

# Sometimes we need to think of zebras: The identification of bone tumors in children

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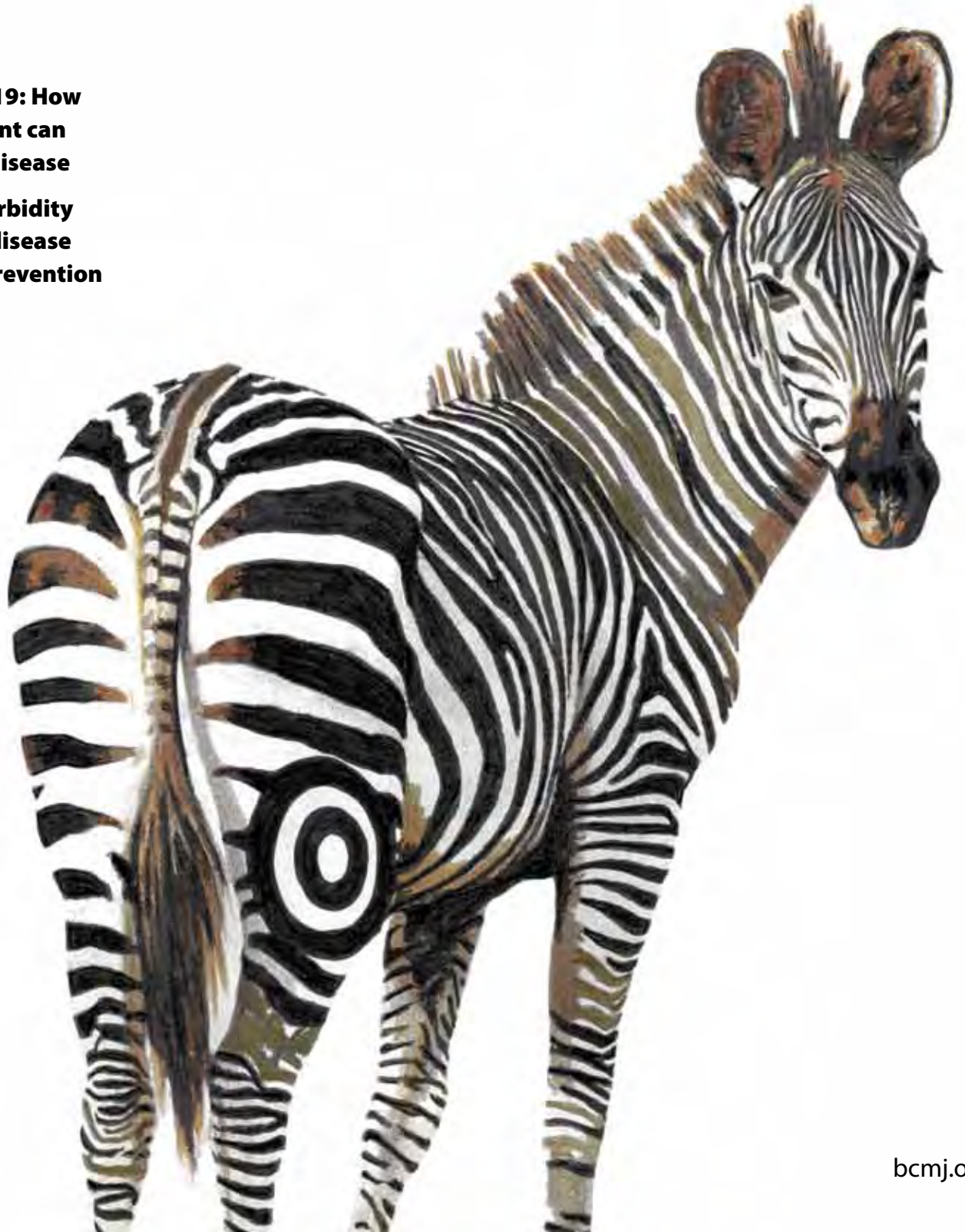
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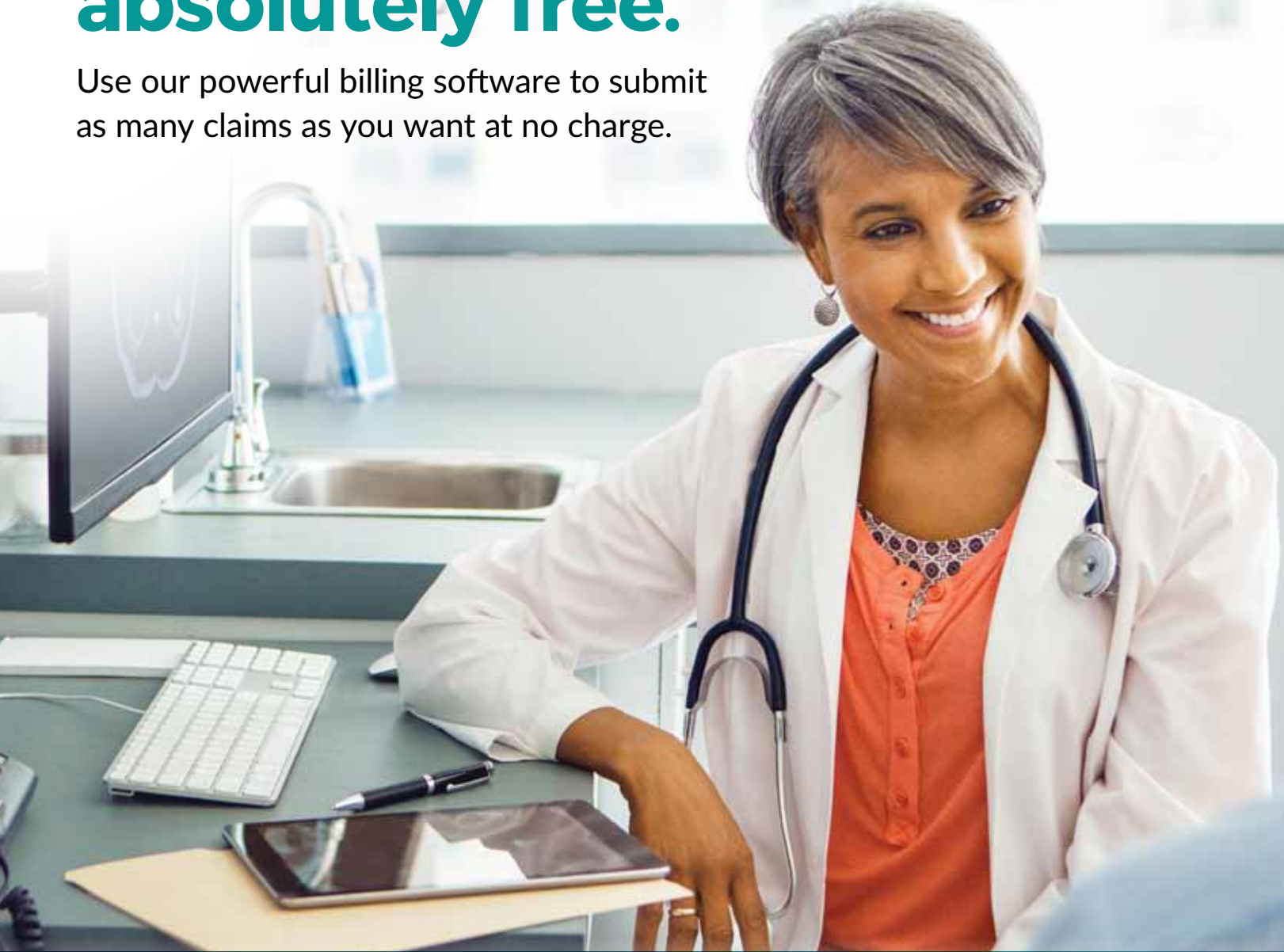




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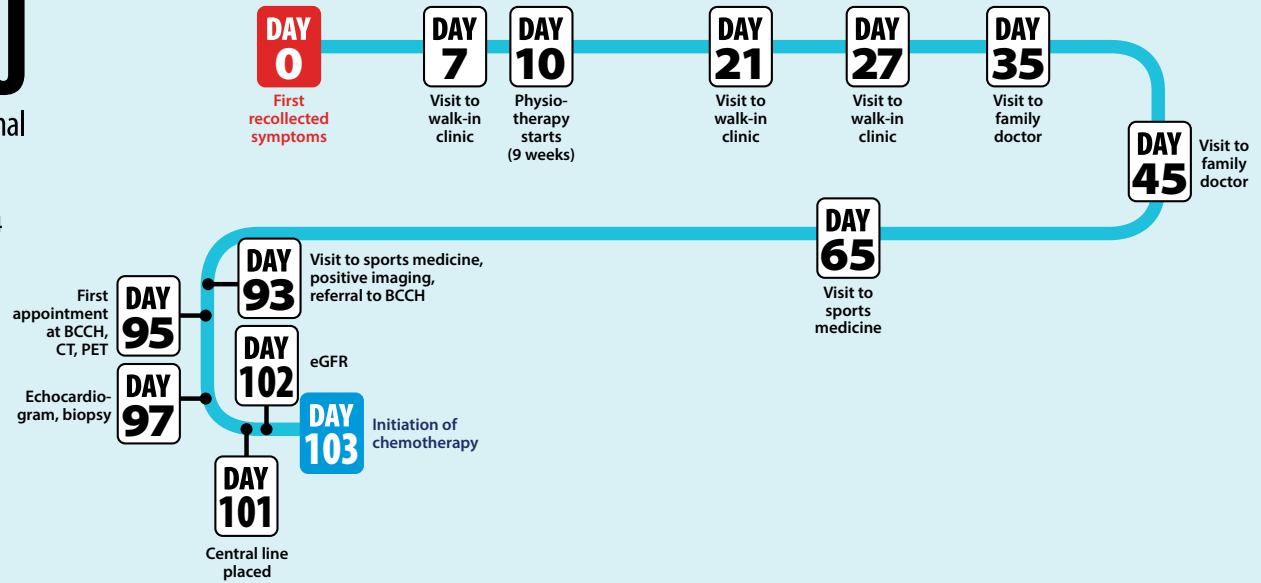
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Patient journey maps are a powerful tool to illustrate relevant interactions with the health care system from the time of first symptoms to the initiation of definitive therapy. This map created using BC Children's Hospital data for our cover article on bone tumors in children shows that the patient saw primary health care physicians seven times before being referred to tertiary care.

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**ON THE COVER**

**Sometimes we need to think of zebras:**

**The identification of bone tumors in children**

Clinicians are often encouraged to follow the diagnostic path most likely—to look for horses, not zebras when they hear hoofbeats. Pediatric bone sarcomas are rare and difficult to diagnose, with common sites for osteosarcoma including the distal femur and proximal tibia. Patients typically present with chronic localized pain that is intermittent, often with no fever, weight loss, or malaise. Because the presentation can be similar to what a clinician would expect for tendonitis and other benign pathologies, patients frequently receive physiotherapy rather than referral to a tertiary care centre for further workup. Article begins on page 130.

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.

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*This evocative sketch by the late Dr Max Schultz, an anesthesiologist, accompanies a brief poem and his obituary on page 142.*

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# Farewell, Kash

As I write this editorial, COVID-19 is rapidly spreading across the globe and drastically changing the daily lives of its inhabitants. It is a time of anxiety and fear, leading to many a grim thought. During this period of negativity and darkness, I would like to celebrate a positive source of light. After 36 years of dedicated service, Kashmira Suraliwalla, senior editorial and production coordinator at the *BCMJ*, has announced her retirement.

