

An unusual finding from fecal immunochemical testing: A case report

IN THIS ISSUE

Novel website connects general surgeons during COVID-19 crisis

Epidemiology of COVID-19 in BC

Medical education during COVID-19

Obesity: A risk factor for severe infection with coronavirus

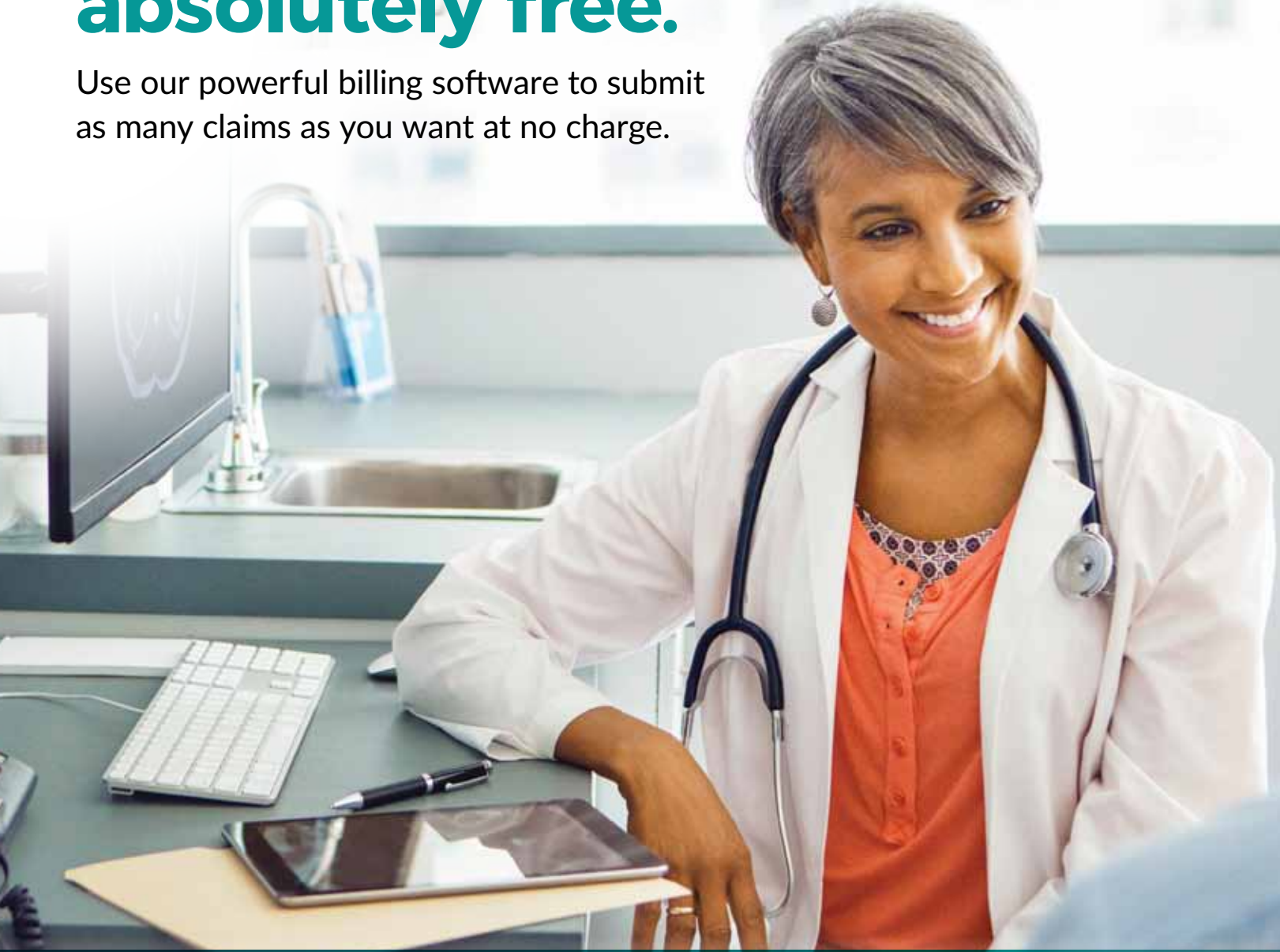




DR.BILL

You can now use Dr. Bill absolutely free.

Use our powerful billing software to submit as many claims as you want at no charge.



Focus on patient care.
Let us handle your billing for you.

Register today for FREE at dr-bill.ca





"Medical education during COVID-19: Lessons from a pandemic" by Dr Roger Wong begins on page 170.

157 Editorials

A conversation from sometime in the future, **David R. Richardson, MD**
Is there a new, better normal?
Cynthia Verchere, MD

160 President's Comment

Forever changed, **Kathleen Ross, MD**

161 Letters

- COVID-19 pharmacologic therapy guidance for BC, **British Columbia COVID-19 Therapeutics Committee**
- COVID-19 pandemic and adolescents' vaping epidemic, **Aki Nilanga Bandara, BSc, Mehara Seneviratne, Senara Wanniarachchi, BSc, Ricky Jhauj, BKin, Vahid Mehrnoush, MD**

- Corporatization of family medicine in BC, **Robert H. Brown, MD**
- Search engine to identify the most affordable drug, coverage availability, and special authority resources, **Anthony Chiam, RPh**

165 BCCDC

Epidemiology of COVID-19 in BC: The first 3 months, **Caren Rose, PhD, BCCDC Surveillance Team, Kate Smolina, PhD**

CLINICAL

- 167 An unusual finding from fecal immunochemical testing: A case report, David Sanders, MD, Hui-Min Yang, MD, S. Ian Gan, MD**

170 Special Feature

Medical education during COVID-19: Lessons from a pandemic, **Roger Y. Wong, MD**

172 Special Feature

UBC Reticulum: A novel website connecting general surgeons in BC during the COVID-19 crisis, **Hamish Hwang, MD, Shiana Manoharan, MD, Taryn Zabolotniuk, BSc, S. Morad Hameed, MD**

174 College Library

Thank you, and a helping . . . email?
Niki Baumann

Contents continued on page 156

Environmental impact

The *BCM^J* seeks to minimize its negative impact on the environment by:

- Supporting members who wish to read online with an e-subscription to bcmj.org
- Avoiding bag use, and using certified-compostable plant-based bags when needed
- Working with Mitchell Press, ranked third in North America for sustainability by canopy.org
- Printing with vegetable-based inks
- Using FSC-certified paper
- Printing locally in British Columbia



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 *BCM^J*.

© *British Columbia Medical Journal*, 2020. All rights reserved. No part of this journal may be reproduced, stored in a retrieval system, or transmitted in any form or by any other means—electronic, mechanical, photocopying, recording, or otherwise—without prior permission in writing from the *British Columbia Medical Journal*. To seek permission to use *BCM^J* material in any form for any purpose, send an email to journal@doctorsofbc.ca or call 604 638-2815.

Statements and opinions expressed in the *BCM^J* 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 *BCM^J*.

The *BCM^J* reserves the right to refuse advertising.



ON THE COVER

An unusual finding from fecal immunochemical testing: A case report

This case report peels back the layers of endoscopic and histologic investigations following a positive fecal immunochemical test result, eventually leading to the detection of a rare mucosa-associated lymphoid tissue lymphoma. Art materials: toilet paper, cardboard.

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

Print: The BCMJ is distributed monthly, other than in January and August.

Web: Each issue is available at www.bcmj.org.

Subscribe to print: Email journal@doctorsofbc.ca.

Single issue: \$8.00
Canada per year: \$60.00
Foreign (surface mail): \$75.00

Subscribe to notifications:

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

Prospective authors: Consult the "Guidelines for Authors" at www.bcmj.org for submission requirements.



Editor
David R. Richardson, MD

Editorial Board
Jeevyn Chahal, MD
David B. Chapman, MBChB
Brian Day, MB
Caitlin Dunne, MD
David J. Esler, MD
Yvonne Sin, MD
Cynthia Verchere, MD

Managing editor
Jay Draper

Associate editor
Joanne Jablkowski

Editorial and production coordinator
Tara Lyon

Copy editor
Barbara Tomlin

Proofreader
Ruth Wilson

Web and social media coordinator
Amy Haagsma

Cover concept and art direction
Jerry Wong, Peaceful Warrior Arts

Design and production
Laura Redmond, Scout Creative

Printing
Mitchell Press

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

ISSN: 0007-0556
Established 1959



In addition to providing medical care to the entire Skeena Valley, Dr Horace Wrinch (pictured here) built two hospitals, created a farm to supply the hospitals, and established a nursing school. A new book about him, *Service on the Skeena: Horace Wrinch, Frontier Physician* by Geoff Mynett, is reviewed on page 176.

Contents continued from page 155

175 COHP

Obesity: A risk factor for severe infection with coronavirus SARS-CoV-2, **Priya Manjoo, MD, Katie Bowers, MPP**

176 News

- Book review: *Service on the Skeena: Horace Wrinch, Frontier Physician*
- 2020 Family Physicians' Awards
- 2020 Rural Awards, BC recipients
- MSP coverage relating to COVID-19
- Health data coalition expands data-sharing application
- Website for Canadians to ask COVID-19 questions and get answers
- BC PharmaCare COVID-19 information for prescribers

- Research to address impact of COVID-19 on medication use and mental health for people with arthritis
- Research to better diagnose COVID-19
- Virtual stroke-recovery sessions
- Ontario researchers join global initiative to study loss of smell in COVID-19 patients
- How to embed AI and digital technology into physicians' training and practices
- Remote surgery: Exploring emergency care at a distance

180 CME Calendar

181 Classifieds

A conversation from sometime in the future

“Hey, great-grandpa, how did you survive the COVID-19 pandemic?”
“Mostly, I just sat around and sent funny memes to my social media contacts.”

Back in February, I wrote an editorial about the novel coronavirus and my hope that if it became a global pandemic humanity would respond with kindness and grace (published in the April issue). As I now sit in front of my computer in early April and reflect on the staggering spread of COVID-19 and the resulting unheard of societal adjustments, I am pleasantly surprised by the positive response to this pandemic. Sure, there have been cases of people fighting over toilet paper or gouging their neighbors by reselling medical supplies at ridiculous markups. But these are exceptions. I have been impressed by how the majority of people are reacting. There are numerous reports of individuals reaching out to the vulnerable in their communities by picking up their groceries, prescriptions, and other necessities. Others are trying to ease the social isolation many elderly are experiencing by sharing music and conversation. Groups that aren't using their personal

Despite fear of physical illness and financial ruin, so many are reaching out to others less fortunate than themselves.

protective equipment (PPE), such as dental offices, have been sharing with those who need them. All manner of organizations in unrelated fields have asked what they could produce and are now manufacturing gowns, masks, gloves, face shields, and more. Some companies are even designing and looking to make ventilators if need be.

I have been touched to my core by the 7:00 p.m. shout-out to health care workers and first responders. The banging of pots and clapping of hands brings a tear to my eye every time. Restaurants

that might be forced to close due to a drastic reduction in their business have been selflessly providing much-needed meals to health care workers at local hospitals. The outpouring of support and gratitude has been truly amazing during this difficult time.

People's creativity has also been on display. Window decorations with hearts and positive messages adorn many neighborhoods. Colorful decorated rocks now line pedestrian paths and walkways. Social media is providing a constant stream of funny memes to lighten the load and share joy as we navigate this pandemic.

The people of BC have been asked to physically distance themselves, self-isolate, and avoid gatherings. I have been beyond impressed by the general response to these measures, despite the significant financial and social losses incurred. The general population is being respectful yet kind while doing their part to flatten the curve.

My spirits have been lifted, as has my belief in the basic goodness of people. Despite fear of physical illness and financial ruin, so many are reaching out to others less fortunate than themselves. I am confident we will get through this pandemic together with perhaps a kinder and gentler world waiting on the other side. ■

—David R. Richardson, MD



Speakeasy Solutions

Cloud-based clinical speech recognition has at last come to Canada!

- ▶ Dictate from almost anywhere.
- ▶ Use your Smartphone as a microphone.
- ▶ Automatic accent detection.
- ▶ No per-device limits.
- ▶ Installs in minutes.

**Nuance®
Dragon®
Medical
One**


Contact us today for a free trial!
604-264-9109 | 1-888-964-9109

speakeasysolutions.com
Professional Speech Technology Specialists

Doctors Helping Doctors
24 hrs/day, 7 days/week

The Physician Health Program of British Columbia offers help 24/7 to B.C. doctors and their families for a wide range of personal and professional problems: physical, psychological and social. If something is on your mind, give us a call at 1-800-663-6729. Or for more information about our services, visit www.physicianhealth.com.

Physician Health Program
British Columbia
Connecting Physicians to Health



Is there a new, better normal?

Most of us could enumerate fairly closely the number of deaths reported to have occurred on 11 September 2001: 2977 victims and 19 hijackers. But our focus on the tragedy would leave us mistaken in our answer. In truth, in the US, about 7500 people die each day, so the vast majority of people who died on 9/11 did so in the more usual way. That day, approximately 100 people likely died in motor vehicle accidents and 31 in firearm incidents. In Canada, approximately 600 people were likely diagnosed with cancer and 22 died by suicide. It's easy to lose track when everything is focused on one huge event.

COVID-19 is a new disease, a novel virus, a puzzle with unpredictable and cruelly shaped pieces that we are trying to assemble in the dark. Living through the effects of physical-distancing guidelines, watching the news, and seeing the economic consequences, we may forget that most of the usual medical statistics are still ticking along. Front-line health care workers are not *all* looking after COVID patients; the majority in many centres are looking after the ordinary illnesses, injuries, and complications. Kids will get leukemia, women will get breast cancer, elderly people will break their hips. Caring for these issues is always challenging, but doing so during a serious pandemic is many degrees more

difficult. Most patients are not allowed to have family members with them in hospital—when they are vulnerable or unable to advocate for their own needs. Most face-to-face and hand-to-hand interaction is limited or distracted by the protections needed. Appointments are limited and less timely. Rounds, education, meetings, communication, students, and residents all have a weakened or distracted presence, and some may bear the scars long term. Learners graduating during this time may not have the same experience or rigor of evaluation in their fields. Studies are being fast-tracked into the public domain and being interpreted and dispersed prior to full peer review. Funding for research is devastated by economic predictions. International fellowships may be practically impossible for the time being. Technology is being used more than ever as we slowly distill what is important and what is possible, and accept that not all things fit well. This pandemic will have implications for medicine, practitioners, education, and non-COVID patient outcomes quite possibly for years.

We will eventually become a physically closer community again. Elective surgeries will again be slated, people will see their more usual lives, illnesses, and injuries somewhat prioritized again. But even with the possibility of an effective vaccine or scientifically supported treatment for COVID-19, it is more likely than not that there will be another SARS, or MERS, or Spanish flu on the horizon. Hopefully things will have changed so we can respond effectively with less drastic reactions, or maybe even have reduced risks for our population. We in health care, who hold many of the stakes directly and on behalf of our patients, may have to be the ones to spearhead changes during our return, even if economic benefactors of the status quo push in other directions.

