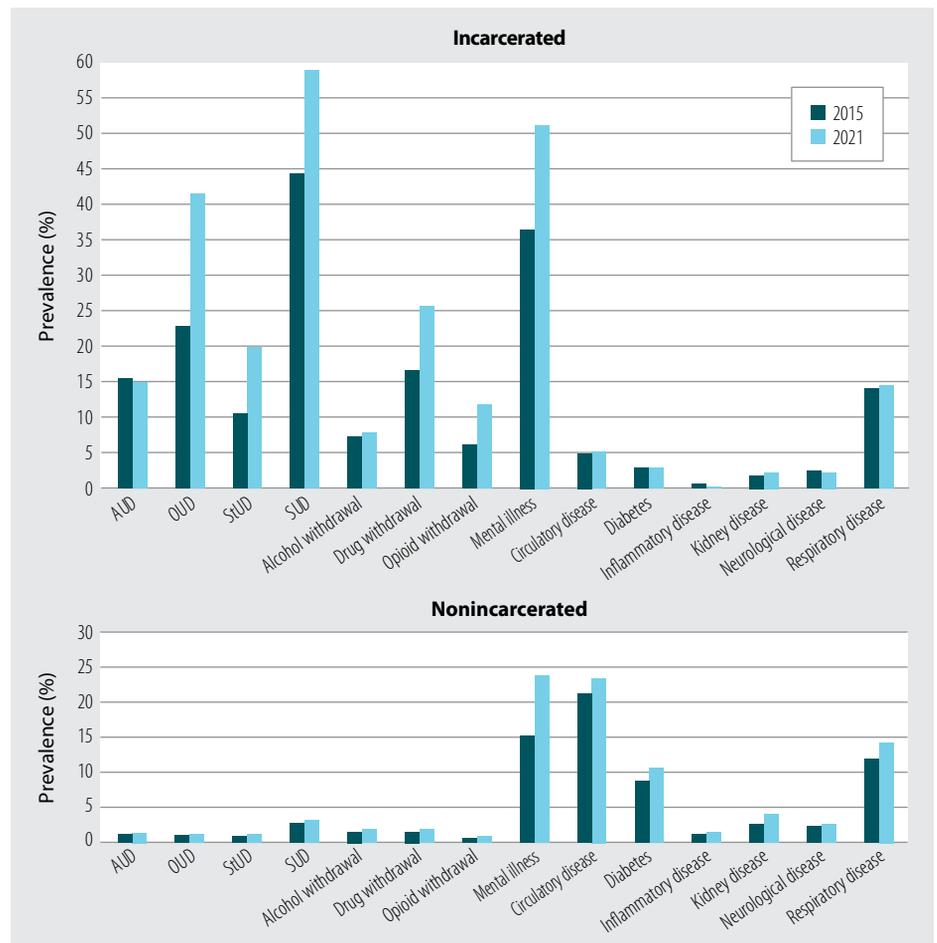


FIGURE 1. Changes in the prevalence of selected health conditions between 2015 and 2021 for incarcerated and nonincarcerated people in British Columbia.

AUD = alcohol use disorder; OUD = opioid use disorder; StUD = stimulant use disorder; SUD = substance use disorder.

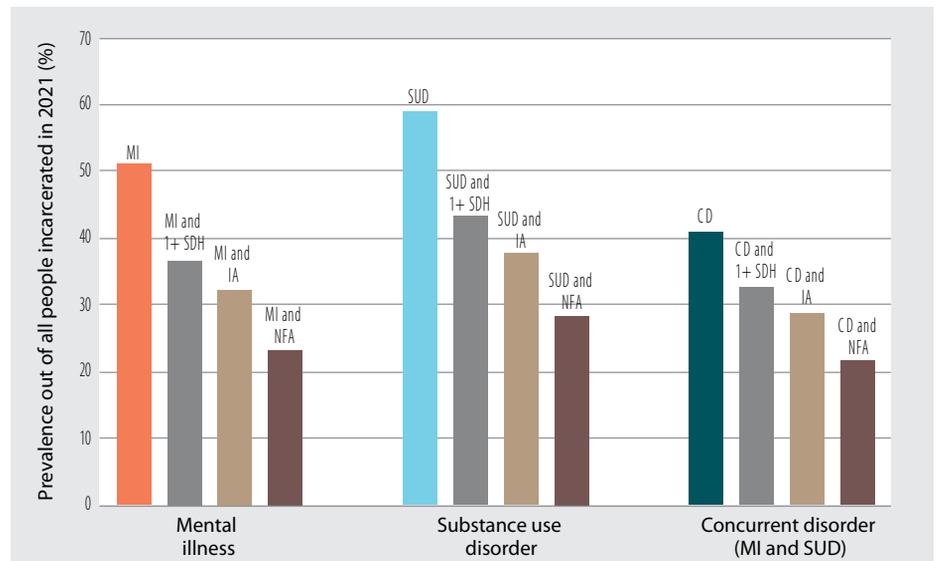


FIGURE 2. Prevalence of co-occurring health conditions and social determinants of health for people incarcerated in 2021.

MI = mental illness; 1+ SDH = at least one social determinant of health (either income assistance or no fixed address or both); IA = income assistance; NFA = no fixed address; SUD = substance use disorder; CD = concurrent disorder (both mental illness and substance use disorder).

created a triple burden of health and social inequities.

Additionally, the prevalence of mental illness and substance use disorder among incarcerated people increased between 2015 and 2021. Rates of mental illness and co-occurring substance use disorder are increasing in BC's provincial correctional system, often in combination with homelessness and poverty postrelease. Prior research has described "social sedimentation," where health inequities concentrate among low-income groups and reproduce across generations.¹³ Poverty and housing insecurity are linked to recidivism risk.¹⁹ People in BC who have concurrent disorders have among the highest reincarceration rates: 72% return to custody within 3 years.²⁰ Correctional facilities provide a key point of intervention to reverse cycles of disadvantage. Robust prerelease discharge planning is urgently needed in provincial institutions to ensure people leaving custody have access to stable housing, health care, income supports, employment, and education services.

Study limitations

Our study had several limitations. We conducted a descriptive, population-based study using linked administrative data. We did not adjust for demographic differences between the incarcerated and nonincarcerated groups, because our goal was to describe entire populations rather than estimate adjusted effects. Our estimates reflect 2015 and 2021 trends among a random sample of people enrolled in public health insurance in BC. Custody volumes and health care delivery inside and outside of correctional centres changed during the COVID-19 pandemic.²¹ Since 2021, the toxic drug crisis has also intensified, and the association between substance use disorder, homelessness, and postrelease overdose risk could be underrepresentative of the postpandemic period.¹⁶

Conclusions

Incarceration is a critical time to disrupt entrenched cycles of poverty. Resources are

needed to implement comprehensive mental illness and substance use disorder treatment in provincial correctional centres and the community. Postrelease supports must be strengthened, with a focus on linking people with housing, education, and employment opportunities alongside expanded access to community-based mental health and substance use disorder treatment. ■

**Incarceration is
a critical time to
disrupt entrenched
cycles of poverty.**

Acknowledgments

This study was funded by the Canadian Institutes of Health Research and Michael Smith Health Research BC. We acknowledge, with gratitude, the traditional, unceded, and ancestral territories of the Musqueam Nation, Squamish Nation, Tsleil-Waututh Nation, and Kwikwetlem First Nation in Vancouver, where BC Mental Health and Substance Use Services, the BC Centre for Disease Control, and the University of British Columbia are based. We also recognize the important contributions of Priorities and Engagement in Research in Correctional Health, British Columbia to this project and the work of the Canadian Collaboration for Prison Health and Education. Access to data provided by the data stewards is subject to approval but can be requested for research projects through the data stewards or their designated service providers. The following data sets were used in this study: Medical Services Plan, PharmaNet, Discharge Abstract Database, National Ambulatory Care Reporting System, incarceration records data from the BC Ministry of Public Safety and Solicitor General, social assistance data from the BC Ministry of Social Development and Poverty Reduction, the Chronic Disease Registry, BC Vital Statistics Agency records, and BC Coroners Service records. All inferences, opinions, and conclusions drawn in this article are those of the authors and do not reflect the opinions or policies of the data stewards. These data were provisioned under Information Sharing Agreement J16-145.