Kash, as she is affectionately known, grew up in Bombay, India, and immigrated to Vancouver as a young adult. An avid traveler and global citizen she's an active member of the Zoroastrian community here on the West Coast. She started as an editorial assistant at the BCMA, as *Doctors of BC* was formerly known, in 1983. As the journal grew, she became the production coordinator, and then started her current position, which sees her working in such diverse areas as Editorial Board wrangling, finance, ad sales, and article submissions (to name a few). She has adjusted

**The physicians of BC owe her a debt of gratitude.**

to many changes in journal publishing and our organization over the years, not to mention being a line of continuity for four editors and six managing editors.

In addition to her excellent work at the *BCMJ*, she is also the production coordinator of the *Report to Members* (formerly the *White Report*). She is well known around *Doctors of BC* because of her help with many social and charitable projects, such as the annual staff summer picnic and the Canadian Cancer Society's Daffodil Campaign. Kash is always ready to contribute to other people's efforts, and is often the instigating force behind a fundraiser or charitable endeavor, whether for earthquake relief, hurricane relief, a humanitarian crisis, or other worthwhile cause.

To my mind, the *BCMJ* and Kash are forever linked as she has been serving our journal with patience and humor since long before I arrived on the scene. The physicians of BC owe her a debt of gratitude, and I would personally like to thank her for her years of dedicated service.



Ms Kashmira Suraliwalla, 2018

I will miss her insightful suggestions and observations on both our organization and the provincial medical system. We wish Kash the very best in the next chapter of her life. ■

—Dave Richardson, MD



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# My pandemic fears

31 March 2020

**B**y the time this editorial, written at the end of March, makes it to print, it will be hopelessly out of date. I hope that my fears today do not become our reality when this is read in the May issue of the *BCMJ*. Thanks to the COVID-19 pandemic, today's reality for many front-line physicians consists of virtual office visits, virtual meetings, virtual contact with friends and loved ones, and virtually being on the edge of panic every day.

We physicians in this province have been told to keep our heads down, to keep calm, and to not publicly disagree with the official statements coming from the various levels of government and the medical profession's representative and regulatory bodies with regard to the COVID-19 pandemic. I understand the logic behind this message; they don't want the public to panic. The unintended consequence is that many health care providers are currently in a state of panic. Those of us who are exposing ourselves daily to people who could potentially make us very sick or even kill us are feeling very stressed. It doesn't help when we know that things are worse than they are being made out to be. It doesn't help when the news from Italy is of civil unrest and the news from New York is that refrigeration trucks are being used to store bodies. It doesn't help when the news from our

international colleagues is that even though they took all the necessary protective measures, they too are getting sick with COVID-19. It doesn't help that we feel as though we may run out of personal protective equipment. It doesn't help when the published statistics of confirmed cases of COVID-19 do not take into account that we stopped testing the general population 2 weeks ago. Of course, the number of confirmed cases will appear to be fewer if you change your testing criteria.

In my opinion—shared by epidemiologists and infectious disease specialists throughout the world, and annunciated by the World Health Organization—the keys to containing this disease are rigorous testing and contact tracing, strict controls on people's movement (border controls and social distancing), and enforced quarantine of high-risk individuals. Unfortunately, we stopped testing widely, and the controls on people's movement were perhaps 1 or 2 weeks too late, and they are too weak.

During the early stages of the pandemic in BC, the physicians with whom I work were aware of community spread of the disease several days before it was announced officially.

During the early stages of the pandemic in BC, some staff were wearing masks at all times in the hospital (not only during patient contact), but they were reprimanded by hospital administration for doing so. A couple of weeks later, we were told by the same people that it was advisable to wear a mask at all times in the hospital. Last week, I had hospital rounds for my group. My

daily ritual after hospital rounds was to shower and change clothes and shoes before going to my office. I now wear a mask and eye protection all the time when I am in public or at work. Many physicians in our hospital had to buy eye protection for themselves, as I did. I clean my hands multiple times a day. Yet, I fear that is not enough to avoid getting the virus. Today, without any obvious stimulus, my fear ramped up to such a high level that I imagined this editorial to also be my obituary.

If this pandemic can be likened to a war, and health care workers are the army, then it feels as if we are being sent into battle without bullets and without adequate body armor.

I apologize to readers for the gloomy nature of this editorial, and I apologize to those trying to keep everyone calm. The only mitigating factor, perhaps, is that by the time you read this my words will either seem hopelessly pessimistic and overdramatic, or the situation will be much worse and these words will seem calm compared with how everyone is actually feeling. I hope it's the former. ■

—David B. Chapman, MBChB

**The keys to containing this disease are rigorous testing and contact tracing, strict controls on people's movement (border controls and social distancing), and enforced quarantine of high-risk individuals.**

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## COVID-19 reflections

**I**t is 2 April 2020 as I write this President's Comment. Across Canada the first wave of the coronavirus crisis is beginning to take off. Using frameworks fine-tuned through other pandemics, we have been implementing stronger and stronger public health measures to slow the spread. And yet the numbers are slowly rising. I feel like I am standing on the beach watching the water drain away ahead of the tsunami.

Last month I messaged all of you to mobilize our profession in amplifying the orders of one of our own, Dr Bonnie Henry, our provincial health officer. I cannot imagine a calmer and more organized physician to lead our health care system and the public through this time—providing information that is timely, relevant, factual, and free from alarmist tone. Many of you joined the communication stream to add your professional knowledge, personal experience, and credibility to ensure the public got the message to self isolate and practise physical distancing.

This is a time unlike any we have seen before, and one I hope we will not see again in our lifetime. Physicians' tireless work in responding

to the pandemic has been supported by public health, government, health authorities, health care leaders, health care workers, and the public. Canadians have weathered an unprecedented disruption to our lives and to the health care system, which has mobilized to meet the necessary changes in a way that many would not have thought possible over such a short time.

Virtual care ramped up seemingly overnight in support of COVID-19 screening and longitudinal care. Our front-line primary care and specialist providers have been working with all partners to ensure that patients can still access care for their usual medical conditions and ensure that our most vulnerable patients stay connected to necessary services.

Physicians and health care leaders inside our facilities have put aside differences and pulled together to nimbly solve critical issues involving physical space, beds, ventilators, oxygen supplies, testing processes, staff shortages, and shortages of personal protective equipment. No one has been idle.

Physicians have rallied together to share knowledge about processes that were successful, and those that were less so. You have created

Facebook, Slack, and WhatsApp groups to support each other, plan next steps, and debrief about critical situations and the ongoing stress of being in a hazardous environment.

Untold numbers of physicians and other health care providers have shown up to work every day facing the threat that they would fall ill. Many may still fall ill, and some may not survive. Tough decisions lie ahead about the rationing of critical care if our resources are outpaced. Knowing this, you all continue to come to work anyway. All of you are heroes.

I hope by the time this is published we will see the light at the end of the darkness, and we will have conquered the first wave of the coronavirus. We know the virus will come back for a second wave, and I'm confident you will rise to face this challenge with the same courageous and innovative spirit you've all embodied thus far.

I will be standing there with you, providing hands-on care, all the while doing my best to keep those I work with and care for, safe from harm.

—Kathleen Ross, MD  
President, Doctors of BC

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# Letters to the editor

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## Is our health system ready for digital health today? Exploring the way forward

Asking “Is our society ready to go digital?” may seem absurd considering that digital technologies are core to almost every aspect of our daily

lives. Yet, asking “Is our health system ready for digital health?” is not farfetched, reflecting the relative lack of digital uptake in health care

delivery today. We must prepare to integrate digital health into mainstream health care.

On 1 November 2019, a panel at the Technologies in Emergency Care Vancouver Conference (TEC Vancouver) discussed how to prepare our health workforce for digital innovations. Fifty leaders representing health, government, private sector, patients, and academia tackled the problem. We highlight some take-home messages from the discussion here.

We need to stop making things hoping they get used. Without guidance from health leaders and front-line clinicians, private sector solutions can miss the mark. Research, education, and

*Continued on page 140*

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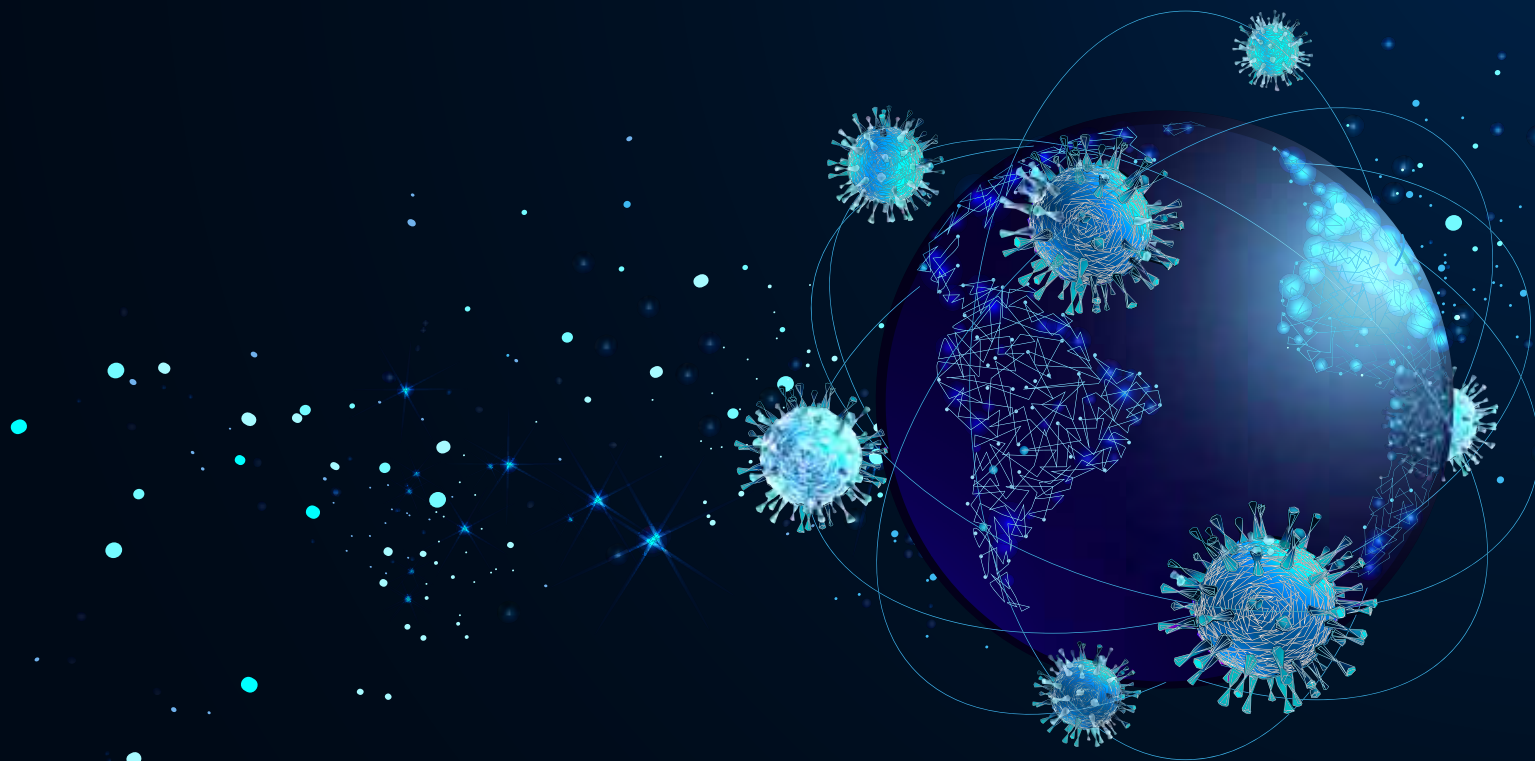
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## **Links and resources for COVID-19**

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](http://www.doctorsofbc.ca/covid-19)**

This page has information on:

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- An online forum for collaboration on COVID-19
- Insurance and benefits updates during COVID-19
- Important external resources
- Support for physicians feeling stress during COVID-19

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T. Justin Dhinsa, BSc, Paula Mahon, RN, DHealth, CNCCP(C), Caron Strahlendorf, MB, FRCPC, FCP

# Sometimes we need to think of zebras: An observational study on delays in the identification of bone tumors in children

Patients eventually diagnosed with osteosarcoma or Ewing sarcoma often spend many weeks receiving physiotherapy and visiting other health care professionals in the primary care setting before they are referred to a tertiary care centre.