Can we take this time to think about ways to encourage a new, perhaps better, normal? Could safe shopping be the standard? Do we need to have 10 000 whateverologists fly to attend a national meeting, or can we have adequate knowledge transfer and social interaction in a different, safer way? How much business *has* to be conducted in person, versus over a 30-minute Zoom meeting? Do we need to have thousands of people crowd together for football, basketball, and soccer games? Maybe there is a way to maintain the enjoyment and fellowship while reducing public

risk. Can we appreciate the performing arts in a safer way without sacrificing the power of artistic immediacy? Will necessity give birth to ideas that would previously have been overpowered by the status quo? Can our patients, and communication of their issues, be treated more effectively in the ways we are using now?

Life may not go back to the way it was. It shouldn't. But as we have done already with airline security, electronic ID tags, recycling and composting, smart phones, and electric vehicles, we change when things need to change, and we can handle it.

COVID news is updated, and some days—sometimes hourly—contradicts its previous iterations. By the time this editorial is published, we may have a new set of rules in place. There are likely to be active protocols affecting life for many months. But we will at some point have to reprioritize the more ordinary things that will need to be done in our practices. We likely will have to do this during a time of serious economic consequences and a scarred, overrun system. I hope open minds, kindness, team playing, and long-term vision will lead our way. ■

—Cynthia Verchere, MD

Will necessity give birth to ideas that would previously have been overpowered by the status quo?

British Columbia Medical Journal

@BCMMedicalJournal

BCMJ Blog: Stopping the spread: Managing substance use disorders amid SARS-CoV-2

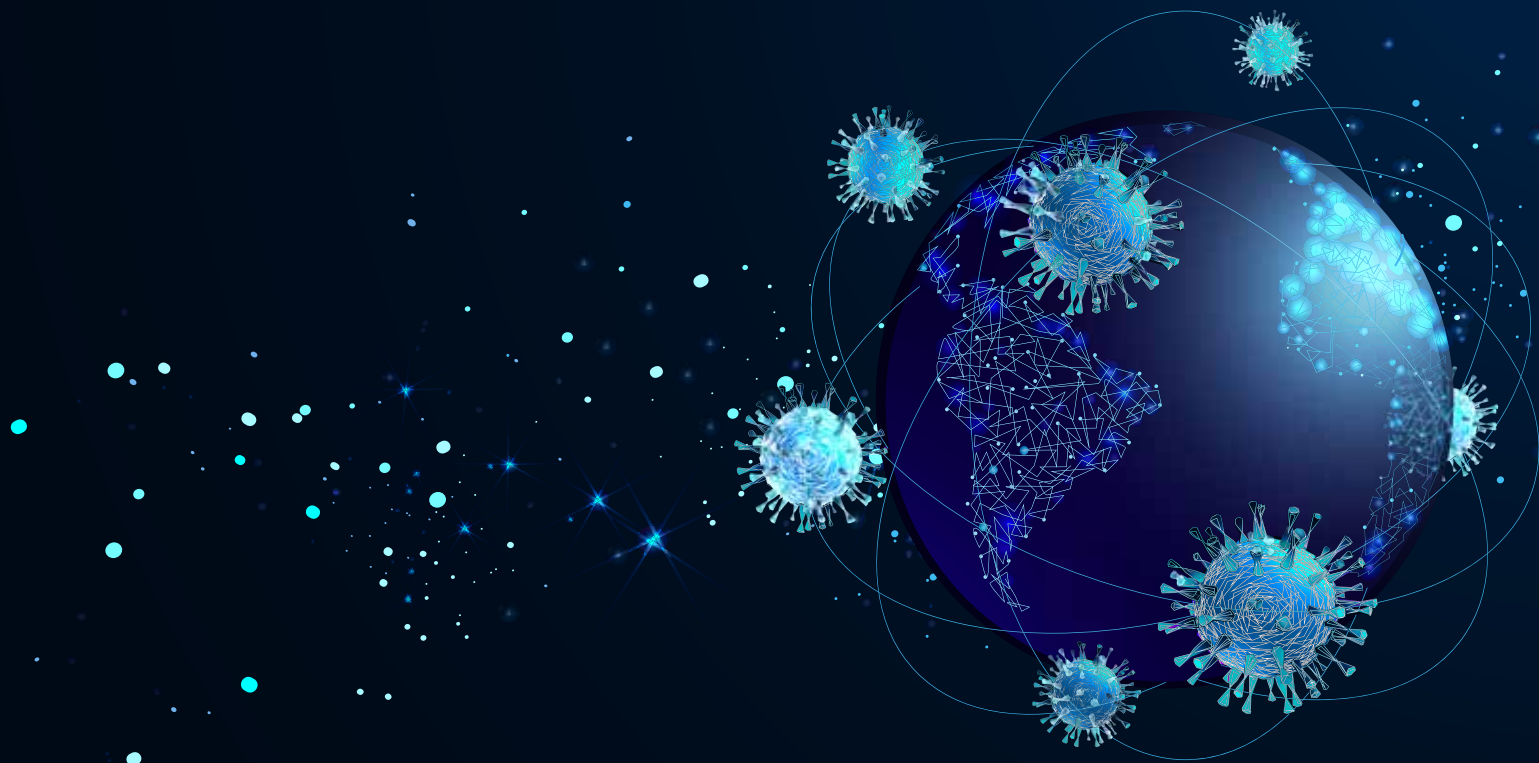
Many people with untreated or undertreated substance use disorder are currently facing dual public health emergencies—the SARS-CoV-2 pandemic and the overdose crisis.

Read the post: bcmj.org/blog/stopping-spread-managing-substance-use-disorders-amid-sars-cov-2



Follow us on Facebook for regular updates





Doctors of BC

Links and resources for COVID-19

Doctors of BC is actively supporting members during the coronavirus (COVID-19) pandemic in a variety of ways. Work includes advocacy on behalf of physicians with government, the provincial health officer, and health authorities, as well as ensuring members have access to appropriate tools, benefits, and insurance.

An information resource from Doctors of BC, updated regularly:

www.doctorsofbc.ca/covid-19

This page has information on:

- Clinical and practice supports
- Billing and fee code changes
- Virtual care
- Insurance, benefits, and income supports
- Advocacy and engagement
- Physician health and wellness
- FAQs (e.g., prescribing, financial supports, PPE)

For questions or concerns about COVID-19, contact us directly at covid19@doctorsofbc.ca

**doctors
of bc**



Forever changed

“I am not afraid; I was born to do this.” —Joan of Arc

14 April 2020

Many of my communications over these past few weeks have focused on the impressive and cohesive response of our profession to the rising SARS-CoV-2 pandemic. Together, we worked with our partners to ensure we were as ready as we could be to treat the most ill patients as they needed hospitalization and ventilation. The speed with which we mobilized and collaborated across all sectors was unprecedented. Our professional organization led the charge to ensure the most up-to-date information was accessible in the most convenient ways. Grass-roots divisions of family practice and medical staff associations banded together to facilitate optimal patient care and physician protection. Truly inspiring work has been done by an untold number of people to pull this all together. Now we wait.

Physical distancing and the provincial health officer’s plea to “just stay home” have certainly made a difference to case numbers to date. At this point, it is still too early to know for sure if our curve is flattening. Added to this, we have patients who need health care outside of COVID-19, and we are successfully rising to this challenge.

A truly critical piece of that success has been the widespread adoption of virtual medicine across medical practices in both primary and consultant care. We have never seen such a rapid and violent shake-up in the way we deliver health care in Canada. Admittedly, the advent of electronic medical records allowing instant search and visualization of data in a patient’s chart was definitely a revolution in care, just not as rapid or as widespread as what we are living through right now.

The majority of our medical training is grounded in honing clinical skills while we see patients in person. Our key triad includes listening to our patients’ concerns, watching them for important clues as they relate their history, and of course the incredible hands-on skills required to ascertain the main differential diagnoses. We are comfortable with our skills and can rely on our clinical judgment based on our visual, auditory, and tactile senses after years of practice and hands-on experiences. We can remember what an incarcerated hernia feels like and what the subtle signs of heart failure sound like. Often what we smell will point us toward the diagnosis, such as an infection or *C. difficile* colitis.

We know when a sick person in our presence is mildly or severely ill, often even before we examine them.

Now enter the world of virtual health. In many ways, it is as if we have lost one or two of our senses. We can obtain the same history and ask the same important questions that often lead us to the differential diagnoses without an in-person exam. That said, hands-on, in-person, face-to-face clinical care is our gold standard.

Times have changed in our virtual-care world. I stare at my patients on tiny screens. My patients stream themselves using cameras and Internet connections of varying quality as they discuss their issues. I feel blunted and perhaps harbor the nagging feeling that my assessment is incomplete. Patients seem to enjoy speaking to their doctors from the comfort of

their homes, often with family around them. It feels less intrusive and several have commented that this type of health care is more “fun” than coming to the office.

It is obvious that our health care system, along with many other aspects of our society, will be forever changed. We will refer to medical practice as “pre-COVID-19” and “post-COVID-19” in the years to come. There is no holding back the wave. Health care will need to continue to adapt. We will learn to work with more than one sense impaired and we will learn to know when we need that missing sense to complete an exam. We know there is something uniquely special and healing in the

face-to-face encounters with our patients that is not present over Skype. Yet, for now, this is very necessary to slow the community spread of SARS-CoV-2 and keep our patients and ourselves safe. I have every confidence that our profession will continue to meet the virtual care model with the same cohesion with which we have met the rest of this pandemic. We know with certainty that we can do this. We are not afraid of change. We were in fact, born to do this.

—Kathleen Ross, MD
Doctors of BC President

I have every confidence that our profession will continue to meet the virtual care model with the same cohesion with which we have met the rest of this pandemic.

Letters to the editor We welcome

original letters of less than 300 words; we may edit them for clarity and length. Letters may be emailed to journal@doctorsofbc.ca, submitted online at bcmj.org/submit-letter, or sent through the post and must include your mailing address, telephone number, and email address. Please disclose any competing interests.

COVID-19 pharmacologic therapy guidance for BC

To date (22 April 2020), there are no Health Canada-approved COVID-19 pharmacologic treatments, yet there is intense interest and media coverage of potential pharmacological agents.^{1,2} In BC, we have had the benefit of a diverse group of experts (the BC COVID-19 Therapeutics Committee [CTC]) scanning and summarizing the emerging literature, as

well as providing a weekly update and concrete recommendations about various experimental therapies. This summary of evidence and recommendations can be found on the BCCDC website.³

The committee convened on 13 March 2020 and initially consisted of front-line clinicians at Vancouver General and St. Paul's Hospitals. As the need for a provincial-level group was acknowledged, the group quickly expanded to 37 members, with representation from all health

authorities, the Ministry of Health Pharmaceutical Services Division (MOH PSD), and university researchers. Clinical health profession members include specialists from critical care, infectious diseases, medical microbiology, general internal medicine, emergency medicine, hematology, rheumatology, anesthesia, family practice, pharmacy, transplant medicine, and antimicrobial stewardship.

The CTC developed its own terms of reference that outline how material will be reviewed and how changes will be made to provincial recommendations as evidence evolves. Virtual meetings occur weekly to review new material and decide on changes to recommendations. There is also an active group on the videoconferencing platform Slack, where sharing and discussions can take place in preparation for the weekly conference. Each drug class/therapeutic intervention is assigned to a small subgroup of CTC members who ensure that the latest material is summarized weekly. New literature

British Columbia COVID-19 Therapeutics Committee (CTC) Clinical Practice Guidance for Antimicrobial and Immunomodulatory Therapy in Adult Patients with COVID-19			
		<i>Last updated May 11, 2020</i>	
Recommendations in this document apply to patients >18 years of age. For recommendations in special populations, refer to the complete guidelines.		There is limited clinical evidence to guide antiviral management for ill patients with COVID-19.	
		The guidelines recommend that specialist consultation (which may include Critical Care/Infectious Disease/Hematology/Rheumatology) be obtained if any investigational treatment is offered to a patient with COVID-19 outside of a clinical trial, and that informed consent be obtained from the patient or substitute decision-maker	
SEVERITY OF ILLNESS	ANTIVIRAL THERAPY	ANTIBACTERIAL THERAPY	IMMUNOMODULATORY THERAPY
Critically Ill Patients <i>Hospitalized, ICU-based</i> Patients requiring ventilatory and/or circulatory support; also includes patients requiring high-flow nasal cannula, or higher concentrations of oxygen by mask <i>*Suggests Enoxaparin 30 mg SC bid for DVT prophylaxis</i>	Chloroquine or hydroxychloroquine (with or without azithromycin) is not recommended outside of approved clinical trials or where other indications would justify its use Lopinavir/ritonavir is not recommended outside of approved clinical trials Remdesivir* is not recommended outside of approved clinical trials	Empiric therapy with ceftriaxone 1-2g IV q24h x 5 days is recommended if there is concern for bacterial co-infection (Alternative for severe beta-lactam hypersensitivity: moxifloxacin 400 mg IV q24h x 5 days) Add azithromycin 500 mg IV q24h x 3 days to ceftriaxone empiric therapy if atypical infection is suspected (azithromycin is not needed if empiric therapy is moxifloxacin) De-escalate on the basis of microbiology results and clinical judgment	Corticosteroids are not recommended outside of approved clinical trials unless there are other indications for its use** There is insufficient evidence at this time to recommend for or against the use of corticosteroids for acute respiratory distress syndrome (ARDS) Tocilizumab (IL-6 receptor blocker) is not recommended outside of approved clinical trials. If considered on an individual basis in patients with cytokine storm, it should only be done so with expert consultation (Infectious diseases and Hematology/Rheumatology)
Moderately Ill Patients <i>Hospitalized, ward-based, long-term care</i> Patients requiring low-flow supplemental oxygen <i>*Consider Enoxaparin 30 mg SC bid for DVT prophylaxis</i>	Chloroquine or hydroxychloroquine (with or without azithromycin) is not recommended outside of approved clinical trials or where other indications would justify its use Lopinavir/ritonavir is not recommended outside of approved clinical trials Remdesivir* is not recommended outside of approved clinical trials	Antibacterial therapy is not routinely recommended outside of approved clinical trials or where other indications would justify its use (eg. suspected bacterial co-infection in COVID positive patients)	Corticosteroids are not recommended outside of approved clinical trials unless there are other indications for its use** Tocilizumab (IL-6 receptor blocker) is not recommended outside of approved clinical trials
Mildly Ill Patients <i>Ambulatory, outpatient, long-term care</i> Patients who do not require supplemental oxygen, intravenous fluids, or other physiological support	Chloroquine or hydroxychloroquine (with or without azithromycin) is not recommended outside of approved clinical trials or where other indications would justify its use Lopinavir/ritonavir is not recommended outside of approved clinical trials Remdesivir* is not recommended outside of approved clinical trials		

Note: This document is dynamic and will be updated as changes to recommendations occur. The complete and most up-to-date version of the guidelines is available at <http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/clinical-care/treatments>

Original infographic design Greater Toronto Area COVID-19 Therapy Committee

* currently unavailable in Canada
 **e.g. asthma exacerbation, refractory septic shock, obstetric use for fetal lung maturation

FIGURE. Antimicrobial and immunomodulatory therapy in adult patients with COVID-19

and unpublished materials are sourced by CTC member searches, and a daily service from the MOH PSD. There are three active documents under constant development, to which all members have editing access:

1. The working document where new studies and information is summarized in point form.
2. The formal summary of evidence (including complete citations), based on the working document, which is used to update the material posted on the BCCDC website.
3. The one pager—a very brief overview of the recommendations.