Competing interests

A.S. received project funding from Michael Smith Health Research BC for the submitted work and project grant funding from the Canadian Institutes for Health Research, BC Ministry of Health, Public Health Agency of Canada, and Health Canada. A.M. received honoraria and speaker's fees from Indivior and the Master Clinician Alliance. A.M. is a member of the Indivior national advisory board. A.K. received speaker and advisory committee honoraria from Lundbeck, Eisai, Idorsia, and Otsuka. The remaining authors have no competing interests to declare.

References

1. Standing Senate Committee on Social Affairs, Science and Technology. A healthy, productive Canada: A determinant of health approach. The Standing Senate Committee on Social Affairs, Science and Technology Final Report of Senate Subcommittee on Population Health. 2009. Accessed 27 February 2025. <https://sencanada.ca/content/sen/committee/402/popu/rep/rephealth1jun09-e.pdf>.
2. Frank J, Abel T, Camprostrini S, et al. The social determinants of health: Time to re-think? *Int J Environ Res Public Health* 2020;17:5856. <https://doi.org/10.3390/ijerph17165856>.
3. Donkin A, Goldblatt P, Allen J, et al. Global action on the social determinants of health. *BMJ Glob Health* 2017;3(Suppl 1):e000603. <https://doi.org/10.1136/bmjgh-2017-000603>.
4. Stewart LA, Nolan A, Thompson J, Power J. Social determinants of health among Canadian inmates. *Int J Prison Health* 2018;14:4-15. <https://doi.org/10.1108/IJPH-08-2016-0038>.
5. Kouyoumdjian F, Schuler A, Matheson FI, Hwang SW. Health status of prisoners in Canada: Narrative review. *Can Fam Physician* 2016;62:215-222.
6. Rotter M, Compton M. Criminal legal involvement: A cause and consequence of social determinants of health. *Psychiatr Serv* 2022;73:108-111. <https://doi.org/10.1176/appi.ps.202000741>.
7. Edwards LM, Chang S, Zeki R, et al. The associations between social determinants of health, mental health, substance-use and recidivism: A ten-year retrospective cohort analysis of women who completed the connections programme in Australia. *Harm Reduct J* 2024;21:2. <https://doi.org/10.1186/s12954-023-00909-4>.
8. Housing, Infrastructure and Communities Canada. Everyone counts 2020-2022: Preliminary highlights report. Modified 28 April 2023. Accessed 21 June 2025. <https://housing-infrastructure.canada.ca/homelessness-sans-abri/reports-rapports/pit-counts-dp-2020-2022-highlights-eng.html>.
9. Little S, Mosconi C. Surging cost of living leading to 'inflation isolation' in B.C.: Poll. *Global News*.

- 27 November 2023. Accessed 6 October 2024. <https://globalnews.ca/news/10117901/cost-of-living-mental-health-isolation-b-c/>.
10. Aerts A. The high cost of living in British Columbia. CPABC in Focus 2022;July/August:14-24. Accessed 5 October 2024. www.bccpa.ca/news-events/cpabc-newsroom/2022/july/the-high-cost-of-living-in-british-columbia/.
 11. CBC News. Stress, isolation, feelings of failure: Rising costs are taking a toll on mental health this holiday season. CBC News. 19 December 2023. Accessed 6 October 2024. www.cbc.ca/news/canada/british-columbia/cost-of-living-impacts-b-c-1.7060037.
 12. Williams D. Sticker shock: The rising price of everything in B.C. Business Council of British Columbia, 2024. Accessed 5 October 2024. www.bcbc.com/insight/sticker-shock-the-rising-price-of-everything-in-bc.
 13. Ross MW. The need for correctional public health and health promotion. Health and health promotion in prisons. London, UK: Routledge; 2012. pp. 13-21. <https://doi.org/10.4324/9780203083239>.
 14. Statistics Canada. Correctional services statistics: Interactive dashboard. Modified 4 March 2025. Accessed 24 October 2025. www150.statcan.gc.ca/n1/pub/71-607-x/71-607-x2019018-eng.htm.
 15. British Columbia Ministry of Public Safety and Solicitor General. Adult custody statistics dashboard. Accessed 26 August 2024. <https://app.powerbi.com/view?r=eyJrljoiNzE2ZmM5MTMtN2U5ZC00ZGQ1LTk4YWUtY2UwNDdiYWl5NTQyIiwidCI6IjZmZGI1MjAwLTNkMGQtNGE4YS1iMDM2LWQzNjg1ZTM1OWFkYyJ9&pageName=ReportSection69506dda63e5b4460c64>.
 16. Kinner SA, Gan W, Slaunwhite A. Fatal overdoses after release from prison in British Columbia: A retrospective data linkage study. CMAJ Open 2021;9:E907-E914. <https://doi.org/10.9778/cmajo.20200243>.
 17. Husein S, Taylor C. From incarceration to encampment: Why so many Ontario prisoners end up homeless. John Howard Society of Ontario, 2025. Accessed 24 October 2025. <https://johnhoward.on.ca/wp-content/uploads/2025/07/Rethinking-Justice-Housing-Report-From-Incarceration-to-Encampment.pdf>.
 18. MacDougall L, Smolina K, Otterstatter M, et al. Development and characteristics of the Provincial Overdose Cohort in British Columbia, Canada. PLoS One 2019;14:e0210129. <https://doi.org/10.1371/journal.pone.0210129>.
 19. Mitchell RJ, Burns N, Glozier N, Nielssen O. Homelessness and predictors of criminal reoffending: A retrospective cohort study. Crim Behav Ment Health 2023;33:261-275. <https://doi.org/10.1002/cbm.2298>.
 20. Butler A, Nicholls TL, Samji H, et al. Mental health needs, substance use, and reincarceration: Population-level findings from a released prison cohort. Crim Justice Behav 2024;51:1054-1071. <https://doi.org/10.1177/00938548241238327>.
 21. McLeod KE, Timler K, Korchinski M, et al. Supporting people leaving prisons during COVID-19: Perspectives from peer health mentors. Int J Prison Health 2021;17:206-216. <https://doi.org/10.1108/IJPH-09-2020-0069>.