## ABSTRACT

**Background:** Pediatric bone sarcomas are rare and difficult to diagnose. Osteosarcoma is the most common and Ewing sarcoma is the second most common of these. Most cases are identified in individuals age 13 to 16 years. Common sites for osteosarcoma include the distal femur and proximal tibia. Patients typically present with chronic localized pain that is intermittent. There is often no fever, no weight loss, and no malaise. Because the presentation can be similar to what a clinician would expect for tendonitis and other benign pathologies, patients frequently receive physiotherapy rather than referral to a tertiary care centre for further workup. A quality improvement observational study was proposed to address a lack

of research on delays in appropriate management of pediatric bone tumor and to increase awareness of osteosarcoma and Ewing sarcoma.

**Methods:** Six pediatric patients at BC Children's Hospital who were diagnosed with either osteosarcoma or Ewing sarcoma in 2018 were identified from the oncology database. The dates of their interactions with the health care system were used to create patient journey maps.

**Results:** Each patient saw an average of four health care professionals before referral to BC Children's Hospital, and three patients spent 4 to 9 weeks receiving physiotherapy. On average, 114 days elapsed from the time patients had their first symptoms to when they received chemotherapy, and 81% of this time was spent within the primary care system.

**Conclusions:** The study reveals an overall delay in diagnosis and treatment of pediatric bone tumors and highlights the need for general practitioners to further consider sarcomas in the differential diagnosis when patients present with chronic localized pain, especially when patients are in the at-risk age group and the pain is localized to one of the common sites. Practitioners should be even more

suspicious if there is a history of night pain, an atypical pain pattern following minor trauma, or a soft tissue mass on examination.

## Background

Bone sarcomas make up 6% of all pediatric cancers, with the most common being osteosarcoma and the second most common being Ewing sarcoma.<sup>1,2</sup> Osteosarcoma is a malignant mesenchymal neoplasia characterized by the production of osteoid or bone by the malignant cells.<sup>3</sup> Ewing sarcoma is part of the Ewing sarcoma family of tumors, which share histological characteristics and chromosomal translocations. Ewing sarcomas are small round blue cell tumors that can develop in bone or soft tissue.<sup>3</sup> The peak incidence for both osteosarcoma and Ewing sarcoma coincides with the adolescent growth spurt. Most cases are identified in individuals age 13 to 16 years, and females tend to present at a younger age than males.<sup>1</sup> Both diseases most commonly occur in the metaphyses of long bones.<sup>4,5</sup> One large population-based series suggested that as many as 75% of osteosarcomas originate in the distal femur.<sup>6</sup> Other common sites for osteosarcoma include the proximal tibia, proximal humerus, middle femur, and proximal femur.<sup>4</sup>

---

*Mr Dhinsa is an undergraduate student in the Faculty of Medicine at the University of British Columbia. Dr Mahon is a clinical assistant professor in the School of Nursing at UBC. Dr Strahlendorf is a clinical associate professor in the Division of Hematology and Oncology in the Department of Pediatrics at UBC.*

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*This article has been peer reviewed.*

Patients often present with chronic localized pain that is intermittent. Clinical diagnosis is difficult because there is often no family history to consider, no fever, no weight loss, and no malaise. The pain is often first noticed after trauma to the site.<sup>7</sup> A bone sarcoma patient's presentation will frequently be similar to what a clinician would expect for tendonitis, muscle injury, Osgood-Schlatter disease, meniscal lesions, and other benign pathologies.<sup>7</sup> The obscure nature of bone sarcomas can result in patients receiving inadequate pain management and attending physiotherapy sessions rather than being referred to a tertiary care centre for further workup.

Early identification of patients is important because bone tumors frequently metastasize. Before treatment protocols changed to include both neoadjuvant and adjuvant chemotherapy, 80% to 90% of patients with osteosarcoma died as a result of their disease metastasizing. It has been hypothesized that the majority of these patients had subclinical metastases that went undetected.<sup>8,9</sup>

The current treatment protocol for osteosarcoma is surgery combined with 12 weeks of neoadjuvant and 29 weeks of adjuvant

chemotherapy.<sup>10</sup> Ewing sarcoma is more sensitive to chemotherapy and radiotherapy than osteosarcoma, so radiation can be considered in place of or in addition to surgery.<sup>11</sup> As a result of modern multimodal therapies for osteosarcoma, 66% of patients without metastases, 50% with limited pulmonary metastases, and 25% with more advanced metastases are expected to be long-term survivors.<sup>12</sup>

System-wide awareness of osteosarcoma and Ewing sarcoma is needed along with timely referral. Only seven articles about delays in appropriate management of pediatric bone tumors have been published to date, and none of them are based on research in Canada or the United States.<sup>7,13-18</sup> A quality improvement observational study of patients treated at BC Children's Hospital (BCCH) was proposed to address this lack of research and to expedite the identification and referral of affected individuals.

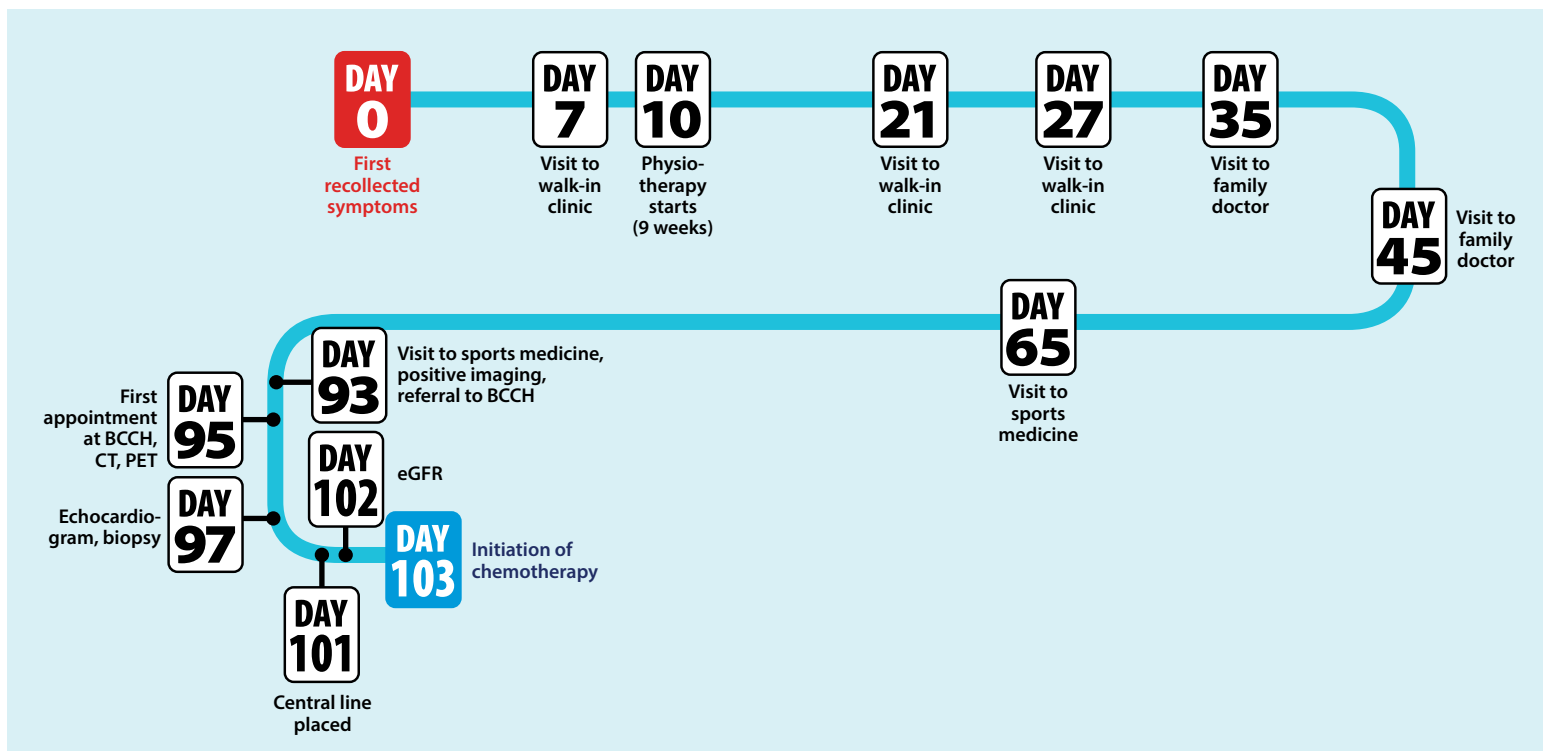
**Methods**

To prevent biased selection of study subjects, the last six pediatric patients diagnosed in 2018 at BCCH with osteosarcoma or Ewing sarcoma were identified in the hospital's oncology database. The medical records of these patients

were then reviewed to determine the dates of appointments, imaging, and interventions. Patient journey maps were created to illustrate all relevant interactions with the health care system from the time of first symptoms to the initiation of chemotherapy. The visual representations of important events for all patients were then compared to determine if there were patterns that might help physicians considering these diagnoses. Information that could be used to identify patients or the health care professionals involved in their care was not included in the research records. The study was approved by the UBC Children's and Women's Health Centre of British Columbia Research Ethics Board.

**Results**

One of the patient journey maps created using BCCH data reveals that the patient saw primary health care physicians seven times before being referred to tertiary care [Figure 1]. Before referral, the patient saw walk-in clinic physicians, family physicians, and a sports medicine physician. In addition, this patient received 9 weeks of physiotherapy. Another patient saw all the professionals named above as well as an emergency room physician before referral.



**FIGURE 1.** Patient journey map of all relevant health care encounters for one study subject with Ewing sarcoma.

On average, 114 days elapsed from the time patients had their first symptoms to when they were treated for their bone tumors, and patients spent 81% of this time in the primary care system visiting multiple health care professionals [Figure 2]. The six patients whose records were reviewed had an average of four interactions with health care professionals, not including regular physiotherapy. Physiotherapists were seen by three of the six patients for 4 to 9 weeks. On average, patients were seen 1.5 days after referral to BCCH and began chemotherapy 10.5 days after their first appointment.

A symptom common among all patients was chronic localized pain that progressed to become very severe. Three of the patients recalled night pain and two noted that they began to notice the pain after minor trauma.