The committee has also developed an infographic to act as a quick reference for clinicians [Figure]. The infographic is dynamic and will be updated as changes to recommendations occur. The complete and most up-to-date version of the guidelines is available at www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/clinical-care/treatments.

Weekly, after the committee has its virtual meeting, the updated material is submitted to the BC Health Emergency Coordination Centre Clinical Reference Group—Clinical Care Guidelines Working Group for final consideration. The approved documents are then posted to the BCCDC website and distributed throughout the province via communications teams at each of the health authorities.

—**British Columbia COVID-19 Therapeutics Committee**

Postscript: For concerns pertaining to the recommendations made by the BC COVID-19 Therapeutics Committee, please contact Dr David Sweet at ddsweet@mail.ubc.ca.

References

1. Health Canada. Vaccines and treatments for COVID-19: List of all COVID 19 clinical trials authorized by Health Canada. Accessed 20 April 2020. www.canada.ca/en/health-canada/services/drugs-health-products/covid-19-clinical-trials/list-authorized-trials.html.
2. Panetta A. Trump's touting of unproven COVID-19 drug is unusual. We'll soon see if he's right. CBC News. 8 April 2020. Accessed 20 April 2020. www.cbc.ca/news/world/trump-drug-covid-hydroxychloroquine-tests-1.5525690.
3. British Columbia COVID-19 Therapeutics Committee. BC Centre for Disease Control. Unproven therapies for COVID-19. Updated 27 April 2020. Accessed 30 April 2020. www.bccdc.ca/Health-Professionals-Site/Documents/Guidelines_Unproven_Therapies_COVID-19.pdf

COVID-19 pandemic and adolescents' vaping epidemic

After careful review of more than 800 research papers on e-cigarettes, the National Academies of Sciences, Engineering and Medicines' evidence-based clinical guidelines concluded that there is “moderate evidence” for increased cough and wheeze in adolescents who use e-cigarettes.¹ In addition, nicotine-containing e-cigarette aerosols have the potential to adversely impact several host defence mechanisms in the lungs. Independent of nicotine, exposure to particulates and flavorings in e-cigarette aerosols could also potentially impair lung function.¹ Meanwhile, the Forum of International Respiratory Societies, a collaborative of nine international professional organizations that was created to promote respiratory health worldwide, published a position statement in 2018 warning that exposure to e-cigarette aerosol in adolescence and early adulthood can result in pulmonary toxicity.²

With the growing evidence of potential risk factors related to the COVID-19 pandemic, the immediate health effects of e-cigarette vaping have become apparent and are alarming. Also, the new evidence suggests COVID-19 and other respiratory infections will not only increase the risk of developing complications from the coronavirus but will increase chances of spreading it to others. Some American states are even issuing specific health advisories on vaping and COVID-19.³ The evolving knowledge is especially worrisome, and in light of this evidence, serious efforts should be made to increase public awareness of the harmful effect of e-cigarette use. Physicians should step up and redouble their cessation and counseling efforts.

Smoking and vaping also seem to be associated with poor survival; therefore, we need to bring sensible policies to protect our young people from devastating effects of COVID-19. The American Academy of Family Physicians recently developed clinical guidance to highlight the well-known risk. People who smoke or use e-cigarettes have a significantly higher risk of contracting respiratory infections like the coronavirus, and people with decreased lung function caused by smoking or vaping are more likely to develop serious complications caused by infections. According to Dr Barbara Keber,

president of the New York State Academy of Family Physicians, “Now more than ever, it is critical for the State and medical community to take actions to prevent our youth from ever using these highly addictive, deadly products, and to help our patients to reduce their risks through FDA-approved cessation and telehealth during this pandemic.”⁴

The Canadian Paediatric Society has developed a COVID-19 resource for the health care community. The society encourages pediatricians and other health professionals who work with adolescents, youth, and families to communicate the message that smoking and vaping may increase the risk of acquiring the COVID-19 infection.⁵

According to scientific evidence, COVID-19 could be a serious threat to those who smoke e-cigarettes, combustible tobacco, or marijuana. Moreover, smoking or vaping increases people's vulnerability to severe illness once infected, and anything that makes the lungs less healthy will weaken our survival chances against COVID-19.

We strongly believe that the recent evidence needs to be appropriately reflected in COVID-19 prevention and control efforts. Further, this information should be widely circulated as an emerging clinical guideline in order to assist front-line physicians' informed clinical decision making efforts to treat COVID-19.

—**Aki Nilanga Bandara, BSc**

Founding Chair, Global coalition to empower adolescent and youth on harmful therapeutic interventions to prevent combustible tobacco use
Instructor, UBC Faculty of Land and Food System

—**Mehara Seneviratne, Senara Wanniarachchi, BSc, and Ricky Jhauj, BKin**

Coordinators, Global coalition to empower adolescent and youth on harmful therapeutic interventions to prevent combustible tobacco use

—**Vahid Mehrnoush, MD**

Senior Advisor, Global coalition to empower adolescent and youth on harmful therapeutic interventions to prevent combustible tobacco use
Section of Trauma, Acute Care, and Global Surgery, Vancouver General Hospital, UBC

References

1. National Academies of Sciences, Engineering, and Medicine, et al. Public health consequences of e-cigarettes. Washington, DC: National Academies Press; 2018.

2. Ferkol TW, Farber HJ, La Grutta S, et al. Electronic cigarette use in youths: A position statement of the Forum of International Respiratory Societies. *Eur Respir J* 2018;51:1800278.
3. Commonwealth of Massachusetts, Office of Attorney General Maura Healey. COVID vaping advisory. Accessed 30 April 2020. www.mass.gov/doc/covid-vaping-advisory.
4. New York State Academy of Family Physicians. Statement by NYSAFP on link between tobacco use and COVID-19. Accessed 30 April 2020. www.nysafp.org/News/What-s-New/COVID-19-Resources.
5. Chadi N, Bélanger R. Canadian Paediatric Society. COVID, youth, and substance use: Critical messages for youth and families. Accessed 30 April 2020. www.cps.ca/en/blog-blogue/covid-youth-and-substance-use-critical-messages-for-youth-and-families.

Corporatization of family medicine in BC

Over the past decade there has been a remarkable change in the ownership of family medicine practices in BC. Large numbers are now owned and operated by private corporations, which are neither owned nor controlled by the physicians who work in them. This has occurred largely because family physicians are neither business people nor endowed with the upfront financial resources to invest in the start-up of increasingly large and complex office structures.

These corporate structures often operate efficiently and all are well equipped with modern

electronic medical record systems. They give more freedom to the individual physicians who have no financial obligations to the practice. They have definitely filled a void in medical care in BC, but the question arises whether they will have a net benefit to the people of the province. After all, it is the people of BC who pay for them through taxation and fees paid to these corporations through physicians' billings.

So, one must first ask: Why would private corporate entities want to invest in primary care delivery? All private companies exist to make money for the owners of those companies. In health care this is no different.


The answer is that private companies have seen the void in the organization of primary care in BC and identified it as a business opportunity. The owners of these companies all want financial compensation for their investment. If this compensation can be attained by driving efficiencies in primary care and saving money globally, then the corporations can be viewed as a net benefit for the people of BC and also for the physicians who work for them.

If, however, these private companies excessively control the behavior of the physicians who work in them, and demand excessive profits for their efforts, then they will be viewed through a different lens. It must also be understood that these private companies control the electronic

health records of the patients registered with them. While it can be argued that the medical records belong to both the patient and the physician, there have been instances in BC where conflicts have arisen between private clinic owners and physicians working in those clinics. These conflicts have resulted in physicians being physically locked out of the private premises and being denied access to their patients' medical records. This is a dangerous situation for the people of BC.

As well, private corporate structures can terminate the contracts of physicians who work on their premises. If this happens, these physicians are at the mercy of the corporations when it comes to supplying them with their patients' electronic medical records. And not having immediate access to patients' electronic medical records makes practising medicine very difficult, if not impossible.

I think it is both prudent and necessary for the Ministry of Health and Doctors of BC to review the status of primary care in BC as it relates to private ownership of medical clinics. The corporatization of primary care in BC reminds me of the corporatization of all medicine in the US. I practised in the US for nearly a decade, and I have intimate knowledge of the abuse of corporate medicine. Currently in the US, over 65% of all family physicians work in privately



OUT NOW! *"The Doctor is In: Recommendations for expanding in-person care in community-based physician practices"*

A one-stop source of information to support physicians in the gradual re-opening of offices and clinics.

Visit doctorsofbc.ca/TheDoctorIsIn

owned corporate structures. These corporate structures use something called “economic credentialing” when they review the usefulness of the physicians who are contracted to work in the clinics. If physicians don’t make enough money for the private corporations, they are let go. Conversely, if the physicians make more money for the corporations, they are rewarded financially. This means that these family physicians end up working for the benefit of the corporations, not for the benefit of their patients. This is one of the many fundamental stumbling blocks in American health care.

This letter is meant to serve as a warning for the possible storm on the horizon in BC. We do not want to have anything resembling the American health delivery system in Canada. The time to conduct this due diligence is now, before private corporations become any more powerful in the ownership of family medicine in BC.

—Robert H. Brown, MD, CCFP
North Saanich

Search engine to identify the most affordable drug, coverage availability, and special authority resources

Drugsearch.ca is a free search-engine website that shows the price of medications (brand and generic), whether a medication is covered by specific BC PharmaCare plans, and whether special authority is first needed for coverage. When special authority applies, links to the special authority criteria and application forms are provided. The search engine is refreshed monthly and syncs drug wholesaler pricing with the PharmaCare database. The website can also be accessed via the Pathways platform using “drugsearch” as a search term.

I created this website, with the help of a local software developer, for several reasons. I once encountered a child with severe asthma whose parents had purchased only Ventolin, avoiding the steroid due to costs. I realized that if the prescriber had a rapid way to see which inhaled steroid was covered, the situation could have been averted. I am also frequently contacted by physician friends and colleagues asking for the prices of different medications because the PharmaCare formulary website does not show the full retail price, only how

The screenshot shows the Drugsearch.ca interface. At the top, there is a search bar with 'entresto' entered and a dropdown menu set to 'ORAL SOLID'. Below the search bar, there are two main sections. On the left, under 'Filter Coverage', there is a checkbox for 'Special Authority' and a link to 'Learn more about B.C. PharmaCare Coverage Plans'. Below this is a box for 'Fair PharmaCare' with text explaining the plan and a link to 'Learn more about Fair PharmaCare'. On the right, under '3 MATCHES FOUND', there are three results for Entresto. Each result includes the product name, generic equivalent, total cost, and a note that a 'Special Authority' application is needed for PharmaCare coverage. Each result has a blue button labeled 'Heart Failure'.

FIGURE. The results of a search for Entresto on Drugsearch.ca.

much the government would pay per dose. I have also found that most pharmacists and prescribers do not realize that costs only from covered medications count toward satisfying a patient’s annual deductible, meaning that the increased prescribing of noncovered medication actually hinders a patient from receiving PharmaCare assistance.

Drugsearch.ca allows a prescriber to search for and compare medications by brand or generic name, filter the search results by application (e.g., inhaled versus topical), and see the price that a patient would pay inclusive of pharmacy fees. The price takes into account whether the medication is covered by PharmaCare and how much a patient would pay if it is covered. Drugsearch.ca results also show if a drug first requires special authority application to activate PharmaCare coverage, and has one-click links to the PharmaCare criteria page and application forms [Figure]. The need for a fast way to show pharmacists and prescribers special authority availability arose after I encountered the case of an elderly pensioner who

had paid nearly \$2000 over a year for Entresto and did not receive PharmaCare assistance for his other medications. It was later found that the special authority had been missed by both pharmacists and prescribers, resulting in the Entresto drug costs not being applied toward his annual deductible, which needed to be met before PharmaCare coverage could begin. Unfortunately, BC PharmaCare policy does not permit retroactive reimbursement to the patient in these situations.

My hope is that patients, pharmacists, and prescribers can use drugsearch.ca to minimize patients’ financial burdens and reduce the amount of paperwork faxed to pharmacies requesting alternative covered medications.

—Anthony Chiam, RPh
North Vancouver

Disclosure: We are applying for a grant from the Ministry of Health for revenue to support the upkeep and cover host and server fees. The website will not track or sell data; all users are anonymous. There will be no advertisements on the site.

Epidemiology of COVID-19 in BC: The first 3 months

11 May 2020

As of mid-May 2020, more than 2000 diagnosed cases of COVID-19 in British Columbia were reported to public health.¹ The epidemic in BC began with the first lab-confirmed case reported on 26 January 2020. Cases through to the end of February were among international travelers or close contacts of travelers to an area with community transmission. In early March 2020, the first case of community transmission in BC was reported, and the first two outbreaks of COVID-19 were identified (one at a conference, and one at a long-term care facility). This was followed by the increase in case counts.

Cases related to travel slowed coincident with restrictions on non-essential travel, mandatory quarantine upon return to BC, and border closures (3rd week of March 2020). A variety of public health measures were implemented, and lab testing capacity continued to be expanded, with testing initially focused on those most likely to transmit infection or who were part of clusters or outbreaks. The daily number of incident reported cases peaked in the 4th week of March at close to 100 new cases.¹ Thereafter, there was a slow decline and leveling in the number of new cases identified daily through April. In late April, low-threshold testing began, and case numbers remained stable. Five weeks after the peak, most cases were acquired locally through contact with a known case or cluster with very little community transmission.

All five regional health authorities reported cases of COVID-19; 84% of cases were from the two most populous health authorities,

Fraser Health and Vancouver Coastal Health.¹ Lab-confirmed cases were evenly distributed by sex. Two-thirds of cases were among individuals aged 30 to 69, and only 2% were pediatric (younger than 19 years). Approximately one in five cases was among health care workers. By 6 May 2020, 49 outbreaks had been declared, the majority (n = 41, 84%) in health care facilities, and eight in other settings (e.g., correctional facilities, workplaces).

One in five British Columbians who tested positive for COVID-19 was hospitalized, and of those two in five required critical care. The crude case fatality rate was 5%, with age-specific rates ranging from 0.8% among individuals younger than 70 years, to 10% among individuals aged 70 to 79, and 28% in individuals 80 years and older. The majority (> 60%) of deaths were among residents of long-term care facilities. Males were at 70% increased risk of death and were also more likely to be hospitalized compared to females (25% for males, 15% females). The number of individuals requiring hospitalization and/or critical care peaked in the first week of April about 10 days after the peak in cases. At the peak, there were nearly 150 cases in hospital across the province; after the peak, the number steadily declined.