From global threats to local practices: The important role British Columbian clinicians play in world health security

World Health Day is marked annually on 7 April to recognize the founding in 1948 of the World Health Organization (WHO), which plays a critical role in preserving the health of people around the world and promoting global health security—the capacity of health systems to prevent, detect, and respond to health threats while maintaining resilient health services and sustaining public trust.^{1,2} In 2026, amid geopolitical fragmentation and substantial reductions in investments in public health institutions like the WHO, there is an increased risk of larger disease outbreaks and worse outcomes in population health overall. We must counteract these changes by preserving global cooperation, protecting the independent scientific voice of public health institutions, and upholding commitments that have been made. Despite lessons learned from COVID-19, global health security remains fragile and disparate; many systems are reverting to prepandemic vulnerabilities.^{3,4}

Global health security is not a distant concern; it shows up daily in primary care, community health, emergency departments, hospitals, and laboratories in BC. The proficiency to recognize unusual presentations or clusters of illness, implement appropriate infection prevention and control measures, and ensure timely reporting of concerns to local public health departments are hallmarks of clinical vigilance, expertise, and

system maturity. National and international frameworks devoted to controlling the spread of public health threats count on these everyday practices as the foundation of surveillance and early-warning systems.^{5,6}

Additionally, health security depends on health system resilience—the capacity to absorb shocks, adapt, and continue delivering care.⁷ Health system resilience is a clinical issue that shapes whether care can be delivered safely during times of strain, such as wildfire seasons, extreme heat events, infectious disease surges, or other prolonged system stress. Resilience is built through systems used every day to ensure staffing operations, referral pathways, technological infrastructure, and interdisciplinary collaborations promote high-quality clinical care and professional training.⁸

Few lessons from the COVID-19 pandemic are more certain than the importance of trust, an essential but fragile asset for health security. Trust in clinicians, public health institutions, and health systems shapes patient behavior, adherence to guidance, and, ultimately, health outcomes. Clinicians in particular play a unique role in preserving it, as trusted care providers who share evidence-based information with their patients and communities. There is growing evidence that trust deserves to be considered a determinant of preparedness.⁹ When trust is present, communities are more resilient to periods of uncertainty and disruption. In its absence, even the most scientifically compelling interventions may be dismissed.

A One Health perspective—recognizing that human, animal, and environmental health are interconnected—is increasingly

used to frame health security.¹⁰ With our province's diverse ecosystems, frequent climate change events, and human–animal interfaces, biological threats occur routinely and require coordination to respond seamlessly and effectively across jurisdictions and sectors. For clinicians, this necessitates diagnostic considerations that encompass community and environmental factors that not only shape the health of the presenting patient but also prevent further escalation.¹¹

To this end, systems that can act quickly and collaboratively matter. Preparedness is a capability that needs to be nurtured for proactive, coordinated practices that demonstrate response readiness. During times of crisis, systems often perform only to their level of preparedness.

When health security works well, it remains largely invisible. When it fails, its absence reverberates across borders, as we saw with COVID-19. This quiet paradox is the responsibility of modern public health and the shared duty of health system leaders and clinicians worldwide.

On World Health Day, let's recognize health security not as an abstract global agenda but as a core determinant of clinical care, system resilience, and public trust. ■

—**Jat Sandhu, MPH, PhD, MBA**
Chief Strategy Officer, BCCDC
Clinical Associate Professor, UBC School of Population and Public Health

References

1. Malik SM, Barlow A, Johnson B. Reconceptualising health security in post-COVID-19 world. *BMJ Glob Health* 2021;6:e006520. <https://doi.org/10.1136/bmjgh-2021-006520>.

References continued on page 109

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

Where there's smoke, there's fire: The harms of vaping and British Columbia's efforts to tackle this growing issue

E-cigarettes, commonly referred to as vapes, entered the Canadian market in 2004. Subsequently, there has been a surge in their use, notably among children and youth. The 2023 BC Adolescent Health Survey revealed that 26% of youth in BC had tried vaping, and 15% had vaped within the past 30 days.¹ Notably, 72% of youth who had vaped started before their 15th birthday.¹ Colorful packaging and dessert-like flavoring accelerated uptake in this younger population.²

To counteract these trends and penalize corporations for their role in influencing nicotine addiction in children and youth, the BC government enacted Bill 24, the Vaping Product Damages and Health Care Costs Recovery Act, in December 2025. This legislation enables the provincial government to sue e-cigarette manufacturers to recover public health care costs associated with their products.³ E-cigarette manufacturers and consumer advocacy groups have openly criticized the Act, arguing that vaping is considered by some to be a method for smoking cessation and a form of harm reduction. Conversely, health care organizations are raising concerns about the cessation efficacy and safety of e-cigarettes. The Canadian Lung Association and the Canadian Thoracic Society report that no vaping product has been approved as a safe and effective smoking cessation aid.⁴

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.

The Canadian Task Force on Preventive Health Care recommends against the use of e-cigarettes for smoking cessation due to a lack of evidence that they reduce smoking habits, as well as their serious health effects.⁵

Continued research on vaping indicates harmful impacts on cardiovascular and respiratory health, as well as potential carcinogenesis. Cardiovascular effects include increased heart rate, blood pressure, platelet activity, and risk of stroke.² Respiratory harms include cytotoxicity, acute and chronic inflammation, impaired immune response, mucociliary dysfunction, oxidative stress, and increased airway hyper-responsiveness.⁶ Vaping has been found to be associated with chronic obstructive pulmonary disease,⁶ and users also face a 30% increased relative risk of developing asthma.² From an oncological perspective, e-cigarettes induce oxidative stress, mitochondrial toxicity, and DNA damage by pathological pathways similar to those of tobacco smoke, including deregulation of cancer-related molecular signaling.⁷ Additional harms include periodontal disease, nicotine dependence in nonsmokers, device malfunction burns, and vaping-associated acute lung injury, a syndrome associated with e-cigarettes containing tetrahydrocannabinol.²

The solution to the public health challenge posed by vaping will likely require more than what BC's new Act is structured to accomplish. While litigation will play a role in deterring harmful industry practices and recovering health care costs, it should be complemented by proactive, evidence-based interventions, such as

multifaceted educational campaigns that communicate the health risks of vaping. In parallel, regulatory strategies that have proven effective in reducing cigarette use—such as plain packaging, restrictions on product appeal, and prominent health warnings on devices—should be applied to vaping products. Together, legislative and regulatory measures, along with public education, may offer a more comprehensive approach that prioritizes prevention and informed decision making. ■

—Hamza Ballouk, MD, FRCPC

Council on Health Promotion Member

—Aven Poynter, MD, FRCPC

Council on Health Promotion Member

—William Liu, BHSc

Council on Health Promotion Member

References

1. McCreary Centre Society. The big picture: An overview of the 2023 BC adolescent health survey provincial results. 2024. Accessed 5 January 2026. https://mcs.bc.ca/pdf/2023_bcahs_the_big_picture.pdf.
2. Kaur J, Goel S, Shabil M, et al. Health impacts of electronic nicotine delivery systems: An umbrella review of systematic reviews. *BMJ Open* 2025;15:e100168. <https://doi.org/10.1136/bmjopen-2025-100168>.
3. Government of British Columbia. New law will hold vape manufacturers accountable for public health costs [news release]. 8 October 2025. Accessed 5 January 2026. <https://news.gov.bc.ca/releases/2025AG0058-000975>.
4. Canadian Lung Association. Position statement on vaping. March 2020. Accessed 24 December 2025. www.lung.ca/position-statement-vaping.
5. Thombs BD, Traversy G, Reynolds DL, et al. Recommendations on interventions for tobacco smoking cessation in adults in Canada. *CMAJ* 2025;197:E846-E861. <https://doi.org/10.1503/cmaj.241584>.