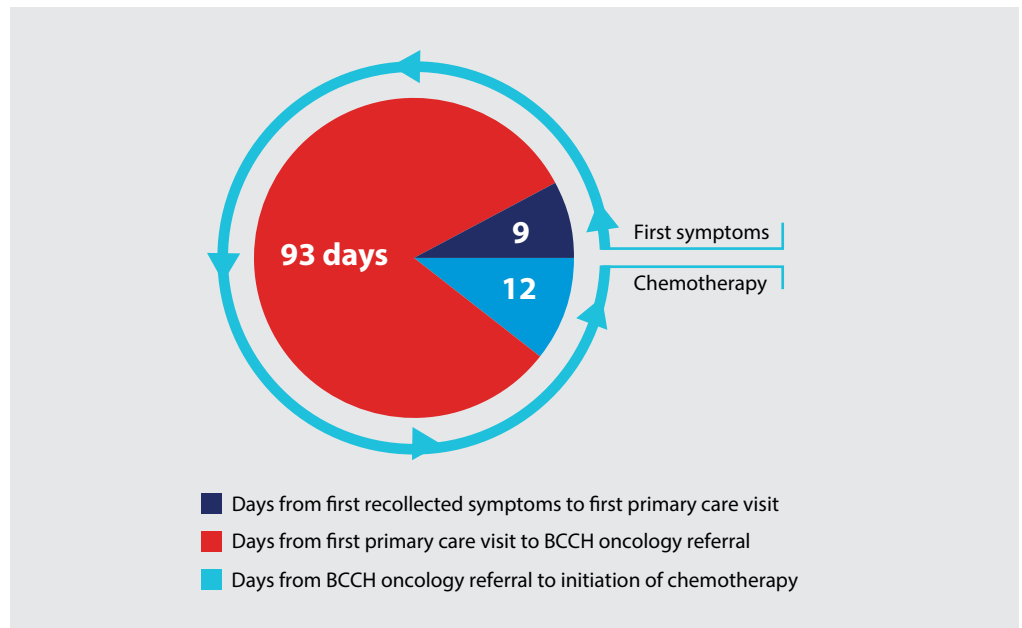
### Conclusions

Bone sarcoma is often overlooked as a possible diagnosis. The patient journey maps created from BCCH data reveal an overall delay in diagnosis and treatment of pediatric bone tumors, with most of the delay in the primary care setting. This accords with findings from Widhe and Widhe, and Goedhart and colleagues, who conclude that timely care of bone sarcoma patients is needed between the first primary care visit and referral to a tertiary care centre.<sup>7,13</sup> In fact, Widhe and Widhe found that when bone sarcomas were identified on radiographs, the radiographs had usually been ordered to assess for more common pathologies such as fractures.<sup>7</sup>

Existing studies have found it difficult to correlate the delays in diagnosis and management with worse prognoses, as more aggressive tumors are usually diagnosed before less aggressive ones.<sup>13,14</sup> However, when metastases are due to a delayed diagnosis, earlier detection would increase survival and the possibility of limb-saving procedures.<sup>7,16</sup> Also, as treatment modalities improve, the speed of diagnosis may play a more important role in patient prognoses.<sup>17</sup>

### Study limitations

The size of our study population was limited by the rarity of the diseases studied. As well, the patient journey maps created from BCCH records do not reveal the emotional and physical



**FIGURE 2.** Average time in days that six study subjects with osteosarcoma or Ewing sarcoma waited at three points during their patient journeys: from first symptoms to first primary care visit, from first primary care visit to BCCH referral, and from referral to chemotherapy.

tolls that delays have on patients and their families, which can be inferred but not quantified from the time depicted between health care encounters. Despite these limitations, the study findings still point to the importance of identifying bone tumor cases sooner.

### Recommendations

While the early diagnosis of a bone sarcoma is difficult, we believe that increased awareness could reduce delays. General practitioners should be aware that bone sarcoma patients typically present with localized chronic intermittent pain at the age of 13 to 16 years. The onset of the pain may follow a minor traumatic injury to the region with the sarcoma. Moreover, as Widhe and Widhe note, the post-trauma pain history of bone sarcoma patients is atypical because the pain from trauma seems to resolve over several days only to return in a more progressive and severe form. Nocturnal pain should increase suspicion.<sup>15</sup>

General practitioners conducting physical examinations should look for a tender soft tissue mass that is firmly fixed to the underlying bone, even though in the majority of cases these masses are not palpable on a patient's first visit.<sup>7</sup> Common sites for osteosarcoma in order

of decreasing prevalence are the distal femur, proximal tibia, proximal humerus, middle femur, and proximal femur.<sup>4,6</sup>

Obtaining a plain radiograph is the recommended first step in the workup when bone tumors are a possibility.<sup>19</sup> Goedhart and colleagues suggest that delays in care could be reduced if general practitioners lower the threshold at which they order plain radiographs.<sup>13</sup> If the radiograph findings are negative but suspicion remains high, a CT or MRI scan is warranted. The definitive diagnosis is made after biopsy, but it can be accurately predicted by considering clinical features with imaging results.<sup>12</sup>

### Summary

General practitioners should further consider bone sarcomas in the differential diagnosis for chronic localized pain, especially when patients are in the at-risk age group and the pain is localized to one of the common sites. Practitioners should be even more suspicious if there is a history of nocturnal pain, an atypical pain pattern following minor trauma, or a soft tissue mass on examination. In accord with Goedhart and colleagues, we recommend that general practitioners consider lowering the threshold at which they order plain radiographs. We believe

that heightened awareness of bone sarcoma symptoms can reduce the delay in diagnosis and treatment. Although osteosarcoma and Ewing sarcoma are rare causes of chronic localized pain, it is critical to consider them since outcomes are heavily dependent on the stage when a tumor is first identified. ■

#### Competing interests

None declared.

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**The obscure nature of bone sarcomas can result in patients receiving inadequate pain management and attending physiotherapy sessions rather than being referred to a tertiary care centre for further workup.**

# Concrete versus COVID-19: How the built environment can limit the spread of disease

On a recent road trip I had occasion to use a rest-stop washroom. As I washed my hands I noted the instructions above the sink encouraging hand washing to prevent influenza and other infectious diseases, and then I turned to leave. To exit the washroom I had to pull on the handle of a heavy metal door. Being familiar with the saying that the doorknob is the second-dirtiest part of the washroom, I pondered my options for a germ-free exit.

I quickly discounted the window; it was too high. Instead, I resolved to use local materials to escape. As there were no paper towels, I used toilet paper to make a glove with which to grab the door handle. I pulled the door open—wide enough to allow me to exit with a graceful pirouette—and carried on my way. As I drove away I wondered about the slow adoption of new building standards that eliminate the touching of shared surfaces.

Awareness of the role that urban design plays in disease prevention is hardly new. Famously, in 1854 English physician John Snow demonstrated that an outbreak of cholera in London was attributable to water drawn from a single well. At the time, sewage was carried in street gutters or pits scattered around residential areas, leading to fecal contamination of drinking water.

The subsequent adoption of piping systems that brought clean water directly into houses is recognized as a landmark example of how

proper urban design can reduce contagion. Similarly, an important tool in the fight against tuberculosis was the provision of adequate indoor ventilation.<sup>1</sup>

Reduction of infectious diseases is not the only health benefit that can be achieved with proper design of living spaces and communities. Urban design can be used to promote active transportation, access to shade, opportunities for social interaction, clean air, and many other benefits.

While much of the progress in preventing infections has come from providing clean air and water, the role of fomites (objects that are touched by multiple people) is another factor. In some instances, the role of fomites is clear: we don't reuse needles or tongue depressors because of the obvious risk of transmitting disease. There are a host of pathogens that can be deposited on surfaces, then transmitted to whoever else touches that surface. *E. Coli*, *Streptococcus*, MRSA, yeast, norovirus, and influenza are all examples. When it comes to colds and flu, however, the role of fomites is somewhat less clear.<sup>2</sup>

Although studies have demonstrated the ability to recover viruses from surfaces (especially nonporous surfaces) days after initial deposition,<sup>3</sup> the recovery of viral nucleic acid does not necessarily mean that those surfaces are a significant source of transmission, and good ventilation, personal spacing, and hand washing may be the mainstay of preventive measures. Nevertheless, given the evolving state of understanding of the role that touched surfaces play in the spread of COVID-19 (let alone the other pathogens that are present), policies that promote environmental hygiene are thought to be justified.<sup>4</sup>

It is fair to ask whether we have done enough in our buildings to limit the risks posed by everyday objects. Doorknobs, light switches, toilet handles, faucet knobs are all ubiquitous, but are they necessary?

Researchers in Singapore studied COVID-19 patients' living spaces and found that the virus was present on toilets, sinks, door handles, and light switches.<sup>5</sup> Current events will place more focus on opportunities to design washrooms and other living spaces in ways that reduce surface contacts.

Motion-sensing light switches, doors that swing outward on exit, self-flushing toilets, pedal-operated sinks, and sensor-triggered hand dryers are all options that offer ways to make the built environment a bigger ally in the reduction of disease. ■

—Lloyd Oppel, MD

**Doorknobs, light switches, toilet handles, faucet knobs are all ubiquitous, but are they necessary?**

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# Measuring multimorbidity to support chronic disease management and prevention

**M**ultimorbidity, the co-occurrence of two or more disease conditions (2+), manifests itself in manifold challenges in the present-day health management of patients. Multimorbidity has been one of the most complex phenomena in health care systems around the world in recent times. It affects all age groups, but a geriatric focus in health research is prominent owing to higher prevalence among older adults.<sup>1</sup> Moreover, the co-occurrence of multiple diseases leads to greater chances of complications and greater severity compared to single diseases, and the combined burden of multimorbidity and the health care resources required to manage it may be much greater than the sum of single diseases.<sup>2,3</sup>

Due to Canada's aging population, multimorbidity is increasingly becoming a key public health and primary care issue in the prevention and management of chronic diseases.<sup>4</sup> Canadian adults 20 years and older who were surveyed with a list of nine self-reported chronic conditions had a multimorbidity prevalence of 12.9% in 2011/12.<sup>3</sup> BCCDC's recent analysis of 16 chronic diseases, as defined in BC's chronic disease registries, showed nearly one third (28.6%) of BC residents 20 years or older had multimorbidity (2+) in 2014/15.<sup>2</sup> Another Canadian study using data for five conditions (cardiovascular disease, respiratory disease, mental illness, hypertension, and diabetes) with

**Multimorbidity has been one of the most complex phenomena in health care systems around the world in recent times.**

nationally validated case definitions revealed multimorbidity prevalence rates of 26.5% and 24.8% in Canada and BC, respectively, in 2011/12.<sup>5</sup> While these Canadian and BC prevalence rates are substantial, a fixed set of well-defined chronic conditions is needed, along with use of a standardized surveillance methodology to improve measurement of multimorbidity that would consistently inform practice, program, and policy planning.<sup>4</sup>

Recently we introduced an indicator measuring multimorbidity prevalence<sup>2</sup> in individuals living with two or more chronic conditions from a list of 16 chronic diseases listed in chronic disease registries. The indicator is intended for use in health surveillance on a periodic basis to support management and prevention of chronic diseases in BC. The chronic diseases with identified case definitions<sup>5,6</sup> selected for the multimorbidity indicator are:

- Asthma
- Chronic kidney disease
- Chronic obstructive pulmonary disease
- Dementia
- Diabetes
- Epilepsy
- Heart failure
- Hospitalized stroke
- Hypertension
- Ischemic heart disease
- Mood and anxiety disorders
- Multiple sclerosis
- Osteoarthritis
- Osteoporosis
- Parkinsonism
- Rheumatoid arthritis

The age-standardized prevalence rate of multimorbidity among individuals having two or more chronic diseases is calculated for the indicator. The measurement is expected to enhance our understanding of the epidemiology of multimorbidity to inform prevention efforts, reduce disease burden, and align health care services with holistic patient needs.<sup>4</sup> This also underscores the importance of monitoring multimorbidity to provide insights to broaden our mindset of single disease-centric approaches to management of chronic disease in the primary care setting and prevention as part of public health. Furthermore, the risk and protective factors and socioeconomic determinants of health associated with most chronic conditions individually are common but can be tackled considering multimorbidity as a composite disease entity for planning upstream prevention. ■

—Drona Rasali, PhD, FACE

BCCDC, Provincial Health Services Authority (PHSA)

—Crystal Li, MSc

BCCDC, PHSA

—Caren Rose, PhD

BCCDC, PHSA, UBC School of Population and Public Health

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



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# Social distancing: Origins and effects

Under normal circumstances the interpersonal distances chosen by people depend on many things. But what are the impacts of required changes in behavior during unprecedented times?