Across Canada, every province has experienced its own epidemic: a series of regional epidemics.² While BC represents 14% of the Canadian population, it accounts for less than 4% of national COVID-19 cases and deaths so far.² BC's epidemic curve was most similar to Saskatchewan's, both in terms of the magnitude relative to the population, as well as the overall trajectory. Internationally, BC fared favorably in

the first 3 months of the pandemic compared with many other countries, mirroring Australia's epidemic curve.³ While the age and sex distribution of cases in BC was similar to what was observed across Canada, there were relatively fewer reported cases among youth and relatively more reported fatalities among individuals over 80 years old compared with global patterns. This is likely a reflection of variations in testing practices and because most COVID-19-related deaths in Canada have occurred in long-term care facilities. The observed sex difference in BC for severe COVID-19-related outcomes, with men more likely to be hospitalized, require critical care, and die, is consistent with international statistics.⁴

As the restrictions and measures put in place to prevent community transmission in BC continue to ease over the coming weeks, the province will

continue to monitor the dynamics and epidemiology of the pandemic. ■

—Caren Rose, PhD
BCCDC, PHSA
School of Population and Public Health, UBC
—BCCDC Surveillance Team
BCCDC, PHSA
—Kate Smolina, PhD
BC Observatory for Population and Public Health, BCCDC
School of Population and Public Health, UBC

References

1. British Columbia Centre for Disease Control. British Columbia COVID-19 daily situation report, May 8, 2020. Accessed 11 May 2020. www.bccdc.ca/Health-Info-Site/Documents/BC_Surveillance_Summary_May_8_2020_Final.pdf.
2. Public Health Agency of Canada. Coronavirus disease 2019 (COVID-19). Daily epidemiology update. Accessed 11 May 2020. www.canada.ca/content/dam/phac-aspc/documents/services/diseases/2019-novel-coronavirus-infection/surv-covid19-epi-update-eng.pdf.
3. Johns Hopkins University COVID-19 Dataset. Accessed 11 May 2020. https://github.com/CSSEGISandData/COVID-19/tree/master/csse_covid_19_data.
4. Global Health 5050. COVID-19 sex-disaggregated data tracker. Accessed 11 May 2020. <https://globalhealth5050.org/covid19>.

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

David Sanders, MD, Hui-Min Yang, MD, S. Ian Gan, MD, FRCPC

An unusual finding from fecal immunochemical testing: A case report

Endoscopic and histologic investigations following a positive fecal immunochemical test (FIT) result eventually led to the detection of a rare mucosa-associated lymphoid tissue (MALT) lymphoma.

ABSTRACT: This case report describes the presentation, workup, and management of a 73-year-old patient with multifocal extranodal mucosa-associated lymphoid tissue (MALT) lymphoma. The MALT lymphoma was identified through a process that began with routine fecal immunochemical testing, which is recommended in BC for screening average-risk patients for colorectal cancer. The fecal immunochemical test (FIT) used for screening requires the patient to submit a stool sample collected at home using a simple kit. The sample is then analyzed for the presence of blood. However, because bleeding can occur with benign pathologies such as hemorrhoids, inflammatory bowel disease, and vascular lesions, further investigation is required when certain pathologies are found on colonoscopy done in the colon screening program. In this

case, investigation included esophagogastroduodenoscopy and CT imaging. The results from all investigations eventually led to the detection of a rare gastric cancer. Despite the patient being from a part of the world with high rates of endemic *Helicobacter pylori*, the MALT lymphoma identified was not associated with *H. pylori* and was probably related to a systemic inflammatory disorder.

Case data

A 73-year-old female with average risk of colon cancer presented for routine fecal immunochemical testing. She had been screened in the past with the fecal immunochemical test (FIT). Her medical history was significant for a cerebrovascular accident, dyslipidemia, osteoporosis, and an inflammatory spondyloarthropathy with inflammatory sacroiliitis. Her medications included ASA, alendronate, and naproxen as needed. She was a nonsmoker with no alcohol consumption and had moved to Canada from Hong Kong. She had a second-degree relative diagnosed after age 60 with colorectal cancer.

After having negative FIT results in 2014 and 2015, the patient had a positive FIT result in July 2018 with a value of 171 ng/mL. When assessed prior to colonoscopy, she reported no hematochezia or melena and regular bowel movements with no change in her bowel habits. She had no early satiety, epigastric pain, nausea, or vomiting. Her weight was stable. She had no fevers, chills, or night sweats. Physical examination revealed no abdominal masses or peripheral lymphadenopathy.

Her colonoscopy revealed a 1-cm pedunculated polyp in the ascending colon and two 5-mm semi-pedunculated polyps in the transverse colon. Evidence of mild colitis was found in the rectosigmoid region and tissue was obtained for biopsy [Figure 1]. Retroflexion in the rectum revealed only internal hemorrhoids. The ascending colon polyp was a tubulovillous adenoma with low-grade dysplasia. The transverse polyps were a sessile serrated adenoma without dysplasia and a tubular adenoma with low-grade dysplasia.

Histologic sections of the rectosigmoid biopsies revealed an atypical lymphoid infiltrate that had expanded the lamina propria and replaced the glands [Figure 2]. Scattered lymphoepithelial lesions were identified. Immunohistochemistry demonstrates an atypical B cell population positive for CD20 and negative for CD3, CD5, CD10, and CD43. A lambda light chain restriction was observed. The findings were consistent with low-grade B cell mucosa-associated lymphoid tissue (MALT) lymphoma.

The patient underwent an esophagogastroduodenoscopy (EGD) that revealed atrophic gastric mucosa in the proximal stomach. Erythema with an abnormal mucosal pattern was seen from the mid-gastric body extending into the antrum, pylorus, and first part of the duodenum [Figure 3]. Biopsies of the gastric and duodenal mucosa again showed a clonal population of CD20 lymphocytes with lambda light chain restriction and confirmed the diagnosis

Dr Sanders is a gastroenterology resident at the University of British Columbia and is based at Vancouver General Hospital.

Dr Yang is a consultant pathologist at Vancouver General Hospital and an associate clinical professor in the Department of Pathology and Laboratory Medicine at the University of British Columbia. Dr Gan is a gastroenterologist at Vancouver General Hospital and an associate professor in the Division of Gastroenterology at the University of British Columbia.

This article has been peer reviewed.



FIGURE 1. Visualization of the rectosigmoid by colonoscopy reveals an abnormal vascular pattern and hyperemia.



FIGURE 3: Visualization of the antrum by esophagogastroduodenoscopy reveals erythema with an abnormal mucosal pattern.

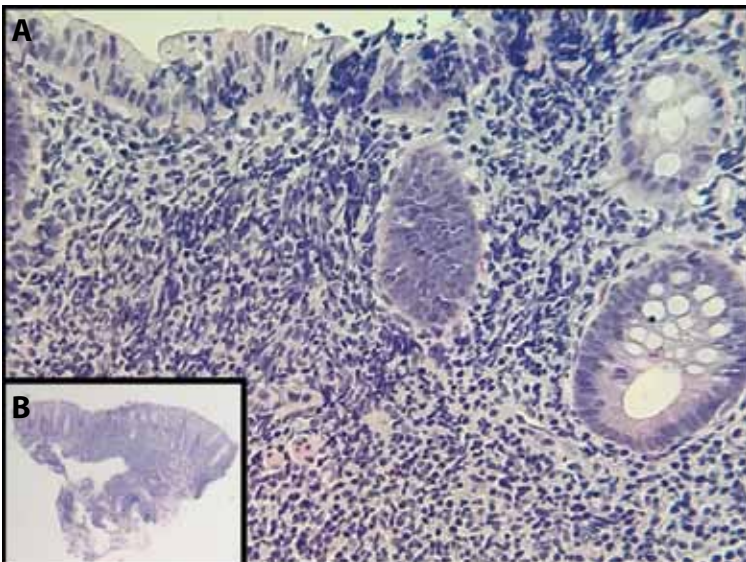


FIGURE 2. Immunohistochemistry findings. **A:** Hematoxylin and eosin staining of biopsied rectosigmoid tissue reveals an atypical polymorphous lymphoid infiltrate that expands the lamina propria and replaces the colonic glands. The majority of the atypical lymphoid cells are intermediate-size with centrocytic nuclei and variably abundant pale cytoplasm. Occasional larger lymphoid cells with vesicular chromatin and distinct nucleoli are also present (original magnification $\times 200$). **B:** Hematoxylin and eosin staining shows that the atypical lymphoid infiltrate extends into the submucosa and is poorly circumscribed (original magnification $\times 40$).

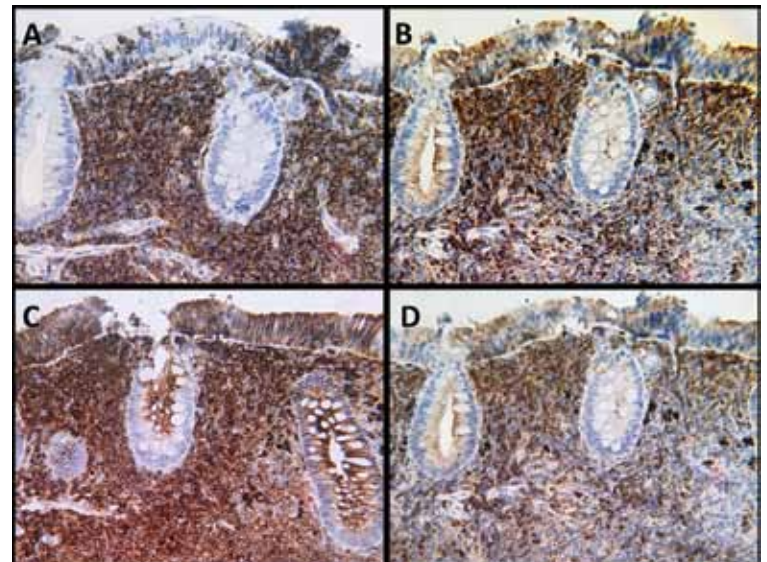


FIGURE 4. Immunohistochemistry findings. **A:** CD20 staining reveals a clonal B cell population in the deep lamina propria (see bottom right corner) and atypical lymphoid cells that are positive for CD20 (original magnification $\times 200$). **B:** CD3 staining reveals scattered background reactive T cells (original magnification $\times 200$). **C:** Lambda light chain immunohistochemistry shows lesional cells that exhibit monotypic reactivity for immunoglobulin (original magnification $\times 200$). **D:** Kappa light chain immunohistochemistry highlights a few non-neoplastic plasma cells (original magnification $\times 200$).

of extranodal marginal zone MALT lymphoma [Figure 4].

Other investigations revealed the patient's hemoglobin level was 117 g/L, her WBC was $3.5 \times 10^9/L$, and her platelet count was $163 \times 10^9/L$. The patient was also found to have a lactate dehydrogenase (LDH) level of 187 IU/L, creatinine of 74 $\mu\text{mol/L}$, and beta-2 microglobulin of 2.4 mcg/mL. Her serum protein electrophoresis showed a monoclonal IgM lambda band in the beta 2 region. *Helicobacter pylori*, bacteria endemic in the patient's area of origin and typically associated with this lymphoma, were not identified by biopsy or by a urea breath test. A bone marrow biopsy showed no bone involvement. A CT scan showed abnormal wall thickening in the gastric antrum, proximal duodenum, and lower rectum [Figure 5]. There were prominent subcentimetre lymph nodes near the stomach and rectosigmoid.

The patient was followed by her oncologist and a repeat EGD and colonoscopy were done at 6 months and found to show no endoscopic or histologic changes. Currently the patient remains on an active surveillance schedule and is receiving no therapy as she is asymptomatic and has a good performance status.

Discussion

Extranodal mucosa-associated lymphoid tissue lymphomas are induced by chronic inflammation,¹ with MALT lymphoma being the most common of marginal zone B cell lymphomas.² The prototypical infection for MALT involvement of the stomach is *H. pylori*. A study published in 2010 found the incidence of *H. pylori*-associated MALT lymphoma has declined³ compared with an earlier study that found *H. pylori* infection in 92% of all gastric MALT lymphomas considered.⁴

US data indicate that extranodal marginal zone lymphoma is rare, with 18.3 cases per 1 million person years, and that the median age at diagnosis is 66 years.⁵ The stomach is the most frequent site of involvement, but MALT can also involve the colon, salivary glands, ocular adenexa, lungs, thyroid, breast, and liver.⁶ Symptoms can include reflux, epigastric pain, anorexia, weight loss, and gastrointestinal bleeding.⁷ Monoclonal gammopathy is found in 27% to 36% of patients.⁸

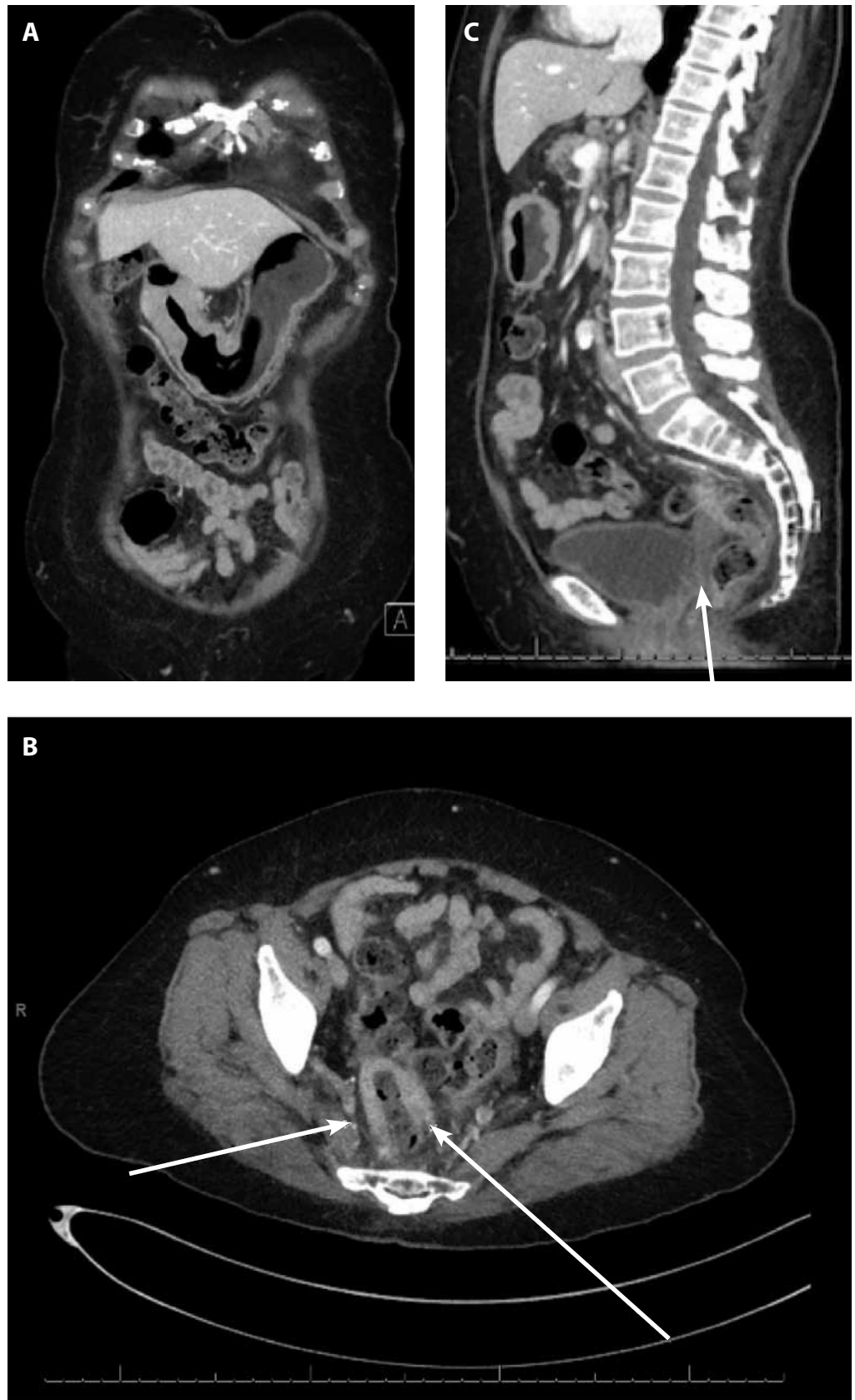


FIGURE 5. CT findings. **A:** Coronal view shows diffuse thickening of the gastric antrum. **B:** Transverse view shows thickening of the rectosigmoid (arrows). **C:** Sagittal view shows fat stranding (arrow) associated with colonic involvement.