References continued on page 109

CanScreen: Making cancer screening more accessible for patients without a family doctor

Every April, Cancer Awareness Month highlights the role that early detection plays in saving lives. Yet, for more than 700 000 British Columbians without a family doctor, access to routine cancer screening and other preventive care can be limited.

On Vancouver Island, a physician-led pilot initiative worked to expand access to screening for people without a family doctor. CanScreen, British Columbia's first dedicated virtual-screening clinic, provided unattached patients with a direct, coordinated pathway into the province's publicly funded breast, colorectal, and lung cancer screening programs. Initially launched in Victoria in 2023, the program expanded to serve communities across Vancouver Island.

Identifying a gap in preventive care

BC's well-established, population-based cancer screening programs rely on a crucial clinical link: a family physician or nurse practitioner attached to the patient to review results and arrange follow-up if needed. Patients without a family physician or nurse practitioner may face barriers to timely screening and follow-up care.

CanScreen served as an effective option within this system. Originally developed as a self-funded initiative by its physician founders, its growth was later supported through funding from the Joint Collaborative Committees, a partnership between Doctors of BC and the Ministry of Health. CanScreen received support from both the

Shared Care Committee and the Specialist Services Committee's Spreading Quality Improvement initiative through Island Health.

Origins of CanScreen

The concept for CanScreen emerged during the COVID-19 pandemic, when it became clear in both urgent care and hospital settings that patients were presenting with advanced-stage cancers that could likely have been detected earlier through routine screening.

This experience emphasized that unattached patients were particularly vulnerable to gaps in preventive care and how delays in screening could lead to poorer outcomes, more complex treatment pathways, and greater demands on the health care system.

How the CanScreen model works

CanScreen operated as a virtual clinic that temporarily attached patients to the clinic, solely for cancer screening and follow-up. This model linked screening tests to a family physician or nurse practitioner, enabling timely review and action on results.

CanScreen clinicians tracked results, discussed next steps with patients, and provided guidance on recommended screening intervals. Patients with normal results returned to the unattached population with reassurance and a screening plan. When abnormal findings or cancer was identified, physicians remained involved throughout the diagnostic and referral processes.

CanScreen also worked with established referral partner clinics in communities such as Port Alberni, Comox, and Nanaimo to intake patients with confirmed cancer diagnoses following results, supporting

continuity of care through regional collaboration and helping connect patients to longitudinal family physician care where possible.

Impact to date

Since CanScreen's launch, more than 4000 patients were assessed, and over 3000 screening tests were facilitated, helping detect 22 cancers, most at an early, highly treatable stage. All services were covered by the Medical Services Plan.

By connecting unattached patients with organized screening pathways, CanScreen reached individuals who might otherwise have presented with later-stage cancer. Earlier diagnosis supported improved outcomes and better use of acute care resources.

The clinic also supported continuity of care for patients with a history of cancer. One patient recovering from colon cancer surgery had anxiety after his family doctor retired. He needed regular blood work, yet he had no way to get lab requisitions. He was reassured by receiving follow-up through CanScreen.

Looking ahead: Equitable access, sustainability, and spread

CanScreen has demonstrated a complementary model that can improve access to screening for people without a family doctor, with strong patient experience and meaningful impact.

A key insight from the initiative is that sustainability and spread depend not only on demonstrating need, but also on alignment across the broader health care system. Screening for unattached patients sits at the intersection of primary care, provincial

Continued on page 109

This article is the opinion of the Joint Collaborative Committees (JCCs) and has not been peer reviewed by the BCMJ Editorial Board.

Patients can now easily report most work-related injuries to WorkSafeBC online

WorkSafeBC has made it easier for workers to report physical injuries from single incidents—such as sprains, strains, cuts, and burns—through an improved online injury reporting tool [Figure 1]. Patients who sustain such injuries at work may not realize that online reporting is their best option or even that they should report to WorkSafeBC at all. Physicians, nurse practitioners, and medical office staff can support patients by educating them on how and when to report.

Changes for patients

Until now, patients typically reported their injuries to WorkSafeBC by calling the Teleclaim team. Now, patients with a physical injury from a specific single incident at work can more easily report their injury to WorkSafeBC on any device (e.g.,

a smartphone) using an online form available at www.worksafebc.com/report-injury.

The form saves automatically so patients can work through it at their own pace. It also enables patients to digitally authorize Form 69W1 (Worker's Authorization for Release of Personal Information from Third Parties to WorkSafeBC). This allows WorkSafeBC to receive the completed forms faster and support patients' claims more efficiently.

Changes for physicians, nurse practitioners, and medical office staff

There are no changes to Form 8 (Physician's Report) or Form 8NP (Nurse Practitioner's Report). Physicians and nurse practitioners should continue to submit these documents to WorkSafeBC as usual.

If a patient hasn't reported a work-related injury or illness to WorkSafeBC, let them know it's important to report as soon as possible. The sooner WorkSafeBC receives information from your patient, the sooner your patient can learn the next steps.

Direct patients to www.worksafebc.com/report-injury to see their reporting

options. If a patient seeks treatment for a traumatic physical injury from a single event at work, advise them that they can easily report their injury online.

For other types of injuries—such as repetitive strain injuries, psychological injuries, occupational diseases, hearing loss, injuries that involve sexual assault or harassment, and catastrophic injuries—advise patients to call the WorkSafeBC Teleclaim team at 604 231-8888 or 1 888 967-5377 to report. The Teleclaim team will collect information, pass along relevant details to specialized team members, and offer specific assistance, such as interpretation services.

WorkSafeBC has moved away from using the paper Form 6 (Application for Compensation and Report of Injury or Occupational Disease) for worker injury reporting. We ask that you no longer offer this option to your patients.

Free resources

WorkSafeBC offers wallet cards [Figure 2] and posters describing how patients should report their injuries, available at no cost. The poster can be displayed in clinics or waiting

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



FIGURE 1. The online injury reporting tool includes a visual body map for your patient to quickly and accurately indicate where they were injured.



FIGURE 2. Wallet cards can be ordered at www.worksafebcstore.com and given to injured workers who visit for initial treatment.

Key points

- Patients with a physical injury from a specific single incident at work (e.g., a fall, being struck by an object) can report it at www.worksafebc.com/report-injury.
- Patients can report other injury types and illnesses by calling 604 231-8888 or 1 888 967-5377.
- Free posters and wallet cards to inform patients about how to report are available at www.worksafebc.com/report-injury-poster.

rooms, and the wallet cards can be given to injured workers who visit for initial treatment. To order, visit www.worksafebcstore.com (click the Publications tab and then choose either the Posters or the Card category). The poster is also available to download and print at www.worksafebc.com/report-injury-poster. ■

—Angelo Cabalfin

Senior Manager, Claims Intake Services,
Claims Intake and Adjudication Services,
WorkSafeBC

COHP

References continued from page 106

6. Global Initiative for Chronic Obstructive Lung Disease. Global strategy for the prevention, diagnosis, and management of COPD: 2026 report. Accessed 24 December 2025. <https://goldcopd.org/2026-gold-report-and-pocket-guide/>.
7. Petrella F, Rizzo S, Masiero M, et al. Clinical impact of vaping on cardiopulmonary function and lung cancer development: An update. *Eur J Cancer Prev* 2023;32:584-589. <https://doi.org/10.1097/CEJ.0000000000000797>.