George Szasz, CM, MD

Staying away from each other has become crucial to slow the spread of the coronavirus. Public health officials have instructed us to practise social distancing, stay home, avoid crowds, and refrain from touching one another.

In 1963, when Edward Hall, a cultural anthropologist, coined the term *proxemics* to define studies about social distancing in everyday life, nobody thought that a virus, 100 times smaller than even a bacterium, would make human closeness a big problem. Hall's concern was that closer distances between two persons may increase visual, tactile, auditory, or olfactory stimulation to the point that some people may feel intruded upon and react negatively. Today we are worried about becoming exposed to a viral attack.

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*Dr George Szasz is a member of the Order of Canada and professor emeritus at the UBC Faculty of Medicine. Throughout his career he practised on the North Shore and worked for the UBC Faculty of Medicine in numerous positions. After retiring from UBC, he was a member and chair of the Medical Advisory Committee of the BC College of Physicians and Surgeons. Now in his 91st year, married for 65 years, and caring for his wife with terminal dementia at home, he continues rowing at the Vancouver Rowing Club and writing for the BCMJ blog.*

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Hall proposed four main zones of space between individuals:

- Intimate distance (less than half a metre), such as in giving or receiving a hug.
- Personal distance (about 1 metre), usually reserved for family or good friends.
- Social distance (2 to 3 metres), when meeting strangers.
- Public distance (more than 5 metres), such as in public presentations.

Under ordinary circumstances, the interpersonal distance chosen by people depends on attitudes toward each other, as well as gender, age, and even climate. In addition, “contact cultures” use closer interpersonal distances and engage in more touching; “noncontact cultures” exhibit opposite preferences. In ordinary times the amygdala is suspected of processing strong reactions to violations of social spaces. Now we are facing compulsory social distancing beyond the amygdala and proxemics. We are ordered by public health authorities to create distances between households, neighborhoods, cities, and even countries.

Overall, people are resilient to short-term social distancing, although individuals who already have problems with loneliness, anxiety, depression, substance abuse, or other health issues are likely to be vulnerable to even more problems. In the short run, understanding the purpose of prolonged isolation and having pride

in being a good citizen by following the advice of professionals may help.

A 2015 study suggested that long-term social isolation (in the absence of a threat like the current viral infection) increased the risk of mortality by 29% for people with chronic conditions such as heart disease, depression, and dementia.

There are no studies about the unintended side effects of enforced long-term social distancing. Confinement of families with children may result in unexpected interpersonal tensions. The physical closeness may exacerbate domestic violence. Missing the coping mechanisms provided by the emotional experiences of sporting or artistic events, or religious ceremonies, may be a problem for many people. Anxiety about finances secondary to job

losses and the interruption of schooling are only part of a predictable rise in mental health problems. And this is only a short list of what a submicroscopic lifeless protein can do when it burrows itself into the cells of our body to copy and copy itself, multiplying to wreak havoc in our lives, and even kill us. ■

**In ordinary times the amygdala is suspected of processing strong reactions to violations of social spaces. Now we are facing compulsory social distancing beyond the amygdala and proxemics.**

#### Suggested reading

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**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](mailto:journal@doctorsofbc.ca) and must include your mailing address, telephone number, and email address. Writers should disclose any competing interests.

## Doctors of BC COVID-19 resource page

Doctors of BC has developed a physician resource web page to keep members updated on the COVID-19 work happening at Doctors of BC, the Ministry of Health, the BCCDC, and other organizations. The latest information relating to virtual care, member insurance and benefits during the outbreak, CMPA protections, data from the BCCDC, and more are provided: [www.doctorsofbc.ca/working-change/advocating-physicians/coronavirus-covid-19-updates](http://www.doctorsofbc.ca/working-change/advocating-physicians/coronavirus-covid-19-updates).

Additionally, members are encouraged to send any COVID-19 related questions and feedback to [covid19@doctorsofbc.ca](mailto:covid19@doctorsofbc.ca).

## Follow-up of living kidney donors: A call for collaboration

Kidney donation in British Columbia is on the rise,<sup>1</sup> and that means the number of kidney donors in the province who require routine or specialized follow-up is becoming increasingly prevalent. While donors are chosen because of their excellent health status, after kidney donation, these individuals require medical vigilance to keep them in optimal health.

According to a recent environmental scan, the majority of kidney transplant programs in Canada do not have standardized donor follow-up. In BC, the current informal model relies heavily on family physicians to follow kidney donors on an annual basis to ensure that their basic kidney health parameters are satisfactory. If health concerns arise, the family physician will either manage the condition or, if necessary, refer the donor to a specialist.

The Vancouver Transplant Nephrologists and Canadian Blood Services have teamed up to

improve and standardize the care and follow-up of people who donate a kidney. Our strategy to have the best possible medical care for kidney donors in the months and years after donation will be achieved through education and collaboration. Our collaborative efforts include stakeholder engagement with family physicians, kidney donors, and the care teams involved in living kidney donation.

We are seeking input from and partnership with physicians who either have kidney donors under their care, or have an interest in the care of kidney donors. Your involvement in the initiative can range from singular input to continuous participation. If interested, please email us at [shawna.mann3@vch.ca](mailto:shawna.mann3@vch.ca).

—Shawna Mann, MD, FRCPC  
Transplant Nephrology Locum, Vancouver General Hospital

### Reference

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## News from the Doctors Technology Office

### Guide to using dictation software in medical practices

A new resource from the Doctors Technology Office provides support for physicians who are in the process of adopting dictation software or are considering making the transition. The guide, *Using Dictation Software in Medical Practices*, is a collaboration of the Doctors Technology Office and the College of Physicians and Surgeons of BC's Physician Practice Enhancement Program. It outlines:

- Benefits of dictation software (with journal references).
- Types of dictation software.

- Implementation planning for practices transitioning from a manual system.
- Questions to ask dictation software vendors when deciding which dictation offering best suits your practice.

Many practices have found the initial setup and ongoing subscription expenses outweighed by both improved patient care stemming from more accurate documentation and a more efficient documentation process leading to long-term savings. Those who would like assistance with planning dictation software implementation, improving usage of their current system, or engaging with vendors are invited to contact the Doctors Technology Office at [dtoinfo@doctorsofbc.ca](mailto:dtoinfo@doctorsofbc.ca). The guide is available online at [www.doctorsofbc.ca/sites/default/files/dto-guide-using\\_dictation\\_software\\_in\\_medical\\_practices.pdf](http://www.doctorsofbc.ca/sites/default/files/dto-guide-using_dictation_software_in_medical_practices.pdf). <https://divisionsoffamilypractice.cmail20.com/t/i-1-xjljtd-jldujxt-u/>.

### New forms guidelines and best practices

Creating new forms and updating forms has been a longstanding pain point for physicians, clinic staff, EMR vendors, and form creators. While a provincial e-forms project is underway to help address frustrations, the Doctors Technology Office has developed an interim guide, *Forms Guidelines and Best Practices*, to assist with creating, editing, and distributing forms. The guide offers recommendations for creating and updating forms, how to determine whether a form is needed, and how to support the updating process. The Doctors of Technology Office is available to provide ongoing support for forms development and can help connect form producers with the e-forms project team and EMR vendors as needed. For questions, guidance, or help on engagement, contact the Doctors Technology Office at [dtoinfo@doctorsofbc.ca](mailto:dtoinfo@doctorsofbc.ca). View the guide online at [www.doctorsofbc.ca/sites/default/files/dto-guide-forms\\_guidelines\\_best\\_practices.pdf](http://www.doctorsofbc.ca/sites/default/files/dto-guide-forms_guidelines_best_practices.pdf).

### Virtual care support

To assist physicians in employing virtual care within their practice, the Doctors Technology Office has developed a variety of virtual care resources. To accommodate increasing requests for immediate support, the office will also be

holding seminars and implementing interim measures.

Detailed information and links to online resources is available at [www.doctorsofbc.ca/news/doctors-technology-office-virtual-care-support-response](http://www.doctorsofbc.ca/news/doctors-technology-office-virtual-care-support-response).

For information and direct one-on-one support with implementing virtual care or health technology, contact the Doctors Technology Office at: 604 638-5841 (1 800 665 2262), [dto info@doctorsofbc.ca](mailto:info@doctorsofbc.ca), or visit [www.doctorsofbc.ca/dto](http://www.doctorsofbc.ca/dto).

## Digestive symptoms present in mild COVID-19 disease, sometimes without fever

A preprint study published in the *American Journal of Gastroenterology* suggests patients with new-onset digestive symptoms after a possible COVID-19 contact should be suspected for the illness, even in the absence of cough, shortness of breath, sore throat, or fever.

This is the first analysis of gastrointestinal symptoms reported by COVID-19 patients with mild disease rather than those with moderate or critical illness and finds a unique subgroup with low-severity disease marked by presence of digestive symptoms, most notably diarrhea. The authors from Union Hospital and Tongji Medical College in Wuhan, China, report that among some of the patients included in the study, these digestive symptoms, particularly diarrhea, were the presentation of COVID-19, and were only later, or never, present with respiratory symptoms or fever. The study represents the 80% or more of patients who do not have severe or critical disease. This is about people in the community struggling to determine if they might have COVID-19 because of new-onset diarrhea, nausea, or vomiting.

The analysis included 206 patients with low-severity COVID-19, including 48 presenting with a digestive symptom alone, 69 with both digestive and respiratory symptoms, and 89 with respiratory symptoms alone. Between the two groups with digestive symptoms, 67 presented with diarrhea, of whom about one in five experienced diarrhea as the first symptom in their illness course. The diarrhea lasted from 1 to 14

## Psychological PPE: Peer support beyond COVID-19

In response to physicians' growing concerns amid the COVID-19 pandemic, the Physician Health Program (PHP) has launched a virtual peer-support group available to all BC physicians. Peer-to-peer connections promote shared learning, resiliency, and hope. Weekly sessions are co-facilitated by psychiatrist Dr Jennifer Russel and manager of clinical services Roxanne Joyce.

To be as accessible and physician-centred as possible, the sessions are drop-in with no commitment required. The focus is peer support, not psychiatric care, and all participants have the option to join anonymously. Conversations so far have explored wellness, work-life balance, pressures of working within COVID-19, acknowledging feelings of helplessness and anger, mindfulness, breathing strategies, working with limited PPE, and more. Many have also shared moments of joy and inspiration.

The PHP program of BC helps physicians, resident doctors, and medical students, as well as their families. When doctors and their families reach out for support, we are there to understand their situation, to support, and to advocate, both individually and collectively, as they strive to improve their mental and physical health.

We take confidentiality seriously. Your identity, personal information, and the fact you contacted us will be held in full confidence. Information pertaining to you and/or your family will be released to third parties only with your explicit consent or as required by law.

PHP is pleased to offer the weekly peer-support sessions as a permanent service. Email [peersupport@physicianhealth.com](mailto:peersupport@physicianhealth.com) for details. We also offer prompt, personalized, confidential counseling, life coaching, support, and referral services. Our intake line is open 24/7 (1 800 663-6729). Our general office line is 604 398-4300 (8:30 a.m. to 4:30 p.m. M-F). Website: [www.physicianhealth.com](http://www.physicianhealth.com).