This case is interesting because the diagnosis was made with the help of the BC Cancer Colon Screening Program, which identifies those at risk of colon cancer using the FIT—a simple test that requires patients to provide a stool sample for analysis. If blood is detected, follow-up procedures are ordered. This case is also interesting because the patient had multifocal disease with involvement of the stomach, small bowel, and rectosigmoid, yet had no evidence of *H. pylori* infection. Besides *H. pylori* infection, autoimmune diseases such as systemic lupus erythematosus, Sjögren's syndrome, Hashimoto disease, and relapsing polychondritis have been associated with MALT.^{1,9,10} This patient had inflammatory spondyloarthropathy with inflammatory sacroiliitis. The mechanism postulated in cases such as this is that chronic inflammation leads to the local accumulation and proliferation of antigen-dependent B cells and T cells. B cell clones will remain that still depend on the antigen-stimulated immune response for growth and survival. With acquisition of additional mutations, the tumor becomes antigen-independent and capable of systemic spread.¹¹

Historically, the Lugano staging system was used for gastrointestinal lymphomas, but models such as the Paris Staging System¹² can also be used. This patient was designated stage IV as she had disseminated extranodal involvement in multiple areas of the gastrointestinal tract.

In *H. pylori*-associated cases, bacteria eradication therapy should be prescribed regardless of disease stage.^{1,12} Eradication of the bacteria should then be documented with a breath test.¹³ The decision to use rituximab, chemotherapy, or radiation is dependent on symptoms and disease distribution.¹² Long-term follow-up with physical examinations, blood testing (including a CBC), cross-sectional imaging, and endoscopy should be implemented to monitor for progression and transformation.¹²

Summary

In the case described here a 73-year-old female was diagnosed with mucosa-associated lymphoid tissue lymphoma after a process that began with routine fecal immunochemical testing. A positive FIT result led to the patient undergoing colonoscopy, esophagogastroduodenoscopy, blood

testing, and CT imaging. Although the patient was not found to have *H. pylori*-associated disease, she did have inflammatory spondyloarthropathy with inflammatory sacroiliitis. Her systemic inflammatory disorder may have been a factor in her MALT diagnosis, since extranodal mucosa-associated lymphoid tissue lymphomas are known to be induced by chronic inflammation.

The mechanism postulated in cases such as this is that chronic inflammation leads to the local accumulation and proliferation of antigen-dependent B cells and T cells.

The stomach is the most common site affected, but MALT lymphoma can also involve the colon, salivary glands, ocular adnexa, lungs, thyroid, breast, and liver. Symptoms may include reflux, epigastric pain, anorexia, weight loss, and gastrointestinal bleeding. Once identified, treatment of MALT lymphoma may include *H. pylori*-eradication therapy, chemotherapy, or radiation. In this case, the patient is currently asymptomatic and remains on an active surveillance schedule without therapy. The patient was referred for a radiation oncology opinion for symptom management or to delay the need for systemic therapy. She was offered radiation to the gastric lesion, but declined treatment due to lack of symptoms and concern around the side effects of radiation. ■

Competing interests

None declared.

References

- Zucca E, Bertoni F. The spectrum of MALT lymphoma at different sites: Biological and therapeutic relevance. *Blood* 2016;127:2082-2092.
- Olszewski AJ, Castillo JJ. Survival of patients with marginal zone lymphoma: Analysis of the surveillance,

epidemiology, and end results database. *Cancer* 2013; 119:629-638.

- Luminari S, Cesaretti M, Marcheselli L, et al. Decreasing incidence of gastric MALT lymphomas in the era of anti-*Helicobacter pylori* interventions: Results from a population-based study on extranodal marginal zone lymphomas. *Ann Oncol* 2010;21:855-859.
- Wotherspoon AC, Ortiz-Hidalgo C, Falzon MR, Isaacson PG. *Helicobacter pylori*-associated gastritis and primary B-cell gastric lymphoma. *Lancet* 1991; 338(8776):1175-1176.
- Khalil MO, Morton LM, Devesa SS, et al. Incidence of marginal zone lymphoma in the United States, 2001-2009 with a focus on primary anatomic site. *Br J Haematol* 2014;165:67-77.
- Zucca E, Conconi A, Pedrinis E, et al.; International Extranodal Lymphoma Study Group. Nongastric marginal zone B-cell lymphoma of mucosa-associated lymphoid tissue. *Blood* 2003;101:2489-2495.
- Koch P, del Valle F, Berdel WE, et al. Primary gastrointestinal non-Hodgkin's lymphoma: I. Anatomic and histologic distribution, clinical features, and survival data of 371 patients registered in the German multicenter study GIT NHL 01/92. *J Clin Oncol* 2001;19:3861-3873.
- Wöhler S, Streubel B, Bartsch R, et al. Monoclonal immunoglobulin production is a frequent event in patients with mucosa-associated lymphoid tissue lymphoma. *Clin Cancer Res* 2004;10:7179-7181.
- Ramos-Casals M, la Civita L, de Vita S, et al. Characterization of B cell lymphoma in patients with Sjögren's syndrome and hepatitis C virus infection. *Arthritis Rheum* 2007;51:161-170.
- Ekstrom Smedby K, Vajdic CM, Falster M, et al. Autoimmune disorders and risk of non-Hodgkin lymphoma subtypes: A pooled analysis within the InterLymph Consortium. *Blood* 2008;111:4029-4038.
- Park YK, Choi JE, Jung WY, et al. Mucosa-associated lymphoid tissue (MALT) lymphoma as an unusual cause of malignant hilar biliary stricture: A case report with literature review. *World J Surg Oncol* 2016;14:167.
- Zucca E, Copie-Bergman C, Ricardi U, et al. ESMO Guidelines Working Group. Gastric marginal zone lymphoma of MALT type: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol* 2013;24(suppl 6):vi144-vi148.
- Fallone CA, Chiba N, van Zanten SV, et al. The Toronto consensus for the treatment of *Helicobacter pylori* infection in adults. *Gastroenterology* 2016;151:51-69.



Medical education during COVID-19: Lessons from a pandemic

Key lessons learned during COVID-19 at the UBC Faculty of Medicine.

Roger Y. Wong, MD, FRCPC, FACP, FCAHS

The impact of COVID-19 on medical education is unprecedented, far reaching, and presents unique challenges to medical schools.¹⁻³ Mitigating strategies should be principle based, forward looking, and compassionate. Lessons learned from the medical education adaptations during the pandemic can potentially be extrapolated to other crisis situations. This article outlines key lessons learned during COVID-19 at the UBC Faculty of Medicine, which is home to a provincially distributed medical undergraduate program that is composed of three regional medical campuses in addition to the main campus.

For all educational adaptations during COVID-19, the foundational consideration is to embrace the safety and well-being of students in the context of providing patient-centred care.

Dr Wong is the executive associate dean, education, and a clinical professor in the Department of Medicine at the UBC Faculty of Medicine.

This article has been peer reviewed.

This cannot be overstated. We know that medical students report feelings of uncertainty and anxiety³ about personal safety and continuity of learning experience. Many have questions on how the pandemic impacts their graduation timeline, financial liability, and housing insecurity. The latter stressors, albeit nonacademic, must be adequately addressed through enhanced student advising services.

To recommend and implement educational adaptations, we constructed two rapid-response teams at the outset. The first, the COVID-19 advisory working group, makes high-level steering recommendations to the dean's office on educational adaptations as part of the medical school's response. The second, the undergraduate medical education COVID-19 task force, implements these recommendations. This task force, co-chaired by the undergraduate associate dean and a regional associate dean, comprises student representatives from all years and campuses, as well as multidisciplinary faculty members and administrative staff. This approach helps to empower students and faculty, who can serve as champions for change.

Effective communication is especially critical during the pandemic. To ensure messaging is consistent, the task force develops key messages regularly to add clarity to what students, faculty, and staff can expect. A multimodal communication approach is helpful, using email, YouTube video messages, and website postings. Also, early engagement of internal (university administration) and external (health authorities) stakeholders is crucial.

During the pandemic, we are learning that medical curricular adaptations should be flexible in terms of delivery and administration, building on the existing pedagogical design. The governance structure of the curriculum should be maintained to ensure compliance with accreditation standards.

With physical distancing required, all in-person classes (e.g., case-based learning, lectures, discussion groups) transitioned to remote teaching via an online platform, literally within several days. Our approach has been to expand the video delivery platform that is already in place for our provincially distributed medical education program. Case-based

learning is delivered via videoconferencing, and the medical program uses YouTube teaching videos, mobile apps, and previously recorded didactic sessions. We recognize that emergency remote teaching may not contain all the best practices in effective online instruction,⁴ and we apply continuous quality improvement processes to enhance the learning experience.

In the meantime, in the interest of student and patient safety, early clinical experiences (years 1 and 2) and clinical clerkship (core and elective rotations, years 3 and 4) have been placed on hold for all medical students. This is a uniform adaptation across all 17 medical schools in Canada and helps manage the finite amount of personal protective equipment available. Close liaison with the Association of Faculties of Medicine of Canada is helpful. Adaptations made to replace in-person early clinical experiences (years 1 and 2) include online posting of clinical skills, development of new webinars, and videoconferencing delivery of family medicine teaching. For year 3 students, the module of clinical clerkship has been temporarily pulled out and replaced with flexible learning experience projects, which normally occur in year 4. The exact timing of clerkship reinstatement remains uncertain at this time and will depend on the rapidly evolving pandemic situation. We understand this can be a source of anxiety for students, and we are offering proactive academic advising and student counseling. Year 4 students have already completed the core curriculum, short of 2 weeks of electives, which have been now replaced by public health or research projects. These final-year students will graduate on time in May 2020, and will start residency training in July 2020, contributing to the physician workforce.

Concurrently, we are empowering all medical students to actively engage in a number of public health activities at the provincial level that do not involve physical patient contact, such as conducting COVID-19 contact tracing, staffing telephone hotlines and call centres in regional health authorities, and performing background literature searches for public health. The engagement of our students as part of the public health response demonstrates the social responsibility of the medical school, an approach that has been mirrored in other jurisdictions.⁵



Many adaptations, such as effective online instruction, are catalyzed by the urgency of the pandemic.

Similar to the curricular adaptations, we have made parallel modifications to the assessment framework, preserving the overall programmatic assessment approach while allowing flexibility by shifting the formative and summative components. Portfolio sessions have switched to online delivery, and workplace-based assessments have been deferred to after reinstatement of clinical clerkship. Multiple-choice examinations are now delivered online and made formative. We also delivered the first online objective structured clinical examination (OSCE) to the final year students and are deferring it for students in the remaining years.

We have made adaptations to faculty development in preparing and supporting teachers via online, open-access resources.⁶ We have also launched a number of COVID-19-related webinars, free of charge, to support our teachers as part of the medical school's continuing professional development services.

While it is important to act quickly when making adaptations during COVID-19, it is equally important to anticipate the long-term shifts that may become the new normal. Many adaptations, such as effective online instruction, are catalyzed by the urgency of the pandemic. We should begin to plan to sustain the adaptations as we refresh medical education.⁷ ■

Competing interests

None declared.

Acknowledgments

Dr Wong would like to express his heartfelt thanks to the countless faculty, clinical colleagues, staff, and students who contribute to the MD undergraduate education program at the University of British Columbia.

References

- Rose S. Medical student education in the time of COVID-19. *JAMA* 2020. doi:10.1001/jama.2020.5227.
- Ahmed H, Allaf M, Elghazaly H. COVID-19 and medical education. *Lancet Infect Dis* 2020. doi.org/10.1016/S1473-3099(20)30226-7.
- Gallagher TH, Schleyer AM. "We signed up for this!" – Student and trainee responses to the Covid-19 pandemic. *N Engl J Med* 2020. doi:10.1056/NEJMp2005234.
- Hodges C, Moore S, Lockee B, et al. EDUCAUSE Review. The difference between emergency remote teaching and online learning. Accessed 30 April 2020. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>.
- Bauchner H, Sharfstein J. A bold response to the COVID-19 pandemic: Medical students, national service, and public health. *JAMA* 2020. doi:10.1001/jama.2020.6166.
- Office of Faculty Development, University of British Columbia. COVID-19 and faculty development and support. Accessed 10 April 2020. <https://facdev.med.ubc.ca/covid-and-faculty-development-support>.
- Emanuel EJ. The inevitable reimagining of medical education. *JAMA* 2020;323:1127-1128.

UBC Reticulum: A novel website connecting general surgeons in BC during the COVID-19 crisis

The UBC Reticulum website was launched in May 2019 to help connect general surgeons throughout the province. Following the emergence of COVID-19, the website has become a communication hub connecting surgeons during the crisis.

Hamish Hwang, MD, FRCSC, FACS, Shiana Manoharan, MD, Taryn Zabolotniuk, BSc, S. Morad Hameed, MD, MPH, FRCSC, FACS

The UBC Reticulum website was launched in May 2019 to help connect general surgeons across British Columbia. The site's primary function was to connect surgeons based on their name, location, specialty area, and the procedures they carry out. Figures 1 and 2 show screenshots of the website's map function that displays where surgeons are located throughout the province. Other features included matching surgeons with mentors, a repository of proposed and completed research projects, a locum-matching function, and a message board dubbed "Netter." The site (www.ubcreticulum.com) is restricted to general surgeons, residents, and associated administrators and researchers.

Dr Hamish Hwang is a clinical associate professor at the University of British Columbia and associate head of the UBC Division of General Surgery. Dr Shiana Manoharan is a general surgery resident at UBC. Ms Taryn Zabolotniuk is a medical student at UBC. Dr S. Morad Hameed is an associate professor of surgery and critical care medicine at UBC and head of the UBC Division of General Surgery.