References continued from page 105

2. UBC Centre for Disease Control. Global Health Security Forum. Strengthening global health security through collaboration and innovation. Accessed 15 February 2026. <https://ubccdc.med.ubc.ca/>.
3. Global Preparedness Monitoring Board. A fragile state of preparedness: 2023 report on the state of the world's preparedness. 30 October 2023. Accessed 15 February 2026. www.gpmb.org/reports/m/item/a-fragile-state-of-preparedness-2023-report-on-the-state-of-the-worlds-preparedness.
4. Kickbusch I. Europe has greater responsibility in the WHO without the United States. *BMJ* 2026;392:s182. <https://doi.org/10.1136/bmj.s182>.
5. World Health Organization. World Health Assembly adopts historic Pandemic Agreement to make the world more equitable and safer from future pandemics [news release]. 20 May 2025. Accessed 15 February 2026. www.who.int/news/item/20-05-2025-world-health-assembly-adopts-historic-pandemic-agreement-to-make-the-world-more-equitable-and-safer-from-future-pandemics.
6. Saif-Ur-Rahman KM, Burke NN, Murphy L, et al. Synthesizing public health preparedness mechanisms for high-impact infectious disease threats: A jurisdictional scan. *J Evid Based Med* 2025;18:e70019. <https://doi.org/10.1111/jebm.70019>.
7. Thomas S, Sagan A, Larkin J, et al. Strengthening health systems resilience: Key concepts and strategies. Policy brief 36. European Observatory on Health Systems and Policies. 2020. Accessed 15 February 2026. <https://iris.who.int/handle/10665/332441>.
8. Organisation for Economic Co-operation and Development. Ready for the next crisis? Investing in health system resilience. 23 February 2023. Accessed 15 February 2026. <https://doi.org/10.1787/1e53cf80-en>.
9. Bærøe K, Árnason V, Jansen M, et al. Pandemic and crisis preparedness and response: Conceptualizing cultural, social and political drivers of trustworthiness and collective action. *Public Health Ethics* 2025;18:phaf004. <https://doi.org/10.1093/phe/phaf004>.
10. Adisasmito WB, Almuhairi S, Behravesh CB, et al. One Health: A new definition for a sustainable and healthy future. *PLoS Pathog* 2022;18:e1010537. <https://doi.org/10.1371/journal.ppat.1010537>.
11. Jassem AN, Roberts A, Tyson J, et al. Critical illness in an adolescent with influenza A(H5N1) virus infection. *N Engl J Med* 2025;392:927-929. <https://doi.org/10.1056/NEJMc2415890>.

Continued from page 107

screening programs, diagnostic services, and regional follow-up. When these functions operate independently, pilots can help address immediate gaps, but integrating them into durable pathways requires coordinated planning across partners.

The experience also highlights the importance of shared direction, clear communication, and coordinated timelines among participating organizations.

Looking ahead, scaling approaches like CanScreen will likely depend on continued provincial engagement, integrated communication pathways, and clear program-level processes to support screening results and follow-up for unattached patients.

—Stuart Bax, MBChB, MRCGP, CCFP

Family Physician
Co-founder, CanScreen

—Cal Shapiro, MD, CCFP
Family Physician
Co-founder, CanScreen

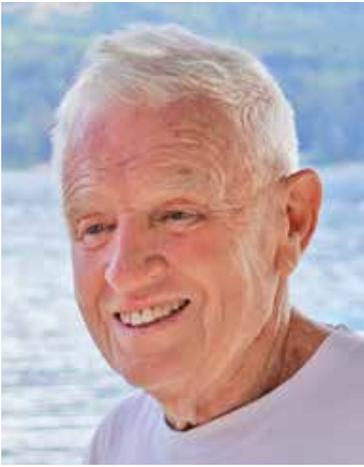
BEYOND MEDICINE

References continued from page 95

4. Lejumeau, JA. Inauguration de la statue de Laënnec à Quimper. *Bulletin de l'Académie impériale de médecine* 1868;33:807-816.
5. Laennec R-T-H. De l'auscultation médiate ou Traité du diagnostic des maladies des poumons et du cœur, fondé principalement sur ce nouveau moyen d'exploration. Two volumes. Brosson et Chaudé, Paris, 1819.
6. Delp MH, Manning RT. Major's physical diagnosis. 8th ed. Philadelphia, PA: W. B. Saunders Company; 1975. pp. 12-15.
7. Roux A. Laennec après 1806, 1806-1826, d'après des documents inédits. Paris: J.-B. Bailière et fils; 1920. p. 219.
8. Laennec, R-T-H. Traité de l'auscultation médiate et des maladies des poumons et du cœur. Two volumes. 2nd ed. Paris: J.-S. Chaudé, Libraire-Éditeur; 1826.
9. Lejumeau, JA. Notice sur le Professeur Laennec. *Nouvelle bibliothèque médicale* 1826;3:316-325.

Obituaries

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



Dr Terrence (Terry) F. Rutherford
1929–2026

Dr Terrence (Terry) F. Rutherford died on 30 January 2026, after a short illness related to complications following treatment for Hodgkin disease.

Terry was born in Birch Hills, Saskatchewan, on 25 November 1929. He attended medical school at the University of British Columbia, graduating in 1956. Following a rotating internship at the former St. Joseph's Hospital in Victoria, he spent 5 years as a medical officer in the Royal Canadian Air Force, including 1 year of training in general surgery at the Lancaster Department of Veterans Affairs Hospital in New Brunswick. He completed further specialty training in pathology at the Department of Pathology at the Winnipeg General Hospital in 1967.

Terry joined the medical staff at St. Paul's Hospital in Vancouver in 1968, assuming responsibility as the associate head of the Department of Pathology and assisting in

establishing a modern clinical laboratory in the hospital's newly built Providence wing, which opened in April 1983.

Terry transitioned into the primary leadership role as chair of the Department of Pathology and Laboratory Medicine in 1983, a role he held until 1993. During this decade, Terry guided the laboratory through many challenges. The list is long, but highlights include modernizing the laboratory management structure, providing clinical and research support in response to the HIV/AIDS epidemic, facilitating the relocation of the UBC Diagnostic and Reference Laboratory to St. Paul's Hospital, and protecting the laboratory budget from fiscal restraints in the late 1980s and early 1990s. Throughout his tenure as chair, Terry continued in his clinical role as a diagnostic surgical pathologist and educator until he retired in 1995.

Terry devoted a great deal of time and energy to St. Paul's Hospital. He enjoyed working with others—technologists, students, pathologists, and clinical colleagues—and often helped his junior colleagues by lightening their clinical load. He was a generous person who freely gave his time. Terry was an active medical leader. Over the years, he served as chair of the hospital's Medical Advisory Committee, as president of its Medical Staff Association, and, in a provincial role, as president of the BC Association of Laboratory Physicians.

As a skillful administrator, Terry's abilities were often tested by the sometimes-fractious egos both within and outside the laboratory. He was particularly adept at making meetings as succinct and painless as possible through judicious use of the question "Does anyone have anything to

say that hasn't already been said?" During the summer, Terry wisely avoided holding Friday afternoon meetings and, whenever possible, finished all necessary work early enough to drive to his family cabin on Shuswap Lake, always a sanctuary from hospital-related stress.