—Roxanne Joyce  
Manager, Clinical Services, Physician Health Program.



days, with an average duration of over 5 days and a frequency around four bowel movements per day. Concurrent fever was found in 62% of patients with a digestive symptom, meaning that nearly one-third did not have a fever. Patients with digestive symptoms presented for care later than those with respiratory symptoms (16 day vs 11 day delay,  $P < 0.001$ ).

Authors concluded:

- Digestive symptoms are common in the community, and most instances of new-onset diarrhea, nausea, vomiting, or low appetite are not from COVID-19.
- Nonetheless, clinicians should recognize that new-onset, acute digestive symptoms

in a patient with a possible COVID-19 contact should at least prompt consideration of the illness, particularly during times of high COVID-19 incidence and prevalence.

- Failure to recognize these patients early and often may lead to unwitting spread of the disease among outpatients with mild illness who remain undiagnosed and unaware of their potential to infect others.
- The data in this study highlight the presence and features of this subgroup of COVID-19 patients and should be confirmed in larger international studies.

The preprint study, "Digestive symptoms in COVID-19 patients with mild disease severity:

Clinical presentation, stool viral RNA testing, and outcomes,” is available at [https://journals.lww.com/ajg/Documents/COVID19\\_Han\\_et\\_al\\_AJG\\_Preproof.pdf](https://journals.lww.com/ajg/Documents/COVID19_Han_et_al_AJG_Preproof.pdf).

## Heart disease, stroke, and diabetes all at once: A triple threat

Living with a cardiometabolic condition such as heart disease, stroke, or diabetes is difficult, but having two or all three of these conditions (cardiometabolic multimorbidity) comes with an exponential increase in the risk of premature death. Researcher Dr Brodie Sakakibara, who is affiliated with the Rehabilitation Research Program at the GF Strong Rehabilitation Centre, sought to discover possible connections between lifestyle and the development of cardiometabolic multimorbidity. Ultimately, individuals with little-to-no physical activity and high stress levels have greater odds of acquiring two or three cardiometabolic conditions.

The research is published in *BMC Public Health* and highlights the critical need to better understand how individuals progress from

having one to two or all three conditions and how to prevent such a decline in health.

The study, “The prevalence of cardiometabolic multimorbidity and its association with physical activity, diet, and stress in Canada: Evidence from a population-based cross-sectional study,” is available online at <https://link.springer.com/article/10.1186/s12889-019-7682-4>.

## Possible role for voice analysis in telemed and patient care

The need for telemedicine has grown amid the coronavirus pandemic for cardiac patients suffering from congestive heart failure who want to avoid contracting the highly contagious virus. Published recently in the *Journal of the American Heart Association*, a study led by Dr Elad Maor of Sheba Medical Center in Israel, in collaboration with the Mayo Clinic, uses telemedicine voice recognition technology to assess patients’ risk for heart failure from the comfort of their own homes. Using voice-processing techniques, audio recordings can identify high-risk patients, allowing telemedicine centres to allocate more resources to these individuals. Dr Maor expects the technology to be available for use in

the near future and suggests that it may have other applications as well. The Sheba Medical Center will begin a clinical trial based on this technology, involving patients with and without COVID-19. Patients will have their voice recorded to test the hypothesis that the voice can be used to identify respiratory disease. The article, “Vocal biomarker is associated with hospitalization and mortality among heart failure patients,” is available online at [www.ahajournals.org/doi/full/10.1161/JAHA.119.013359](http://www.ahajournals.org/doi/full/10.1161/JAHA.119.013359).

## Arthritis research education series launches with knee osteoarthritis and running

Arthritis Research Canada presents the new Arthritis Research Education Series. By taking an in-depth look at specific research studies through the use of video and other tools, the education series shares expert knowledge from leading arthritis scientists on the latest findings in arthritis research. The series kicks off with the topic of knee osteoarthritis and running. More details are available at [www.arthritisresearch.ca/arthritis-research-education-series](http://www.arthritisresearch.ca/arthritis-research-education-series).

## LETTERS

Continued from page 128

knowledge translation are vital for scalability and positive societal impact of technology solutions. Multisectoral collaboration is essential to address gaps and choose digital health solutions wisely.

In the digital age, health professionals are more than knowledge purveyors; they are interpreters of information. Let’s use this opportunity to build relationships with our patients and not sacrifice the humanity in health care in favor of medical technocracy. Health professional training must emphasize digital health and how to use it to build relationships with patients. Patients and family caregivers need to bring their lived experience to all aspects of digital health transformation.

The Hippocratic Oath exhorts, “Do no harm.” Disruptive innovations can bring positive outcomes, but they can also introduce unforeseen harm. How do we take calculated

risks without inhibiting progress? When do we choose evolution and when do we choose revolution to address persistent problems through disruption? We must ask ourselves: Can we be more nimble and less risk adverse? How do we open the door to culture change in health care? What’s stopping us?

TEC Vancouver was organized by the UBC Department of Emergency Medicine Digital Emergency Medicine Unit and Vancouver General Hospital Emergency Department in partnership with Vancouver Coastal Health and VGH and UBC Hospital Foundation. The conference explored how innovative technologies influence health care delivery today and emerging trends that can shape the future of health care. We welcome readers to join us in the conversation in Vancouver on 7 November 2020 for the second TEC Vancouver conference.

—Kendall Ho, MD

Professor, UBC Faculty of Medicine  
Department of Emergency Medicine  
Lead of Digital Emergency Medicine Unit  
Co-chair, TEC Vancouver Conference

—Helen Novak Lauscher, MD

Associate Lead of Digital Emergency Medicine Unit, UBC Department of Emergency Medicine

—Chad Kim Sing, MD

Associate Vice President of Medicine, Quality and Safety at Vancouver Coastal Health Authority

Clinical Associate Professor, UBC Faculty of Medicine Department of Emergency Medicine  
Co-chair, TEC Vancouver Conference

—Maryam Matean, MPH

Research Portfolio Coordinator at UBC Faculty of Medicine, Department of Emergency Medicine, Digital Emergency Medicine Unit

# New WorkSafeBC early concussion and assessment program

**C**oncussion is considered to be a relatively benign injury with an expected full recovery within 4 weeks; however, up to 20% of those diagnosed with a concussion will experience ongoing symptoms and related disability. These delayed or incomplete recoveries are associated with heightened emotional distress, loss of or impaired function, and an inability to return to preinjury work levels.

In 2017, WorkSafeBC had over 2700 claims accepted for concussion. Approximately 50% of workers with a concussion injury returned to work within 2 weeks; however, up to 35% experienced greater than 12 weeks of work disability after their injury.

While there are currently no gold-standard treatment protocols for concussion, evidence shows that early education, reassurance, and resumption of normal activities are associated with improved outcomes.

## New early concussion management program

The Early Concussion Assessment and Treatment (ECAT) program is a new WorkSafeBC-sponsored health care program designed to support injured workers in BC. A network of 26 providers has been established to deliver the ECAT program across BC.

The Ontario Neurotrauma Foundation Guidelines for Concussion/Mild Traumatic Brain Injury and Persistent Symptoms<sup>1</sup> was used as a primary resource. Additionally, the program was designed in collaboration with physical therapists, occupational therapists, neuropsychologists, and physicians with expertise in concussion management.

The ECAT program provides early assessment, education, reassurance, and intervention, when indicated, for injured workers with confirmed or suspected concussions. The ECAT program is delivered by a treatment team consisting of an occupational therapist and a physical therapist.

During the intake assessment, the occupational therapist will identify cognitive, psychosocial, and vocational barriers that interfere with daily activities, while the physical therapist will complete a musculoskeletal and vestibular assessment. Education, support, and reassurance are embedded in the assessment process, and the team develops a treatment plan in collaboration with the injured worker. The intake report, which includes the clinical findings and treatment plan, is sent to the injured worker's primary care physician.

Treatment options can be customized to an injured worker's unique clinical needs for up to 6 weeks, and may include:

- Phone support for an injured worker who has remained job attached or has a plan in place for return to work.
- Return-to-work services incorporating job site visits and return-to-work planning, implementation, and monitoring.
- Structured rehabilitation with clinic-based treatment for an injured worker who has safety-sensitive jobs or barriers that must be addressed before returning to work. These services may also include community integration or group sessions.

The ECAT program is rooted in evidence-based practice and provides education, support, and reassurance to injured workers within weeks of sustaining their injury, with the goal of supporting recovery of function and a safe, sustainable return to work. The ECAT program also aims to identify injured workers who demonstrate signs of potential chronicity so that they can receive comprehensive assessment and treatment.

**Delayed or incomplete recoveries are associated with heightened emotional distress, loss of or impaired function, and an inability to return to preinjury work levels.**

## How to access the program for your patient

Primary care physicians play an important role in identifying and managing injured workers with concussions. We encourage collaboration and communication with the

ECAT program to provide consistent messaging, guidance, and reassurance to help injured workers feel positive and safe in their recovery.

Participation in the ECAT program requires a referral from a WorkSafeBC officer. Physicians can support this process by identifying appropriate patients on the Physician's Report (Form 8/11).

For further information about the ECAT program and other WorkSafeBC programs, please contact a WorkSafeBC medical advisor at any WorkSafeBC office. ■

—Luisa Johns, BSc, PT

## Reference

1. Ontario Neurotrauma Foundation. Guideline for concussion/mild traumatic brain injury and persistent symptoms: 3rd edition, for adults over 18 years of age. Accessed 28 February 2020. <https://braininjuryguidelines.org/concussion>.

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

# Obituaries We welcome original tributes of less than 300

words; we may edit them for clarity and length. Obituaries may be emailed to [journal@doctorsofbc.ca](mailto:journal@doctorsofbc.ca). Include birth and death dates, full name and name deceased was best known by, key hospital and professional affiliations, relevant biographical data, and a high-resolution head-and-shoulders photo.



## Dr James (Jim) Harvey Sherstan 1933–2020

Dr Jim Sherstan was born in Lloydminster, Saskatchewan, on 1 April 1933, was raised and schooled in tiny prairie towns, and graduated from the University of Alberta Faculty of Medicine in 1960. He trained in general surgery in the celebrated program at the University of Alberta, finishing in 1966.

He met his wife, Betty, while doing a year of surgical training in St. John's, Newfoundland, in 1963. She describes him as charming and humorous. They have four children—Michele, Scott, Cindy, and Craig.

I met Jim in 1966 when I started an internship at the University of Alberta Hospital. Jim was just finishing as chief resident in surgery and was going to Cold Lake, Alberta, until he completed the fellowship exams in the fall. In 1969 I met Jim again when I started a 6-year stint in general practice in Kitimat, BC. Most of Jim's professional life was spent there, and he was an indispensable member of the medical community. He was available 24/7 to carry out a wide variety of surgical procedures, including cesarean sections, and he would volunteer to help out the GP covering emergency if the workload was excessive.

Jim also introduced me to curling. Jim was the skip at a rink that was all, or nearly all,

physicians. Thanks to his patient teaching style and a rather busy playing schedule, I managed to learn the game and we often did well. Sometimes two members of the team would be called simultaneously to emergencies, so we would have to forfeit, but we could play one man short and still do well.

Jim died in Quesnel, BC, on 2 February 2020. Those of us privileged to have worked, played, sung, and curled with Jim cherish the time we spent with him. We extend our love and sympathy to his wife, Betty, and their children.