This article has been peer reviewed.

The initiative was funded by the University of British Columbia, and the site was created by Actualize8, a website design company in Vancouver. Inspired by social media apps such as Facebook, Twitter, and Instagram, and websites

such as Airbnb and MLS, UBC Reticulum uses tags to tailor the site to a user's interests. Users identify subspecialties and other interests, and corresponding tags were created to attach to applicable research projects and message posts. Users who list specific interests on their profile receive an email or text notification when another user posts something tagged with that interest. Examples of tags include subspecialty interests such as community surgery, colorectal surgery, gastric oncology, and critical care. Examples of other interests include billing, global health, medicolegal issues, wellness, medical education, and telehealth.

Netter topics include links to other websites, billing tips, resources for telehealth, information to share with patients, endoscopy algorithms, COVID-19 data resources, announcements about canceled conferences, government tax information, wellness resources, perioperative PPE protocols, alternative sourcing of PPE, advice on triaging office consults, impacts on residents and qualifying examinations, and invitations to webinars. **Figure 3** shows a screenshot of a feeder post and a few comments on the

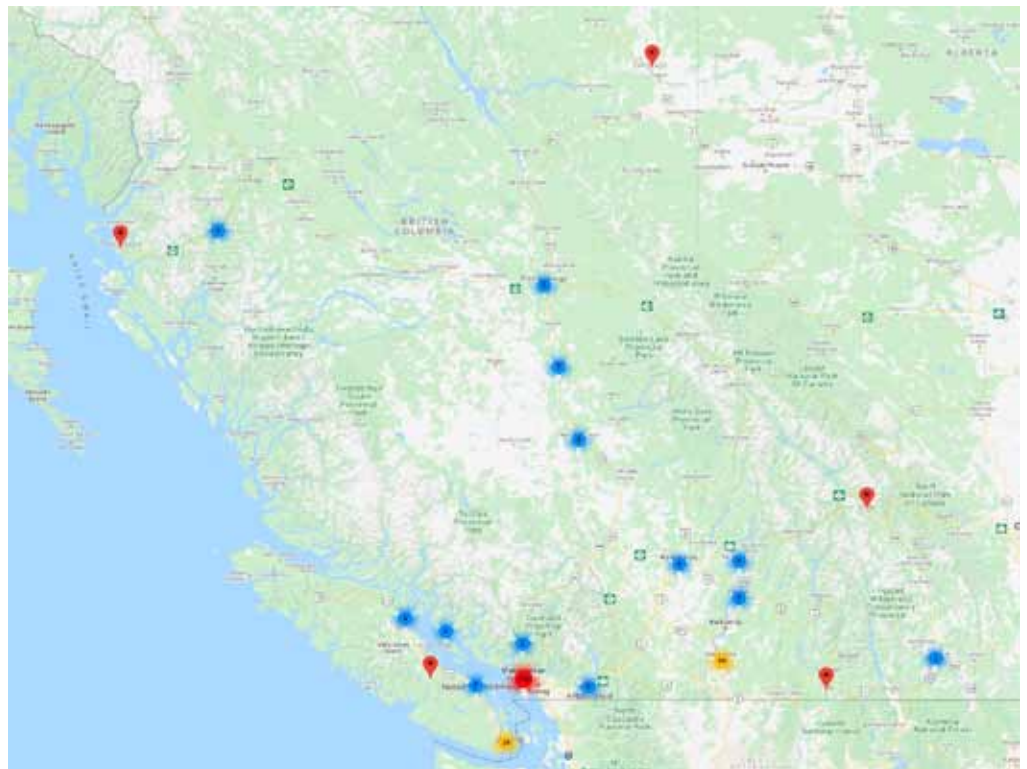


FIGURE 1. The map function of the UBC Reticulum website showing where surgeons are located throughout the province.

message board (user identifiers are greyed out).

On 15 March 2020, a COVID-19 tag was created. By 25 March 2020 there were 31 feeder posts on Netter with 63 follow-up comments posted by 24 users from all five geographic regions of the province. After 10 days, more surgeons were engaged on the website than previously seen on any other topic. Over the following 4 weeks, there were 60 additional Netter posts, including a link to a daily Zoom update hosted by surgeons at Vancouver General Hospital and attended by surgeons across the province. An additional 40 users signed up for the website, bringing the total to 232.

On 6 April 2020, a new feature went live—the COVID-19 Surgical Oncology Transfer Network. This feature, pictured in **Figure 4**, allows an at-a-glance view of all the hospitals in the province and their capacity to perform urgent cancer surgery. Each site has a designated surgeon contact to facilitate urgent transfers of cancer patients; if cancer operations become no longer possible at one hospital patients could be transferred to another hospital in the network that still has access. The network is maintained by a volunteer UBC medical student.

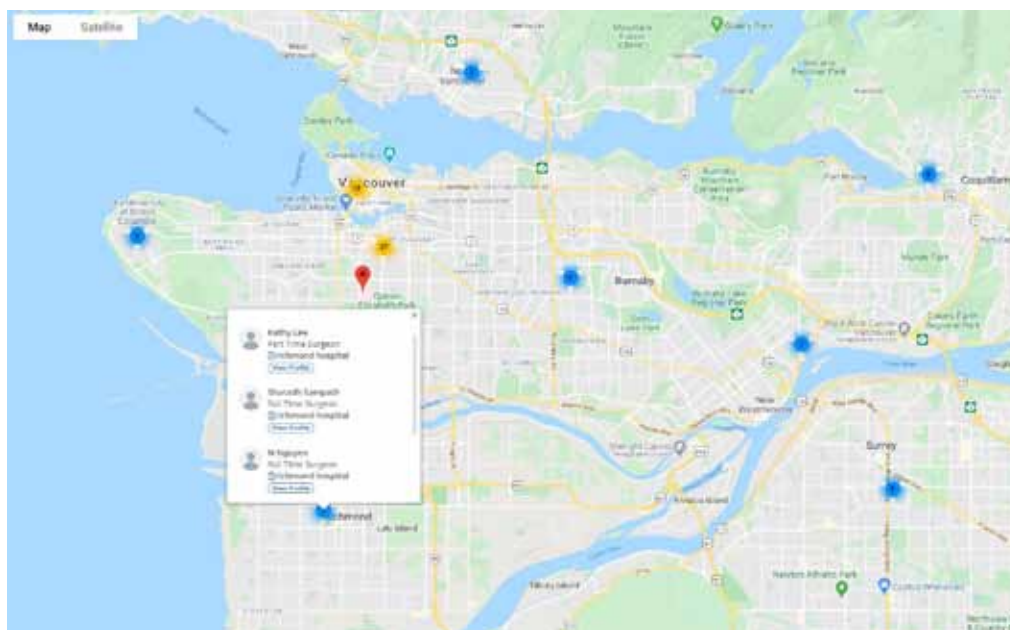


FIGURE 2. The map function showing general surgeons in Greater Vancouver.

In the face of the unprecedented COVID-19 crisis, general surgeons in BC have been able to use this new technology to connect and help each other in real time in a way never before seen. The potential for collaboration created by

a networking website such as this was realized in an unpredictable circumstance. Opportunities to repurpose the network for other pandemics or disaster scenarios in the future are sure to be discovered. ■



FIGURE 3. A screenshot of a feeder post on the message board (Netter).

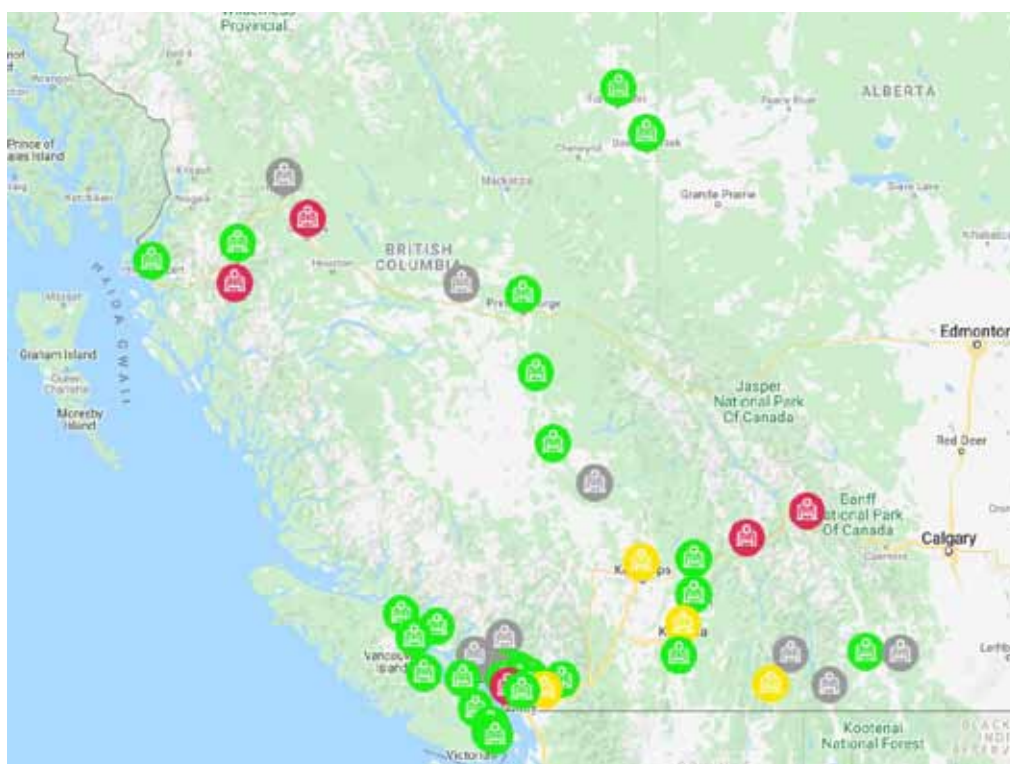


FIGURE 4. A screenshot of the COVID-19 Surgical Oncology Transfer Network.

Thank you, and a helping . . . email?

Thank you to everyone for all you're doing in this unusual situation. Normally the College Library would extend a helping hand, but even though we washed it for over 20 seconds, maybe we can offer a helping email instead?

For doctors on the front lines: if you need information, we're here for you. We've been answering many questions related to COVID-19 and know how challenging it is to find information on an emerging disease. The College Library has created a list of pandemic-related

e-books for background information: www.cpsbc.ca/files/pdf/Ebooks-to-Assist-with-Pandemic-Management.pdf. You may enter requests for information on more specific topics on our literature search form: www.cpsbc.ca/literature-search-requests.

For doctors continuing to provide care to patients with other disorders, our services are still available, with an emphasis on electronic delivery. We've been working on many non-COVID-19 questions, and we continue to provide access to quality resources such as point-of-care tools and apps in case you need

quick, evidence-based clinical answers or information on the go.

Last, but definitely not least, we've been receiving questions about health care professionals' mental health, and we can provide information about sources of support for you and your colleagues, such as www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/health-care-provider-support.

Hope that you and yours stay safe and well.

—Niki Baumann
Librarian

We continue to provide access to point-of-care tools in case you need quick, evidence-based clinical answers.

This article is the opinion of the Library of the College of Physicians and Surgeons of BC and has not been peer reviewed by the BCMJ Editorial Board.

doctors of bc

we know you.

INSURANCE for doctors

T 604 638 2904
E insurance@doctorsofbc.ca
W doctorsofbc.ca/insurance

we're for you.

Obesity: A risk factor for severe infection with coronavirus SARS-CoV-2

The COVID-19 pandemic is of particular relevance to patients with obesity. Early clinical reports from China, Italy, and the US identified that age, hypertension, cardiac disease, and diabetes are strongly associated with severe disease and death from infection with SARS-CoV-2.¹⁻⁵ Obesity was demonstrated to be an important risk factor for severe infection from the influenza A H1N1 virus,⁶ and emerging evidence suggests that this is also the case for SARS-CoV2.

Recent studies from China, France, and the US show that COVID-19 positive patients with a higher body mass index (BMI) have greater odds of experiencing disease requiring acute or critical care, and may be less likely to survive.⁷⁻⁹

The largest study to date, evaluating the association of BMI with SARS-CoV-2 infection was a retrospective analysis of 3615 COVID-19 positive symptomatic patients in a New York academic hospital.⁷ Among patients younger than 60 years, persons with a BMI between 30 and 34 kg/m² were 2 times more likely to be admitted to acute care and critical care. Similarly, patients younger than 60 years with a BMI \geq 35 kg/m², were 4 times more likely to be admitted to critical care. This study adjusted for age but not comorbid conditions.

There are several biologically plausible mechanisms for the association between obesity

and more serious infection from SARS-CoV-2. Obesity is a state of chronic inflammation with high concentrations of pro-inflammatory cytokines, which causes reduced macrophage activation and blunted cytokine production contributing to impaired innate immunity.¹⁰ Leptin is a hormone made by fat cells and is a marker of the degree of adiposity. Leptin levels are high

in patients with obesity and it has been shown to interfere with the body's ability to mount an effective immune response to vaccination or infection. It is possibly the basis of the poor vaccination success

rates in patients with obesity as well as their increased susceptibility to viral infections.¹¹

Persons with obesity shed influenza A virus for longer periods, increasing the chance of spread.¹² This is important in determining self-isolation times. Furthermore, BMI correlates positively with the concentration of infectious virus in exhaled breath and evidence suggests that the obesity microenvironment contributes to greater disease virulence.^{13,14}

Mounting evidence supports obesity as a risk factor for severe COVID-19 disease. Isolation of positive cases and physical distancing are currently the primary interventions. Persons with obesity should be especially careful to avoid infection. Physicians should also be aware of the psychological toll associated with obesity and the need to support our patients' physical and mental well-being amid the global pandemic. ■

—Priya Manjoo, MD

—Katie Bowers, MPP

BMI correlates positively with the concentration of infectious virus in exhaled breath.