After retirement, Terry regularly kept in touch with many hospital colleagues and often attended laboratory social events. He was a supportive, warm, and humorous person who was fun to be around. Terry will be missed by his wife, Anna, and his children, grandchildren, great-grandchildren, and many friends.

—Douglas Filipenko, MD
Vancouver



Dr Gordon E. Dower
1923–2022

Dr Gordon E. Dower passed away on 9 December 2022. He was born on 16 November 1923 in Cardiff, Wales, to Dr Alexander Dower and Phyllis Dower (nee Ewbank). Gordon was accepted by St. Bartholomew's Hospital to study medicine. The

teaching labs were destroyed by a bomb in World War II, so his class was transferred to Cambridge, where he met his future wife, Helen Lucas-Smith.

Gordon finished his hospital training and several house jobs at Bart's before enlisting in the Royal Canadian Air Force as a medical officer, with postings in Chatham and Ottawa. On completion of his service, Gordon, Helen, and their infant daughter drove across Canada to Vancouver seeking a warmer climate. He visited the fledgling medical school at the University of British Columbia and was offered a job in the Faculty of Medicine, where he stayed until his retirement.

Gordon preferred research to medical practice and was particularly intrigued by the electrical activity of the heart. He developed a xenobiotic long-term culture of myocardial cells to study drug effects in vitro. He was part of Dr Murray Newman's investigation team studying the orca in captivity, and in 1964, he took the first ECG on an orca, Moby Doll, using plumbers' aids as suction cups for the leads. Gordon also developed the field of polarcardiography, in which the electrical activity of the heart is displayed as a vector over time. He also invented the EASI lead system, which uses a small number of leads to derive a 12-lead ECG using a computer. The device was used on the space shuttle *Challenger* missions to monitor astronauts' heart activity and is used for telemetry in hospitals. He was also a fellow of the American College of Cardiology and published over 50 scientific articles.

In retirement, Gordon continued to invent, and he built the Ridek electric car. At the time, battery charging was slow, and the premise was to swap out the battery deck while retaining the ride-on component. He attended many electric vehicle conventions, including one in Long Beach to celebrate his 80th birthday with his family.

Gordon went on his first flight at 5 years old, using his allowance at a local exhibition. He waited 40 years to qualify as a fixed-wing pilot and took to flying a helicopter upon retirement. When he was refused a car rental in Ireland at the age

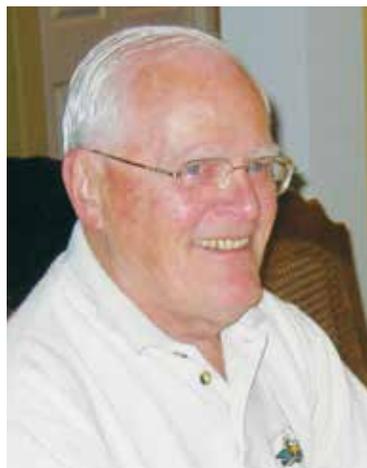
of 81 while attending an electric vehicle convention, he instead rented a helicopter to explore the Emerald Isle.

At age 90, he received a new aortic valve via transcatheter implantation and had almost another decade of happy life. He moved to the Tapestry retirement community at Wesbrook Village at age 93 and made many friends. He presented talks on a variety of topics to the group, including "Why Einstein was wrong." Gordon was an avid runner and continued jogging until an injury at age 98. In his final illness, he opted for medical assistance in dying and was with family when he left us.

Gordon is survived by his daughters, Julia (Karl), Nancy (Jim), and Lin; grandchildren, Wendy, Sheila, Kate, Jill, and David; and great-grandchildren, Ry, Erika, Thor, Linnaea, Jimmy, Miles, Teagan, and Teddy. He was predeceased by his wife, Helen, and son, Roger.

Gordon was an eternal optimist with a brilliant mind, a love of family, and an interest in learning.

—Nancy Dower, MD, PhD, FRCPC



Dr Joseph (Joe) Frank Schweigel 1936–2025

Dr Joseph (Joe) Frank Schweigel, a pioneer in spinal cord rehabilitation and a beloved mentor to generations of surgeons, passed away on 9 November 2025.

Joe was born to immigrant parents in Regina, Saskatchewan. Soon after, the family moved to Vancouver, where Joe grew up with his sister, Frances Watson. He graduated from Vancouver College high school and attended the University of British Columbia. His path to medicine was a testament to his resilience: he transitioned from engineering to medical studies and survived a grueling battle with meningitis before graduating in 1962. After an internship in Toronto, he practised as a family physician in Ontario, where he met his wife, Bonnie (also a Vancouverite), on a blind date.

Following his residency at UBC, Joe completed a fellowship at the Rancho Los Amigos National Rehabilitation Center in California. He returned to Vancouver to specialize in spine surgery, a move that would define his life's work.

Joe's professional legacy is anchored in the founding of the acute spinal cord injury unit, first at Shaughnessy Hospital and then at Vancouver General Hospital, alongside his friend, neurosurgeon Dr Skip Peerless. It was one of only three such specialized units in North America and remains a global model of care. In 1975, Joe became the unit's first director, tirelessly working one-in-two on-call shifts for years. His commitment to the community extended beyond the operating room; alongside his friend Doug Mowat, he served on the board of directors of the BC Paraplegic Association (now Spinal Cord Injury BC) and chaired the Rick Hansen Man in Motion Legacy Fund, raising vital awareness and funding for spinal cord injury care. He also served as chair of the UBC Medical Engineering Resource Unit.

To his students, Joe was a legend. Twice voted best medical student teacher, he was known for a rigorous style that birthed the term *Schweigelized*—a badge of honor worn by residents who met his exacting standards and emerged as better surgeons for it. He organized the orthopaedic seminar program, the basic science lecture program, and the surgical anatomy exposure sessions.

Although he retired from surgery in 2001, Joe continued a nonsurgical practice

OBITUARIES

until age 72. In retirement, he relished traveling with Bonnie and hosting his four children—Robert (Dione), Jason (Julie), Carolyn (Malcolm), and Lorraine (Calum)—and his 12 grandchildren for their 50th and 55th wedding anniversaries in Kauai. He was a man of immense drive—famous for his 7 a.m. starts to family vacations—with a sharp mind, who spent his final years discussing politics and science with his “club” friends.

He leaves behind a legacy of excellence, a third generation of *Schweigel* UBC graduates, and a family who loved him dearly.

—Robert Schweigel, MD, FRCSC
Surrey



Dr Charles Peter Stockdill
1941–2026

We are saddened to announce the passing of Dr Charles Peter Stockdill on 27 January 2026, 1 day before his 85th birthday. He was predeceased by his wife, Deanna, by 8 days.

Peter was born in Victoria to Joyce and Dexter Stockdill, both architects. He attended St. Christopher’s Elementary School, followed by Glenlyon Preparatory School and Oak Bay High School. He started his postsecondary education at Victoria College, finishing with a BSc in chemistry and mathematics. Influenced by the lengthy illness and subsequent loss of his mother, he chose a career in medicine, obtaining his medical degree from the University of

British Columbia in 1966. After graduation, he completed a rotating internship at Royal Jubilee Hospital in Victoria.

Peter began his professional career in Prince Rupert, where he worked as a general practitioner with general anesthesia privileges at the local hospital, in partnership with Dr Bill Hick. While practising in Prince Rupert, he was the representative for District 9, Skeena, to the Board of Directors of the then-BCMA. After working for 5 years in this capacity, Peter returned to Vancouver with his young family—his wife, Shirley; son, Stephen; and daughter, Susanne—to join the residency program in ophthalmology at UBC.