—Ian L. Macdonald, MD, FRCPC  
Vancouver

## Dr Maxwell (Max) Schultz 1923–2020

Dr Maxwell Schultz died on 16 February 2020 in South Delta, BC. Dr Schultz was a Northern Ontario boy (Thessalon, if you know the area), adventurous soul, debater (usually switching tacks 180 degrees at some point just to stir things up), jokester with a wicked sense of humor, lover of nature, raconteur, masterful sketcher, skier, horseback rider, occasional calf rounder-upper, anesthesiologist, and generous loving dad and family man. He graduated from Queen's University (MD 1946) just as the war ended. He was a member of the accelerated wartime class of Meds '47, which completed 6 years of medical school in just 4½ years. Initially a lumber company doctor in Kapuskasing, Ontario, then a GP in Thunder Bay, he then (to quote him) shoved off for an adventure out west. He was one of the first to train in anesthesia at Vancouver General Hospital. There he stayed, enjoying working with his colleagues and the staff in the Associated Anaesthesia Service and the nurses and orderlies and shepherding thousands of patients through their operations with skill and kindness. Max is remembered as



a marvellous colleague. He never made anyone feel bad about asking for advice and was always eager to help. He was a superb anesthesiologist. His sense of humor was unparalleled.

While he maintained his roots and ties to the east and his family, Max loved the west—the mountains, where he taught himself and his kids to ski, the hikes, the trails for horseback riding, and the ocean for boating. Max is predeceased by his wife, Anne, and leaves behind to mourn and miss and be thankful for him his five children, eight grandchildren, and 12 great-grandchildren.

—Karen Schultz, MD, CCFP, FCFP  
Kingston, Ontario



*Going home  
The end of a day  
And we're on the way  
Over the hill  
In the still haze  
Of setting sun, work done*

# 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](http://www.bcmj.org/cme-advertising). You will be invoiced upon publication. Payment is accepted by Visa or MasterCard on our secure online payment site.

## DROP-IN COVID-19 PHYSICIAN PEER SUPPORT SESSIONS

### Online (Tue & Thu)

Effective Tuesday, 7 April, 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](mailto:peersupport@physicianhealth.com) for the link to join by phone or video.

## CME ON THE RUN

### Online webinars, 1 May–5 Jun (Fri)

CME on the Run sessions are held on Friday afternoons from 1–5 p.m. and include great speakers and learning materials. The next two sessions of CME on the Run series are offered via online webinar. Registrants will receive links to go online before each session. Dates and topics: 1 May (prenatal, pediatric, and adolescents). Topics include: Management of anxiety in children; Pediatric asthma management update; Abnormal gait in children: Diagnosis and management; ADHD: Clinical tips for diagnosis and treatment; Depression in teens; Management of childhood obesity; Doc, I'm pregnant. Now what? An update on antenatal screening; Pediatric rashes. The last session is 5 Jun (internal medicine). Topics include: Diabetes management update (beyond metformin); Multiple myeloma: When to suspect it?; IBD care in primary care; Community acquired pneumonia management updates; Treating resistant hypertension; Syncope: Differential

diagnosis and investigations; Polymyalgia rheumatic: Diagnosis and management; Diverticular disease: Pathology and management. To register and for more information visit [ubccpd.ca](http://ubccpd.ca), call 604 675-3777 or e-mail [cpd.info@ubc.ca](mailto:cpd.info@ubc.ca).

## MINDFULNESS IN MEDICINE WORKSHOPS FOR PHYSICIANS AND THEIR 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 Sep, 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](mailto:hello@livingthismoment.ca), or check out [www.livingthismoment.ca/event](http://www.livingthismoment.ca/event) for more information.

## 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](http://www.fpon.ca), or contact Jennifer Wolfe at 604 219-9579.



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Lupus patients who take their medications at lower risk for type 2 diabetes

An Arthritis Research Canada study has revealed that patients with lupus who take their medications as prescribed have a reduced risk of developing type 2 diabetes compared to lupus patients who do not.

Read the article: [bcmj.org/news/lupus-patients-who-take-their-medications-lower-risk-type-2-diabetes](http://bcmj.org/news/lupus-patients-who-take-their-medications-lower-risk-type-2-diabetes)



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The *British Columbia Medical Journal* is a general medical journal that seeks to continue the education of physicians through review articles, scientific research, and updates on contemporary clinical practices while providing a forum for medical debate. Several times a year, the *BCM/J* presents a theme issue devoted to a particular discipline or disease entity.

We welcome letters, blog posts, articles, and scientific papers from physicians in British Columbia and elsewhere. Manuscripts should not have been submitted to any other publication. Articles are subject to copyediting and editorial revisions, but authors remain responsible for statements in the work, including editorial changes; for accuracy of references; and for obtaining permissions. The corresponding author of scientific articles will be asked to check page proofs for accuracy.

The *BCM/J* endorses the “Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals” by the International Committee of Medical Journal Editors (updated December 2016), and encourages authors to review the complete text of that document at [www.icmje.org](http://www.icmje.org).

All materials must be submitted electronically, preferably in Word, to:

The Editor

*BC Medical Journal*

E-mail: [journal@doctorsofbc.ca](mailto:journal@doctorsofbc.ca)

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Web: [www.bcmj.org](http://www.bcmj.org)

## Editorial process

Letters to the editor, articles, and scientific papers must be reviewed and accepted by the *BCM/J*'s eight-member Editorial Board prior to publication. The Board normally meets the last Friday of every month, at which time submissions are distributed for review the following month. We do not acknowledge receipt of submissions; the editor will contact authors of articles by email once the submission has been reviewed by the Board (usually within 8 to 10 weeks of submission). The general criteria for acceptance include accuracy, relevance to practising BC physicians, validity, originality, and clarity. The editor contacts authors to inform them whether the paper has been rejected, conditionally accepted (that is, accepted with revisions), or accepted as submitted. Authors of letters are contacted only if the letter is accepted and editorial staff need further information. Scientific papers and other articles typically take 5 to 10 months from the date of receipt to publication, depending on how quickly authors provide revisions

and on the backlog of papers scheduled for publication. Manuscripts are returned only on request. The *BCM/J* is posted for free access on our website.

## For all submissions

- Avoid unnecessary formatting, as we strip all formatting from manuscripts.
- Double-space all parts of all submissions.
- Include your name, relevant degrees, email address, and phone number.
- Number all pages consecutively.

## Opinions

**BCMD2B (medical student page).** An article on any medicine-related topic by a BC physician-in-training. Less than 2000 words. The *BCM/J* also welcomes student submissions of letters and scientific/clinical articles. BCMD2B and student-written clinical articles are eligible for an annual \$1000 medical student writing prize.

**Blog.** A short, timely piece for online publication on [bcmj.org](http://bcmj.org). Less than 500 words. Submissions on any health-related topic will be considered. Should be current, contain links to related and source content, and be written in a conversational tone.

**The Good Doctor.** A biographical feature of a living BC physician. Less than 2000 words.

**Letters.** All letters must be signed, and may be edited for brevity. Letters not addressed to the Editor of the *BCM/J* (that is, letters copied to us) will not be published. Letters commenting on an article or letter published in the *BCM/J* must reach us within 6 months of the article or letter's appearance. No more than three authors. Less than 300 words.

**Point-Counterpoint.** Essays presenting two opposing viewpoints; at least one is usually solicited by the *BCM/J*. Less than 2000 words each.

**Premise.** Essays on any medicine-related topic; may or may not be referenced. Less than 2000 words.

**Proust for Physicians.** A lighthearted questionnaire about you. Submit responses online at [www.survey-monkey.com/s/proust-questionnaire](http://www.survey-monkey.com/s/proust-questionnaire), print a copy from the *BCM/J* website at [www.bcmj.org/proust-questionnaire](http://www.bcmj.org/proust-questionnaire), or contact [journal@doctorsofbc.ca](mailto:journal@doctorsofbc.ca) or 604 638-2858.

**Special Feature.** Articles, stories, history, or any narrative that doesn't fit elsewhere in the *BCM/J*. Less than 2000 words.

## Departments

**Obituaries.** Include birth and death dates, full name and name deceased was best known by, key hospital and professional affiliations, relevant biographical data, and photo. Less than 300 words.

**News.** A miscellany of short news items, announcements, requests for study participants, notices, and so on. Submit suggestions or text to [journal@doctorsofbc.ca](mailto:journal@doctorsofbc.ca) or call 604 638-2858 to discuss. Less than 300 words.

## Clinical articles/case reports/survey studies

Manuscripts of scientific/clinical articles and case reports should be 2000 to 4000 words in length, including tables and references. The first page of the manuscript should carry the following:

- Title, and subtitle, if any.
- Preferred given name or initials and last name for each author, with relevant academic degrees.
- All authors' professional/institutional affiliations, sufficient to provide the basis for an author note such as: “Dr Smith is an associate professor in the Department of Obstetrics and Gynaecology at the University of British Columbia and a staff gynecologist at Vancouver Hospital.”
- A structured or unstructured abstract of no more than 150 words. If structured, the preferred headings are “Background,” “Methods,” “Results,” and “Conclusions.”
- Three key words or short phrases to assist in indexing.
- Disclaimers, if any.
- Name, address, telephone number, and email address of corresponding author.

Survey studies must have a response rate of at least 50% in order for the paper to be reviewed for publication consideration. Papers with less than this response rate will not be reviewed by the *BCM/J* Editorial Board. We recognize that it is not always possible to achieve this rate, so you may ask the Editor in advance to waive this rule, and if the circumstances warrant it, the Editor may agree to have the paper reviewed.

## Authorship, copyright, disclosure, and consent form

When submitting a clinical/scientific/review paper, all authors must complete the *BCM/J*'s four-part “Authorship, copyright, disclosure, and consent form.”

**1. Authorship.** All authors must certify in writing that they qualify as an author of the paper. To be considered an author, an individual must meet all three conditions:

- Made substantial contributions to the conception and design, acquisition of data, or analysis and interpretation of data, and



- Drafted the article or revised it critically for important intellectual content, and
- Given final approval of the version to be published.

Order of authorship is decided by the co-authors.

**2. Copyright.** All authors must sign and return an “Assignment of copyright” prior to publication. Published manuscripts become the property of Doctors of BC and may not be published elsewhere without permission.

**3. Disclosure.** All authors must sign a “Disclosure of financial interests” statement and provide it to the *BCMj*. This may be used for a note to accompany the text.

**4. Consent.** If the article is a case report or if an individual patient is described, written consent from the patient (or his or her legal guardian or substitute decision maker) is required.

Papers will not be reviewed without this document, which is available at [www.bcmj.org](http://www.bcmj.org).

### References to published material

Try to keep references to fewer than 30. Authors are responsible for reference accuracy. References must be numbered consecutively in the order in which they appear in the text. Avoid using auto-numbering as this can cause problems during production.

Include all relevant details regarding publication, including correct abbreviation of journal titles, as in *Index Medicus*; year, volume number, and inclusive page numbers; full names and locations of book publishers; inclusive page numbers of relevant source material; full web address of the document, not just to host page, and date the page was accessed. Examples:

1. Gilsanz V, Gibbons DT, Roe TF, et al. Vertebral bone density in children: Effect of puberty. *Radiology* 2007;166:847-850.

(NB: List up to four authors or editors; for five and more, list first three and use et al.)

2. Mollison PL. *Blood Transfusion in Clinical Medicine*. Oxford, UK: Blackwell Scientific Publications; 2004. p. 78-80.
3. O'Reilly RA. Vitamin K antagonists. In: Colman RW, Hirsh J, Marder VJ, et al. (eds). *Hemostasis and Thrombosis*. Philadelphia, PA: JB Lippincott Co; 2005. p. 1367-1372.
4. Health Canada. *Canadian STD Guidelines, 2007*. Accessed 15 July 2008. [www.hc-sc.gc.ca/hpb/lcdc/publicat/std98/index.html](http://www.hc-sc.gc.ca/hpb/lcdc/publicat/std98/index.html).