References

- Onder G, Rezza G, Brusaferro S. Case-fatality rate and characteristics of patients dying in relation to COVID-19 in Italy. JAMA 2020. doi: 10.1001/jama.2020.4683.
- Zhou F, Yu T, Du R, et al. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: A retrospective cohort study. Lancet 2020;395(10229):1054-1062.
- Guan WJ, Ni Z-Y, Hu Y, et al. Clinical characteristics of coronavirus disease 2019 in China. N Engl J Med 2020. doi: 10.1056/NEJMoa2002032.
- Grasselli G, Pesenti A, Cecconi M. Critical care utilization for the COVID-19 outbreak in Lombardy, Italy: Early experience and forecast during an emergency response. JAMA 2020. doi: doi:10.1001/jama.2020.4031.
- Arentz M, Yim E, Klaff L, et al. Characteristics and outcomes of 21 critically ill patients with COVID-19 in Washington State. JAMA 2020. doi: 10.1001/jama.2020.4326.
- Morgan OW, Bramley A, Fowlkes A, et al. Morbid obesity as a risk factor for hospitalization and death due to 2009 pandemic influenza A(H1N1) disease. PLoS One 2010;5:e9694.
- Peng YD, Meng K, Guan HQ, et al. [Clinical characteristics and outcomes of 112 cardiovascular disease patients infected by 2019-nCoV]. 2020;48:E004.
- Lighter J, Phillips M, Hochman S, et al. Obesity in patients younger than 60 years is a risk factor for Covid-19 hospital admission. Clin Infect Dis 2020. doi: 10.1093/cid/ciaa415.
- Simonnet A, Chetboun M, Poissy J, et al. High prevalence of obesity in severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) requiring invasive mechanical ventilation. Obesity (Silver Spring) 2020. doi:10.1002/oby.22831.
- Bahr I, Spielmann J, Quandt D, Kielstein H. Obesity-associated alterations of natural killer cells and immunosurveillance of cancer. Front Immunol 2020;11:245.
- Painter SD, Ovsyannikova IG, Poland GA. The weight of obesity on the human immune response to vaccination. Vaccine 2015;33:4422-4429.
- Maier HE, Lopez R, Sanchez N, et al. Obesity increases the duration of influenza A virus shedding in adults. J Infect Dis 2018;218:1378-1382.
- Honce R, Karlsson EA, Wohlgemuth N, et al. Obesity-related microenvironment promotes emergence of virulent influenza virus strains. mBio 2020;11:e03341-19.
- Yan J, Grantham M, Pantelic J, et al. Infectious virus in exhaled breath of symptomatic seasonal influenza cases from a college community. Proc Natl Acad Sci U S A 2018;115:1081-1086.

This article is the opinion of the Nutrition Committee, a subcommittee of Doctors of BC's Council on Health Promotion, and is not necessarily the opinion of Doctors of BC. This article has not been peer reviewed by the BCMJ Editorial Board.

News

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



Book review: *Service on the Skeena: Horace Wrinch, Frontier Physician*

By Geoff Mynett. Ronsdale Press, 2019. Paperback.

The achievements of physicians working in remote areas in the early days of this country are legendary. In his book *Service on the Skeena*, Mynett does us great service by telling the story of one of those legendary pioneers. It is a fascinating story of Harold Wrinch, a man motivated by service, dedicated to the people of a remote region, working through tremendous challenges to provide care to Indigenous communities as well as to isolated and sometimes

fractious settlers. A true generalist, Wrinch's name deserves wide recognition as one of the outstanding medical pioneers of the country.

Horace Wrinch arrived with his wife in the Upper Skeena in 1900 to serve the people of the region and was responsible, as the only physician, for providing care over hundreds of miles in every direction. In the days when churches in Canada took considerable responsibility for providing hospital care, Wrinch brought a deep faith as well as remarkable medical skill to his work.

This doctor, with early training in agriculture, not only provided essential medical services, but built two hospitals, established a nursing school, and created a farm that supplied the hospitals. He also provided an early practical example of medical insurance, years before it became a topic of wide concern, in

order to better provide for the people of the Upper Skeena.

This biography—well researched and well written—provides in-depth local history, wonderful stories of early medicine in the Upper Skeena, and anecdotes of the challenges Wrinch faced. For instance, not long after arriving in the Upper Skeena, he was required to write examinations in order to qualify for a licence to practise in British Columbia. This involved a 125-mile winter hike from Hazelton to Stewart, boat travel to Victoria, and then a return journey, all of which took over a month.

Mynett not only tells the story of Wrinch's remarkable medical achievements, including his lockdown of Northern BC during the Spanish flu epidemic, but also of his involvement in the famous Simon Gunanoot case. He also details Wrinch's work as a member of the provincial

2020 Family Physicians' Awards

The BC College of Family Physicians' (BCCFP) awards and honors program recognizes BC's exceptional family physicians, residents, and medical students, and highlights the value of family medicine. Winners of the 2020 awards are listed below. For more information about the winners and the awards, visit <https://bccfp.bc.ca/2020-award-recipients>.

BC Family Physician of the Year Award

The BC Family Physician of the Year Award recognizes a family physician who provides exemplary care to patients and takes part in activities that contribute to excellence in family medicine.

Dr Tahmeena Ali

Family Medicine Advocate Award

The Family Medicine Advocate Award recognizes a BCCFP member who has demonstrated a strong commitment to advocating for the value of family medicine.

Dr Lawrence Yang

My Family Doctor Award

The My Family Doctor Award is the BCCFP's patient-nominated award that honors the patient-doctor relationship. Nominations are accepted from patients or family members.

Dr Rachel Collins (Fraser Health)

Dr Kalen Geddes (Northern Health)

Dr Peter Lutsky (Vancouver Coastal Health)

Dr Patricia Olsen (Island Health)

Dr Mark Szykaruk (Interior Health)

Dr Manoo and Jean Gurjar Award

Dr Jessica Briggs

Dr Anmol Lamba

First Five Years of Practice Award

The First Five Years of Practice Award recognizes an exceptional family physician in the early stage of their career.

Dr Alyssa Cantarutti

Resident Leadership Award

The BCCFP offers financial awards for residents in the UBC Family Practice Residency Program, including this leadership award.

Dr Rebekah Eatmon

2020 Rural Awards, BC recipients

The Society of Rural Physicians of Canada (SRPC) has named the recipients of its 2020 Rural Awards. The SRPC recognizes physicians and organizations that have made a significant contribution to rural medicine in Canada. Nominees must be members of the SRPC, with the exception of the Keith Award, Rural Education Award, and the Rural Health Champion Award. BC physicians have been recognized in the following categories. The complete list of 2020 award recipients is available at https://srpc.ca/srpc_awards_2020.

Rural Service Award

The Rural Service Award recognizes SRPC physician members of 5 years or longer who live and work in rural Canada, and who have served their rural communities for 10 years or longer.

Dr Bret Batchelor, Revelstoke

Dr Pamela Frazee, Tofino

Dr Joshua Greggain, Hope

Dr Courtney Rennie, Revelstoke

Rural Long Service Award

The Rural Long Service Award recognizes SRPC physician members of 5 years or longer who live and work in rural Canada, and who have served their rural communities for a minimum of 20 years. Individuals must be a previous recipient of the Rural Service Award.

Dr Bruce Mohr, Whistler

Dr Leah Seaman, Kaslo

Dr Tandi Wilkinson, Nelson

Fellowship of Rural and Remote Medicine of the SRPC

The Fellowship of Rural and Remote Medicine of the SRPC recognizes expertise in the practice of rural medicine in Canada. The Fellowship award is presented to SRPC physician members who are previous recipients of the Rural Service Award and who have acquired a minimum of 10 points. Points are accumulated as follows:

- Each year serving as a rural preceptor for students and residents.
- Each SRPC sanctioned event attended.
- Each full year serving on an SRPC committee.
- Each skill: GP surgery, GP anesthesia, GP obstetrics.
- One point for having published in the *Canadian Journal of Rural Medicine*.

Dr Stephen Arif, Invermere

Dr Karen Forgie, Halfmoon Bay

Dr Marius Mostert, Fort Nelson

Lifetime Membership Award

The SRPC Lifetime Membership Award recognizes longstanding members (10 years or more), who have reached age 65.

Dr Gord Hutchinson, Victoria

Dr Michael Wright, Fort St. John

Rural Community Impact Award

This award, new for 2020, recognizes a physician who has had a significant impact on their community through clinical services, teaching, research, volunteer work, or other community involvement continually advocating for the best health care available.

Dr Onuora Odoh, Houston

Rural Health Champion Award

This award, new for 2020, is presented to a nonphysician who has had a significant impact on rural health care delivery, either through clinical care or system-level impact in a community, province, or nationally.

Ms Brenda Fowler, Gabriola Island

legislature in trying to create a form of provincial health insurance in the 1930s.

This book will greatly appeal to those interested in the history of medicine, the local history of early British Columbia and the people who built it, and the history of the church's work in medicine.

I highly recommend this excellent biography of an outstanding pioneer doctor.

—Peter Newbery, MDiv, MD
Hazelton

MSP coverage relating to COVID-19

Patients who are not eligible for coverage under MSP will be provided provincially insured health coverage for services relating to suspected

or confirmed cases of COVID-19. Services for unrelated conditions that are performed on MSP non-eligible patients will remain uninsured. Physicians and other health care providers are responsible for determining if a patient meets the criteria for coverage. Services related to COVID-19 for non-MSP eligible patients should be billed using the following Personal Health Number (PHN): **9703740703**.

Providers may also notice an increase in patients presenting to them with confirmation of coverage letters. These letters have been issued in response to access to care during the COVID-19 pandemic. For more information on billing this general PHN, contact MSP: Vancouver: 604 456-6950, other areas of BC: (toll-free): 1 866 456-6950.

Health data coalition expands data-sharing application

The Health Data Coalition (HDC) has expanded HDC Discover, a data-sharing application that allows family doctors to compare electronic medical record (EMR) data from their clinic to provincial averages. Doctors can then share the information with their colleagues and work together to improve their practices in order to improve patient care and inform strategic decision making.

Dr Kathleen Ross, president of Doctors of BC, emphasizes that as more physicians enroll, HDC will be able to generate a more robust picture of population health, helping physicians identify and develop ways to improve patient care.

This physician-governed not-for-profit has worked closely with government and led the negotiation with technology companies to provide access to information that will change the way health care is delivered in the province. The application was created to provide a community view of primary care data across BC, which had been unavailable until now.

Dr Shirley Sze, chair of the HDC board of directors, points out that this tool creates the opportunity for family doctors to use data to learn about their individual and collective workloads and complexity of diseases, and begin to build strategies.

HDC signed an adaptor development agreement with Intrahealth and Telus in 2018 to expand the original application, which previously allowed sharing only by Medical Office Information System (MOIS) and OSCAR users. The Intrahealth adaptor has gone live and WELL Health has signed an agreement to ensure continuity for OSCAR EMR users. Now that all adaptors are complete, the majority of primary care physicians across the province can access HDC Discover.

Contributing data to HDC is a sign of a doctor's professional commitment to improving clinical practice improvement and providing valuable data for the overall goal of resource planning. Pressures to improve the quality of services delivered to patients are increasing, and these pressures underscore the need for physicians and organizations to engage in measurable quality improvement processes. Using insights from the data results in a professionally satisfying practice and leads to improved patient outcomes. Physicians can access this data through a secure, simple-to-use program that maintains patient and provider confidentiality.

The application was recently certified by the Privacy by Design framework. This project is supported and funded by the General Practice Services Committee, a partnership of Doctors of BC and the Ministry of Health. HDC was established in April 2016 through a merger of two previous initiatives, Aggregated Metrics for Clinical Analytics and Research and the Physician's Data Collaborative, to support a network of physicians for the collaborative use of clinical data. Learn more about HDC and enroll at <https://hdcbc.ca>.

Website for Canadians to ask COVID-19 questions and get answers

The Canadian Medical Association, alongside the Royal College of Physicians and Surgeons of Canada and the College of Family Physicians of Canada, has partnered with spark*advocacy to launch a campaign that provides a way for Canadians to ask Canada's doctors COVID-19 questions that are top of mind. The website www.covidquestions.ca lists questions submitted by Canadians and answers sourced from reputable organizations, with the option for anyone to submit new questions that have not yet been addressed.

BC PharmaCare COVID-19 information for prescribers

BC PharmaCare has developed online resources for issues related to COVID-19 about drug supply, anticoagulant/antiplatelet coverage and testing, special authority extensions, care for people who use drugs, and limited coverage inhalers for asthma and chronic obstructive pulmonary disorder. The COVID-19 Information for Prescribers page is online at www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/pharmacare/prescribers/covid-19-prescribers.

Research to address impact of COVID-19 on medication use and mental health for people with arthritis

Arthritis Research Canada's research scientist Dr Mary De Vera and her team have launched a study, UNIFIED, which seeks to better understand the experiences of individuals with rheumatic diseases and immunosuppressive conditions during the COVID-19 pandemic.

During the pandemic, people living with arthritis, such as rheumatoid arthritis, gout, and lupus, are more vulnerable to infection because of their arthritis and the medications used for their treatment. What is not known is how the pandemic has impacted people with arthritis and how to better support arthritis patients.

Through surveys and interviews, the UNIFIED study will ask people living with arthritis

how COVID-19 has affected access to and use of their arthritis medications, and how it has impacted their mental health. The study will also assess patients' experiences with care and access to their physician. This includes telehealth, treatment decisions, and mental health checkups.

Patient input is needed so decisions made by doctors and health care systems can be informed and optimized during the pandemic and beyond. For more information about the study, visit www.arthritisresearch.ca/participants-needed-understanding-the-experiences-of-individuals-with-immunosuppressive-conditions-during-the-covid-19-pandemic-unified.

Research to better diagnose COVID-19

Radiologists at Vancouver General Hospital, the University of British Columbia, and Vancouver Coastal Health Research Institute are leading an international study to better predict the presence of COVID-19 based on CT scans. Radiologists, fellows, residents, and UBC medical students are collecting, analyzing, and labeling thousands of CT scans, and in some cases chest X-rays, from COVID-19 patients around the globe. Information gleaned from the scans will form the basis for an open source artificial-intelligence model to predict the presence, severity, and complications of COVID-19 on CT scans. The model will integrate clinical data to help support and supplement existing tools to improve patient care. For example, it could help physicians determine whether individuals are best treated at home or whether they may require hospitalization/ventilation. It will not replace current testing. The model will also assist in detecting similarities and differences in variations of patterns across different cultural and ethnic groups, and help researchers understand early and late stages of patterns of disease. It could also help flag those who may ultimately develop permanent lung damage/fibrosis. Researchers are confident this new tool will help them predict disease severity and its clinical impact in different patient populations.

Once developed, the new artificial-intelligence model will be piloted at Vancouver General Hospital with an aim to embed it in

routine diagnostic procedures to improve the accuracy of COVID-19 diagnostics.

Funding for this project is provided by the UBC Community Health and Wellbeing Cloud Innovation Centre (UBC CIC), opened in January 2020 and powered by Amazon Web Services (AWS), as well as the AWS Diagnostic Development Initiative (DDI).

For more information about the project, visit <https://cic.ubc.ca/covid-19-ct-scans>.

Virtual stroke-recovery sessions

The Stroke Recovery Association of BC is offering virtual stroke-recovery programs. Physicians are encouraged to tell their patients about this service. No referral necessary; everyone is welcome. For more information and to register, visit <https://strokerecoverybc.ca/programs-locations/virtual-programs>. Email any questions to office@strokerecoverybc.ca.

Ontario researchers join global initiative to study loss of smell in COVID-19 patients

As part of an initiative called the Global Consortium for Chemosensory Research (GCCR), scientists at Lawson Health Research Institute and Western University are studying the sudden loss of smell (anosmia) in COVID-19 patients. They are asking individuals with confirmed or presumptive cases of COVID-19 worldwide to participate in a survey to better understand this symptom.

A sudden loss of smell has been widely reported as a marker of COVID-19. More research is needed but emerging evidence suggests that more than 60% of COVID-19 patients experience anosmia and that it is often the first symptom of the disease.