Upon obtaining his FRCSC in ophthalmology, Peter set up his specialty practice in Langley. He worked there for the next 25 years. In this setting, he once again became active with the BCMA, and he was the first president of the Society of Specialists.

While in Langley, he became a charter member of the Rotary Club of Langley and was designated a Paul Harris Fellow. It was there, too, that the marriage to his first wife unfortunately ended. But Peter bravely moved on.

Peter later married Deanna Newnham (Espinola, Ontario), who worked in the ophthalmology supply business. They were a grand couple. With the assistance of Deanna’s nursing skills (she was a Hamilton General Hospital nursing graduate), Peter volunteered his surgical skills in Tonga, Ecuador, and India. When not in the operating room, Peter was either sailing with Deanna aboard the *Penta Star* or *Gypsy Wind* along BC’s West Coast or seeking refuge at their second home on Maui. Peter was devoted to Deanna throughout their lives together, as well as to his children.

Peter spent the final years of his working life on Vancouver Island in Qualicum, Parksville, and Port Alberni. Upon retiring, he continued his love of the ocean, with Deanna, by sailing up and down the coast. As a consequence—he always stood by his convictions—he became a member-at-large with the Council of BC Yacht Clubs, where he focused his attention on maintaining

access to waterways, anchorages, and shore rights for all British Columbians.

After Deanna became incapacitated with dementia, Peter became active with the Parksville Probus Club. He made many new friends in the organization, including Lajla Stevenson, who was with Peter when he passed. Peter loved personal contacts in life, but he was also a man of principle and not one to suffer fools. In this context, I am reminded of and paraphrase what former senator Ted Kennedy said of his brother, Robert: “Some men see things as they are and ask why; my brother saw things as they might be and asked why not.”

Peter will be missed by all who were close to him—his family, friends, and colleagues. He is survived by his children, Stephen Stockdill and Susanne Stockdill; grandchildren, Liam, Natasha, Michael, and Samantha; brothers, Thomas Stockdill (Patricia) and Dr James Stockdill (Debra); and stepchildren, Jeff Newnham, Mark Newnham, and Tracy Powell.

—James Stockdill, MD
Victoria

Health Professions and Occupations Act: What physicians need to know

The HPOA came into effect April 1, 2026, introducing changes to the regulation of health professionals in BC.

Explore and stay informed about Doctors of BC’s advocacy and ongoing efforts at doctorsofbc.ca/HPOA.

**doctors
of bc**

Classifieds

Pricing (two options): Run an online-only ad at our monthly online rates, or pay an additional \$25 per month for an ad to appear in print as well. **Online rates:** Doctors of BC members: \$50 + GST per month per ad of up to 350 characters. \$75 + GST for 351 to 700 characters. Nonmembers: \$60 + GST per month per ad of up to 350 characters. \$90 + GST for 351 to 700 characters. **Deadlines:** Ads must be submitted or canceled by the first of the month preceding the month of publication, e.g., by 1 January for February publication. **Place an ad (payment required online):** bcmj.org/classified-advertising.

PRACTICES AVAILABLE

VANCOUVER—FAMILY PRACTICE AND REAL ESTATE AVAILABLE

MD retiring. Take over an established practice in the thriving, safe, and friendly Hastings-Sunrise neighborhood. Respectful and appreciative panel of 2200+ patients. EMR. Excellent staff. Opportunity to purchase street-front, retail office space (1000 sq. ft.). Please email vancouver sunriseclinic@yahoo.com for more information.

EMPLOYMENT

ACROSS CANADA—PHYSICIANS FOR YOU: YOUR RECRUITMENT SOLUTION

Are you a physician looking for work? Or a medical facility requiring physicians? Our team works with independently licensed Canadian physicians, CFPC/RCPC-eligible physicians, and clinics and hospitals across Canada, with excellent reviews. Contact Canada's trusted recruitment firm today to experience our specialized service that is tailored for your success! Visit www.physiciansforyou.com, email info@physiciansforyou.com, or call 1 778 475-7995.

PORT COQUITLAM—FAMILY PHYSICIANS, FULL-TIME OR PART-TIME

Excellent opportunity: MD Medical Clinic is seeking full-time or part-time family physicians for family practice and walk-in care (in-person and virtual). Overhead is 80/20, minimum income guarantee, and 3000+ patients on wait list. Contact 604 518-7750 or email mdmedicalclinicbc@gmail.com.

SURREY—RCMP HIRING PHYSICIANS FOR OCCUPATIONAL HEALTH SERVICES; FULL-TIME, PART-TIME, PERMANENT

As part of a multidisciplinary health services team at the RCMP E Division (BC headquarters) in Surrey, you'll be responsible for providing disability case management with the goal of having members return to good health and to work. The OHS program supports members' fitness for duty through physical and psychological screening, monitoring, and assessing risks for specific occupational health conditions and hazards. You will provide advice to management on the health service needs of the membership. Experience in occupational health/preventive medicine is an asset. Provincial licensing and security clearance are required. Health/pension benefits and flexible scheduling offered. For details, contact Paulina Bjelos at 778 290-3332 or paulina.bjelos@rcmp-grc.gc.ca.

VANCOUVER AND AREA—VIRTUAL OR IN-PERSON: FPs, SPECIALISTS, NPs

We are expanding and looking to add new team members across the country—BC, AB, SK, MB, ON, QC, NB, NS, PEI, NL. Open/collegial environment, 15+ years of practice support experience, efficient medical front and back office, EMR. Attractive split. Contact us today: yournewclinic.ca, supportyourpractice@enhancedcare.ca, 647 254-5578.

VICTORIA—CARDIAC SURGICAL ASSISTANT AT ROYAL JUBILEE HOSPITAL

Join a collaborative cardiac surgery team! We are recruiting a cardiac surgical assist to join a well-established and supportive cardiac surgery program consisting of five cardiac surgeons and four experienced

cardiac surgical assists. This role offers an excellent opportunity to work in a collegial, high-functioning environment with strong team support and structured onboarding. We offer an APP contract, participation in MOCAP, 2 weeks of full-time paid training to support a smooth transition into the role, predictable expectations with a minimum commitment of 2 assisting days per week, and the opportunity to work alongside a stable and experienced cardiac surgeon. Contact natbarlow72@gmail.com for more information.

MEDICAL OFFICE SPACE

COQUITLAM—OFFICE SPACE TO SHARE

Office space suitable for a specialist is available in my Coquitlam office on Tuesdays, Fridays, and alternate Thursdays. The office is fully furnished, including a small patient waiting area for up to six people, two examining rooms, and a consultation room. Ample parking is available in the outdoor and underground lots. The office building is also close to the Lincoln SkyTrain Station and Coquitlam Centre. Please call 604 328-7945 (any day or evening after 4:00 p.m.), and ask for Alan.

DOWNTOWN VERNON—PURPOSE-BUILT TWO-DOCTOR OFFICE WITH STAFF AND SUPPORT

Turnkey location and situation in extremely efficient and friendly well-run office in Vernon. Full-time manager, LPN, and 1.5 FTE MOA staff. Your own office and two exam rooms just for you. Fully equipped procedure room with ability to do minor ops, EKG, spirometry, Holter monitor, UDT, strep, urinalysis. Daily lab pickup. Ground-floor 1200 sq. ft. office with loads

CLASSIFIEDS

of parking, five blocks from Vernon Jubilee Hospital, two blocks from downtown Vernon. Flexible rent: either 80/20 or flat rate, whatever suits you. You will be as busy as you want to be in a very short time. I am full-time with an interest in full-service family medicine. Contact drlindsaypritchett@gmail.com for more information.

VANCOUVER—TURNKEY MEDICAL OFFICE, FOUR FULLY FURNISHED EXAM ROOMS

Modern clinic for specialists and FPs. Lease four rooms for \$7000 or two rooms for \$4000/month. Front desk kiosk for your MOA, computers, printer, and basic supplies. Free on-site parking at Superstore Marine Drive. Bright waiting area, HVAC, Internet, and utilities included. Flexible start, signage, cleaning, and secure building. Contact Pauline at tgr604@gmail.com.

Find more classified ads online:
bcmj.org/classifieds

MISCELLANEOUS

CORTES ISLAND—CULTIVATING WELL-BEING FOR HEALTH PROFESSIONALS, 14–19 JUNE 2026

Created by and for health professionals facing the growing pressures of modern health care, this 6-day retreat invites you to step away and recharge through meditation, nature, and evidence-based practices led by psychiatrists Drs Andrea Grabovac and Erin Burrell. Dive deep into mindfulness techniques, reconnect with what matters, and be supported by peers in unparalleled surroundings. Past participants call it “pure nourishment for the soul.” CFCP accredited. Partners welcome. Visit www.hollyhock.ca or email dr.burrell@hushmail.com.

TOFINO/CORTES ISLAND/SALTSPRING ISLAND/BALI—MINDFULNESS IN MEDICINE: CULTIVATING MEANING AND JOY IN OUR WORK AND LIVES

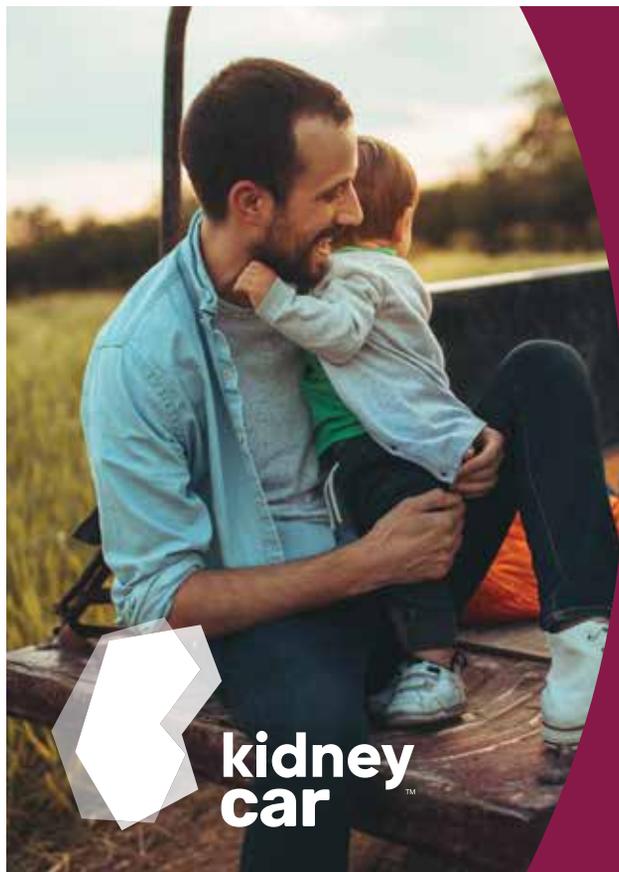
Join Dr Mark Sherman and your colleagues for a workshop or retreat exploring burnout,

meaning, and joy in our lives. Workshops are 4 half days in Tofino, BC, with partners, learning the foundations of mindfulness theory and practice while integrating on the land and ocean. Retreats are 5–7 days of immersive experience and deeply healing journeys. Tofino, Mindfulness in Medicine, 24–27 April 2026. Cortes Island, Heal Thyself, 31 May – 5 Jun 2026. Saltspring Island, Heal Thyself, 24–29 September 2026. Bali, Indonesia, Honoring the Sacred, 13–20 February 2027. Visit <https://livingthismoment.ca> or <https://livingthismoment.ca/testimonials/>, or email mark@livingthismoment.ca.

Prefer to read the *BCMJ* online?

Email “Stop print, start online” to journal@doctorsofbc.ca with your name and address.

Instead of print issues, you will receive the table of contents via email (10/year) with links to each new issue.



Turn Your Vehicle Into a Lifesaving Machine

Canada's longest-running charity car donation program. 100% of proceeds stay in Canada to support kidney patients.

DONATE TODAY:
1.800.585.4479 / KIDNEYCAR.CA



**kidney
car**

Archetype



Artist's rendering of a dental office. For illustrative purposes only.

Grow Your Medical Practice
**IN VANCOUVER'S
EMERGING
MEDTECH HUB**

**NEW ENTRY-LEVEL PRICING
ON SIX OPPORTUNITIES
FROM \$1,050/SF**



**OWN FROM THE UPPER \$900Ks
MOVE IN TODAY**
Between VGH & St. Paul's Medical Campuses



Register for pricing
and tour bookings
info@archetypevancouver.com

archetypevancouver.com

 QuadReal **rennie**

The developer reserves the right to make changes and modifications to the information contained herein without prior notice. Prices and promotions are subject to change without notice. Speak to the sales team for incentive details. Artist's renderings and maps are representations only and may not be accurate. E.&O.E.

Exclusive discounts, tailored for you.

Club**MD**

ClubMD, in partnership with Venngo MemberPerks, connects you with premium discounts on top brands. Access deals for practice supports, dining, travel, electronics, and wellness—all customized to your location through an easy-to-use app and website.

**Register with Venngo for access
to all ClubMD offers at:**

doctorsofbc.venngo.com/register



METROPOLITAN HOTEL

Unwind just steps from Vancouver's best shopping, attractions, and entertainment. Enjoy refreshed rooms, an inviting indoor pool, and elegant event spaces for the perfect getaway.

**UNLOCK EXCLUSIVE
NEGOTIATED RATES
FOR GREATER SAVINGS**

Call toll free **1 866 999 0798** or use code **JZN** under the Corp/Promo section to book a room online.

THE MORTGAGE GROUP

Busy in the clinic? Canada's largest independent mortgage brokerage helps you secure the right mortgage to fit your unique financial needs.

**FLEXIBLE MORTGAGE
SOLUTIONS, TAILORED
FOR YOU**

For general inquiries contact **Rein Weber** via rweber@mortgagegrp.com or call **604 351 1569**, and mention **Doctors of BC**.



BROADWAY ACROSS CANADA

Take a well-deserved break from the clinic with Broadway Across Canada, where you can enjoy world-class theatre, exclusive offers, and special pricing on select shows.

**RECEIVE UP TO
20% OFF ON
BROADWAY ACROSS
CANADA SHOWS**

Get your tickets online or call **1 800 889 8457**, and ask for the **Doctors of BC** rate.

P: 604 638-7921
TF: 1 800 665-2262 ext 7921
E: clubmd@doctorsofbc.ca
doctorsofbc.ca/ClubMD

**doctors
of bc**