In the new study, patients with loss of smell will answer questions through a publicly accessible survey. They will be asked about their experiences with COVID-19 and other respiratory illnesses. An immediate goal is to better understand the association between anosmia and COVID-19, and determine if loss of smell is the same in symptomatic and asymptomatic patients. The team also hopes to determine if loss of smell happens before other symptoms

of COVID-19 as it could allow for earlier self-isolation advice.

While there are existing therapies that can aid in regaining a sense of smell, it's currently unknown whether they are effective for COVID-19 patients. The long-term consequences of anosmia in COVID-19 patients are also unknown. Researchers encourage anyone who has been diagnosed with COVID-19 or another respiratory illness to complete the survey if they are able. The survey is currently available in 10 languages at www.covidandsmell.com.

How to embed AI and digital technology into physicians' training and practices

The Royal College of Physicians and Surgeons of Canada's Task Force on Artificial Intelligence (AI) and Emerging Digital Technologies unveiled 12 foundational recommendations on how to prepare physicians for the technological changes coming to their practices.

While not the focus of the report, the importance of AI and emerging digital technologies for supporting and responding to unprecedented shifts in health care become even more pronounced as physicians adhere to expectations of physical distancing while treating patients (e.g., telehealth, robotics), and challenge organizations to rethink how they prepare residents and fellows for rapid deployment of new and emerging AI technologies.

Members of the task force include fellows of the Royal College and AI experts who consulted with stakeholders, interviewed experts, and reviewed survey responses from over 4000 fellows and resident affiliates to inform the findings. The recommendations aim to inform the future of care and physician training in Canada.

The report is available at www.royalcollege.ca/rcsite/health-policy/initiatives/ai-task-force-e.

Remote surgery: Exploring emergency care at a distance

Could remote robotic surgery play a role in improving health outcomes for residents in remote and northern communities? The Conference Board of Canada explores the use of this

technology in a newly released report, "Cool Ideas: Remote Surgery." This paper aims to spark a conversation on whether remote robotic surgery could reduce costs, expand access, and improve surgical services in the North, in the near term or distance future.

Looking to remote robotic surgery to help residents in Canada's North and other remote regions access important surgical needs requires addressing many issues, including technological, cultural, logistical, and social concerns. But first, northerners need to determine if remote surgery is something they want to consider.

"Cool Ideas: Remote Surgery" is the second report in the Cool Ideas series. This series aims to raise awareness about emerging opportunities while weighing the costs and benefits of new systems against the risks and challenges. The first report of the series was titled "Revolutionary Building for the North: 3D Printing Construction." Both reports are available from www.conferenceboard.ca/e-library.



BC Medical Journal
@BCMedicalJrnl

Follow

The BC Medical Journal provides continuing medical education through scientific research, review articles, and updates on contemporary clinical practice. #MedEd

President's Comment: #COVID-19 reflections. This is a time unlike any we have seen before, and one I hope we will not see again in our lifetime. #coronavirus @DrKathleenRoss1
Read the article: bcmj.org/presidents-comment-covid-19-covid-19-reflections



Follow us on Twitter for regular updates

CME calendar

Rates: \$75 for up to 1000 characters (maximum), plus GST per month; there is no partial rate. If the course or event is over before an issue of the *BCMJ* comes out, there is no discount. **Deadlines:** ONLINE: Every Thursday (listings are posted every Friday). PRINT: The first of the month 1 month prior to the issue in which you want your notice to appear, e.g., 1 February for the March issue. The *BCMJ* is distributed by second-class mail in the second week of each month except January and August. **Planning your CME listing:** Advertising your CME event several months in advance can help improve attendance; we suggest that your ad be posted 2 to 4 months prior to the event. **Ordering:** Place your ad at www.bcmj.org/cme-advertising. You will be invoiced upon publication. Payment is accepted by Visa or MasterCard on our secure online payment site.

COVID-19 PHYSICIAN PEER SUPPORT

Online (Tue & Thu)

The BC Physician Health Program (PHP) is offering free drop-in Physician Peer Support Sessions every Tuesday and Thursday from 4–5 p.m. PST via Zoom. Join other physicians, psychiatrist Dr Jennifer Russel, and PHP's Roxanne Joyce to talk over any challenges and issues in providing care as the COVID-19 pandemic continues. Sessions are drop-in, no commitment necessary, focusing on peer support not psychiatric care. E-mail peersupport@physicianhealth.com for the link to join by phone or video.

GP IN ONCOLOGY TRAINING

Vancouver, 14–25 Sep and 8–19 Feb 2021 (Mon–Fri)

BC Cancer's Family Practice Oncology Network offers an 8-week General Practitioner in Oncology education program beginning with

a 2-week introductory session every spring and fall at BC Cancer–Vancouver. This program provides an opportunity for rural family physicians, with the support of their community, to strengthen their oncology skills so that they can provide enhanced care for local cancer patients and their families. Following the introductory session, participants complete a further 30 days of clinic experience at the Cancer Centre where their patients are referred. These are scheduled flexibly over 6 months. Participants who complete the program are eligible for credits from the College of Family Physicians of Canada. Those who are REAP-eligible receive a stipend and expense coverage through UBC's Enhanced Skills Program. For more information or to apply, visit www.fpon.ca, or contact Jennifer Wolfe at 604 219-9579.

MINDFULNESS IN MEDICINE FOR PHYSICIANS & PARTNERS

Tofino, 25–28 Sep (Fri–Mon)

Physician heal thyself. Join Dr Mark Sherman and your community of colleagues for a transformative workshop, 25–28 September, will be held at Long Beach Lodge Resort, Tofino. The workshops focus on the theory and practice of mindfulness and meditation—reviewing definitions, clinical evidence, and neuroscience, and introducing key practices of self-compassion, breath work, and sitting meditation to nurture resilience and healing. This annual meditation retreat is an opportunity to delve deeply into meditation practice in order to recharge, heal, and build a practice for life. Each workshop is accredited for 16 Mainpro+ group learning credits and has a 30 person limit, so please register today! Contact us at hello@livingthismoment.ca, or check out www.livingthismoment.ca/event for more information.



Expand your practice to #virtualCARE by seeing patients via phone and video.

For resources, FAQs and tips visit doctorsofbc.ca/covid-19

 @doctorsofbc

 @bc doctors

 @doctorsofbc

**doctors
of bc**

Better. Together.

Classifieds

Advertisements are limited to 700 characters. Rates: Doctors of BC members: \$50 + GST per month for each insertion of up to 350 characters. \$75 + GST for insertions of 351 to 700 characters. Nonmembers: \$60 + GST per month for each insertion of up to 350 characters. \$90 + GST for insertions of 351 to 700 characters. **Deadlines:** Ads must be submitted or canceled by the first of the month preceding the month of publication, e.g., by 1 November for December publication. Visit www.bcmj.org/classified-advertising for more information. **Ordering:** Place your classified ad online at www.bcmj.org/classified-advertising. Payment is required at the time that you place the ad.

EMPLOYMENT

ARE YOU A PHYSICIAN LOOKING FOR A NEW ROLE?

Physicians for You—leaders in physician recruitment in Canada. Our strong reputation is built on exceptional service and results. Locum, contract, long-term, city, rural, we have it all. Whether you're a physician looking for work across Canada, or a medical facility requiring physicians, we can help. Your needs are our focus. Save time and effort; let us do all the legwork. Let our 10 years of experience in Canada, extensive knowledge of the processes for licensure, and our personalized, friendly service work for you. Check out our current job postings online and contact us today. Website: www.physiciansforyou.com. Email: info@physiciansforyou.com. Office: 1 778 475-7995.

EDMONTON, AB—FAMILY PRACTICE PHYSICIAN REQUIRED

Callingwood Crossing Medical Clinic is vibrant and growing! West Edmonton location. Newly renovated dynamic office operating for over 28 years with an extremely loyal patient base. We use Med Access EMR, have an attached pharmacy, and are one of the largest clinic members of Edmonton West Primary Care Network. We have

immediate openings for a physician with enough patient volume where your panel could be filled in 3 to 6 months. You would work as an independent contractor with a fee-for-service split. We also offer an attractive signing bonus and look forward to hearing from you soon! Please email Amy Markovitz, Amy.ccmc@hotmail.com, or Nanci Harper, nanci_anne@hotmail.com.

NANAIMO—GP

General practitioner required for locum or permanent positions. The Caledonian Clinic is located in Nanaimo on beautiful Vancouver Island. Well-established, very busy clinic with 26 general practitioners and two specialists. Two locations in Nanaimo; after-hours walk-in clinic in the evening and on weekends. Computerized medical records, lab, and pharmacy on site. Contact Lisa Wall at 250 390-5228 or email lisa.wall@caledonianclinic.ca. Visit our website at www.caledonianclinic.ca.

NORTH VAN—FP LOCUM

Physician required for the busiest clinic/family practice on the North Shore! Our MOAs are known to be the best, helping your day run smoothly. Lucrative 6-hour shifts and no headaches! For more information, or to book shifts online, please contact

Kim Graffi at kimgraffi@hotmail.com or by phone at 604 987-0918.

POWELL RIVER—LOCUM

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

clinic@tmca-pr.ca, website: powellrivermedicalclinic.ca.

SOUTH SURREY/WHITE ROCK—FP

Busy family/walk-in practice in South Surrey requires GP to build family practice. The community is growing rapidly and there is great need for family physicians. Close to beaches and recreational areas of Metro Vancouver. OSCAR EMR, nurses/MOAs on all shifts. CDM support available.

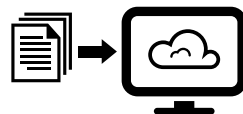
ARE YOU PLANNING TO...?



... retire or transition?



... relocate?



... scan your files?

RSRS

1-888-563-3732 - Ext.2

CANADA'S #1 PROVIDER OF PRACTICE CLOSURE, TRANSITION, SCANNING AND STORAGE SERVICES. SINCE 1997.

www.RecordSolutions.ca

CLASSIFIEDS

Competitive split. Please contact Carol at Peninsulamedical@live.com or 604 916-2050.

SURREY/DELTA/ ABBOTSFORD—GPS/ SPECIALISTS

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

VANCOUVER ISLAND— ISLAND HEALTH SEEKING PSYCHIATRISTS

Island Health welcomes psychiatrists to apply for full-time or part-time positions that span the continuum of care from child and youth, to adult, to addictions, to geriatric. Whether you prefer oceanfront living or sweeping mountain vistas, Vancouver Island provides an affordable lifestyle in family friendly communities, exceptional outdoor year-round recreation, and a healthy work/life balance. Sponsored site visits/interviews available as well as relocation assistance to successful candidates. Recruitment incentives may be available as per the MOH Rural Recruitment Contingency Fund. Contact us today at physicians@viha.ca or view opportunities at medicalstaff.islandhealth.ca/careers.

VANCOUVER/RICHMOND—FP/ SPECIALIST

The South Vancouver Medical Clinic seeks family physicians and specialists. Split is up to 80/20. Closing your practice? Want to work part-time? Join us

to see only booked patients or add walk-ins for variety. Oscar EMR. Positions in Richmond also available. Contact Dr Balint Budai at tgr604@gmail.com.

VICTORIA—FULL/PART-TIME FAMILY PHYSICIAN

Work in the most beautiful place on earth. Option to bring your own practice or for long-term locum. Our office is bright, friendly, and well run with low shared expenses. We value work-life balance. Contact Narissa Arter, office manager, phone: 250 478-2133, email: naarter@gmail.com.

VICTORIA—GP/WALK-IN

Shifts available at three beautiful, busy clinics: Burnside (www.burnsideclinic.ca), Tillicum (www.tillicummedicalclinic.ca), and Uptown (www.uptownmedicalclinic.ca). Regular and occasional walk-in shifts available. FT/PT GP post also available. Contact drianbridger@gmail.com.

MEDICAL OFFICE SPACE

VANCOUVER (BROADWAY CORRIDOR)—MED OFFICE SPACE FOR RENT

Office space available for rent in the prestigious Fairmont Medical Building (750 West Broadway) not far from VGH. No extra overhead expenses; one of three offices most suitable for psychiatrist or psychologist. Contact: alevin@drlevin.ca.

VANCOUVER (BROADWAY CORRIDOR)—OFFICE FOR SALE

Broadway Medical (943 W Broadway). Spectacular North Shore view, turnkey, 650 sq. ft. seventh-floor office with three exam rooms and one office (one exam room and office with mountain view), waiting area,

and reception area with two built-in desks. Lots of storage space. Office designed by Richard Salter. Ideal for two physicians: pediatrician, family physician, or specialist. Contact gaildodekwenner@gmail.com.

MISCELLANEOUS

CANADA-WIDE—MED TRANSCRIPTION

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

FREE MEDICAL RECORD STORAGE

Retiring, moving, or closing your family practice? RSRS is Canada's #1 and only physician-managed paper and EMR medical records storage company. Since 1997. No hidden costs. Call for your free practice closure package: everything you need to plan your practice closure. Phone 1 866 348-8308 (ext. 2), email info@rsrs.com, or visit www.RSRS.com.

PATIENT RECORD STORAGE—FREE

Retiring, moving, or closing your family or general practice, physician's estate? DOCUdavit Medical Solutions provides free storage for your active paper or electronic patient records with no hidden costs, including a patient mailing and doctor's web page. Contact Sid Soil at DOCUdavit Solutions today at 1 888 781-9083, ext. 105, or email ssoil@docudavit.com. We also provide great rates for closing specialists.

VANCOUVER—TAX & ACCOUNTING SERVICES

Rod McNeil, CPA, CGA: Tax, accounting, and business solutions for medical and health professionals (corporate and personal). Specializing in health professionals for the past 11 years, and the tax and financial issues facing them at various career and professional stages. The tax area is complex, and practitioners are often not aware of solutions available to them and which avenues to take. My goal is to help you navigate and keep more of what you earn by minimizing overall tax burdens where possible, while at the same time providing you with personalized service. Website: www.rwmcga.com, email: rodney@rwmcga.com, phone: 778 552-0229.

Information on COVID-19 from Doctors of BC, updated regularly:

www.doctorsofbc.ca/covid-19

doctors
of bc



Club MD

PUT YOURSELF IN THE PICTURE.

Exclusive deals from brands you trust

You work hard. Your downtime is important and we want to help you make the most of it to do the things you love. Club MD provides exclusive deals from trusted brands so you can spend your time on what's important.

CAR PURCHASE & LEASE • ENTERTAINMENT • FITNESS & WELLNESS • FOOD & BEVERAGE • HOTELS & TRAVEL



WEST X BUSINESS SOLUTIONS

Members save 20% on home or small office printers and accessories with free shipping included to most urban areas in BC.

doctorsofbc.ca/westx

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

doctorsofbc.ca/club-md





THANK YOU
FOR YOUR SERVICE
DURING THESE TIMES
We are here to help
support you and your
patients

Stay well in uncertain times
with proven information and tools

BounceBack[®] skill-building program

Living Life to the Full interactive
CBT-based online course

Confidential peer support for long-term
care and home support workers

Plus strategies and tools to use at home

cmha.bc.ca/covid-19



Canadian Mental
Health Association
British Columbia
Mental health for all

Expanded COVID-19 supports have been made possible
by the generous funding of the Province of BC