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A book cited in full, without page number citations, should be listed separately under Additional or Suggested reading. Such a list should contain no more than five items.

### References to unpublished material

These may include articles that have been read at a meeting or symposium but have not been published, or material accepted for publication but not

yet published (in press). Examples:

1. Maurice WL, Sheps SB, Schechter MT. Sexual activity with patients: A survey of BC physicians. Presented at the 52nd Annual Meeting of the Canadian Psychiatric Association, Winnipeg, MB, 5 October 2008.
2. Kim-Sing C, Kutynec C, Harris S, et al. Breast cancer and risk reduction: Diet, physical activity, and chemoprevention. *CMAJ*. In press.

**Personal communications** are not included in the reference list, but may be cited in the text, with type of communication (oral or written) communicant's full name, affiliation, and date (e.g., oral communication with H.E. Marmon, director, BC Centre for Disease Control, 12 November 2007).

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Tables and figures should supplement the text, not duplicate it. Keep length and number of tables and figures to a minimum. Include a descriptive title and units of measure for each table and figure. Obtain permission and acknowledge the source fully if you use data or figures from another published or unpublished source.

**Tables.** Please adhere to the following guidelines:

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- Number tables consecutively in the order of their first citation in the text and supply a brief title for each.
- Place explanatory matter in footnotes, not in the heading.
- Explain all nonstandard abbreviations in footnotes.
- Ensure each table is cited in the text.

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- Number figures consecutively in the order of their first citation in the text and supply a brief title for each.
- Place titles and explanations in legends, not in or on the illustrations themselves.
- Provide internal scale markers for photomicrographs.
- Ensure each figure is cited in the text.
- Color is not normally available, but if it is necessary, an exception may be considered.

### Units

Report measurements of length, height, weight, and volume in metric units. Give temperatures in degrees Celsius and blood pressures in millimetres of mercury. Report hematologic and clinical chemistry measurements in the metric system according to the International System of Units (SI).

### Abbreviations

Except for units of measure, we discourage abbreviations. However, if a small number are necessary, use standard abbreviations only, preceded by the full name at first mention, e.g., in vitro fertilization (IVF). Avoid abbreviations in the title and abstract.

### Drug names

Use generic drug names. Use lowercase for generic names, uppercase for brand names, e.g., venlafaxine hydrochloride (Effexor). Drugs not yet available in Canada should be so noted.

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- Three key words are provided.
- Author information is provided for all authors.
- References in text are in correct numerical order.
- Reference list is in correct numerical order and is complete.
- References list contains up to three authors only.
- All figures and tables are supplied.
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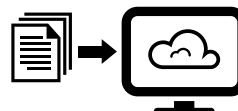
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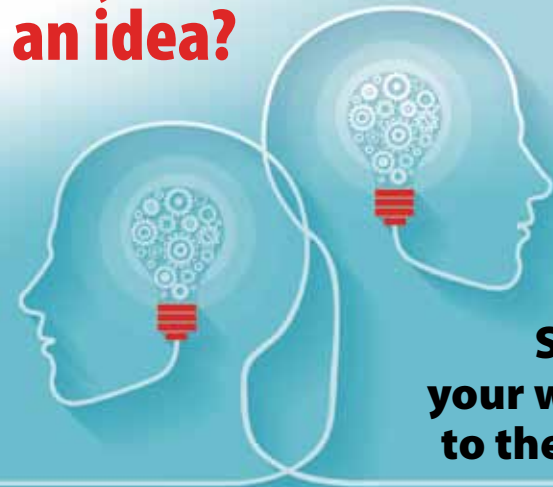
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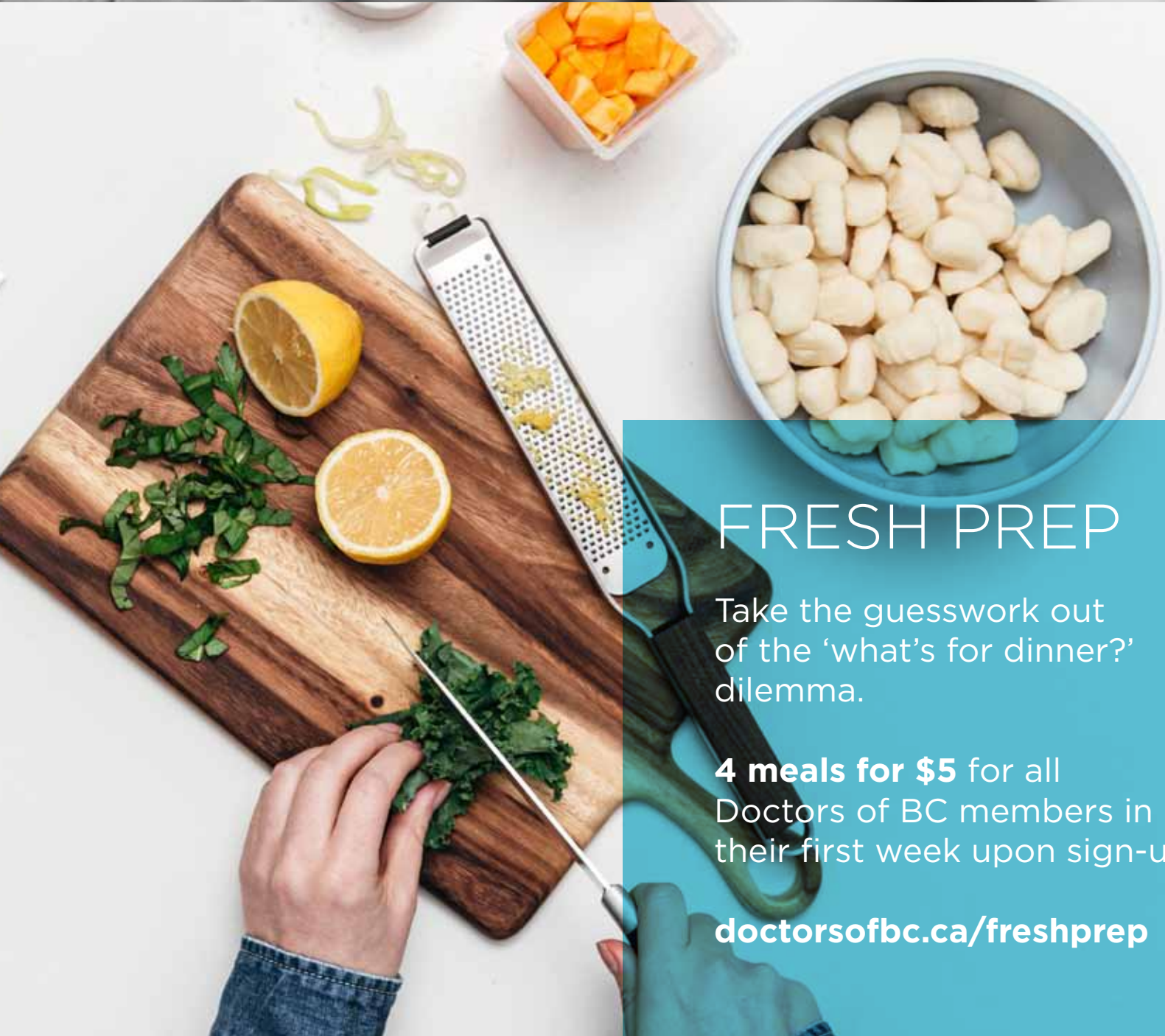
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# Thursday mornings: My experience as a practising patient

Helping medical students on their path to becoming physicians.

Ed Martin, BA



As usual, I'm in my assigned clinical skills room early, a practice honed either by training (during my career as a flight attendant), or maybe just an aspect of my personality. I don't need to be early; the clinical skills staff set up the room the day before. The gowns, robes, and drape sheets are set out, as are the tissue, lubricant, paper trays, and prostate models. Three sizes of gloves are in the dispensers on the wall. The anatomical charts are in place. Everything is ready. I wait patiently for the male clinical teaching associate (MCTA) whom I'll be working with, the students, and the tutor to arrive.

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*Originally from San Diego, California, Mr Martin earned his BA in history from San Diego State University before spending 9 years in Japan teaching English conversation. Currently a flight attendant for a major US carrier, Mr Martin enjoys hiking on Vancouver's North Shore and attending the Vancouver Symphony in his free time.*

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*This article has been peer reviewed.*

As I change out of my street clothes into a robe, I recollect how it is that I've come to be here on a Thursday morning to help instruct second-year medical students on how to perform the male genital and urinary exam. If someone had told me 3 years ago that this is how I would be spending some of my Thursday mornings, I wouldn't have believed them.

The teaching aspect isn't new to me—I spent 9 very interesting, productive years in Japan teaching English as a foreign language prior to becoming a flight attendant—but I never thought of myself as being particularly good at science. Yet life is full of opportunities and challenges that you'd never expect.

One September day in 2009 I was reading an article in *Maclean's* about a new way of interviewing potential medical students.<sup>1</sup> Rather than placing candidates before a panel of three, the new multiple mini-interview (MMI) process moved the candidates through up to 12 different interviewers who would evaluate them as they answered a short, specific question or interacted with an actor. The questions have no right or wrong answer. Candidates excel by demonstrating how well they think

on their feet and deal with ethical, moral, or other dilemmas. The interviewers are drawn from a pool of volunteers from a cross-section of society—doctors, other health care providers, academics, and members of the general public.

Something intrigued me about this process and the prospect of helping select the next class of medical students. Shortly after reading the article, I contacted the University of British Columbia's Faculty of Medicine to ask if they used the MMI and if I could contribute somehow. I was happy to learn that they did, and I was placed on a list of potential interviewers for 2011.

On a Friday evening in February 2011, I joined a group of fellow interviewers for our training session. Our role was explained clearly, as were the logistics. And did it ever run smoothly! In my whole working career, I'd never felt better looked after or supported. It was a remarkable experience that inspired me to return year after year.

As for the substance of the interviews, I cannot share any questions (they remain confidential), but I can tell you that they are challenging on many levels for the candidate and the

interviewer. Speaking with bright, enthusiastic, and, yes, nervous young people does give one hope. They show a strong desire to help their fellow humans and burn with idealism that gives reason to be hopeful for the future.

Following my first year of interviewing, a co-chair of the writing group asked me to join the group of academics, clinicians, and members of the public who develop the questions that are posed to the applicants in the MMI. Attending the editorial meetings in which the writers present

and discuss their ideas is one of the most interesting and intellectually challenging things I have ever done. Ideas are examined from every angle with one goal in mind: will an interviewer be able to fully assess a candidate if a certain question is asked?

During one of my writing group meetings I learned about the standardized patient (SP) program. Making up an eclectic group of people of all ages and backgrounds but populated with a large number of actors, SPs play the role of patients in teaching situations and clinical skills exams. Roles can involve a patient's history, a physical exam, or a mix of the two. Guided by a talented group of trainers, SPs are well prepared in training sessions for the case they are expected to present. The standardized part comes from the need to have multiple actors playing a certain patient role the same way so that each student in a large class can have a similar experience. I've had fun playing various roles as an SP, each one teaching me about a large range of medical conditions, some of which I would not have otherwise known about. But what gives me the greatest satisfaction is being part of a team of dedicated people working to help train the physicians of tomorrow.

Ready in my robe, I open the door of the clinical skills room and the first of eight second-year students arrives. We make small talk while the others file into the room. It's early September, and the academic year has just started. I smile to myself as I overhear the students' excited conversations about their

**[Medical students] show a strong desire to help their fellow humans and burn with idealism that gives reason to be hopeful for the future.**

recent experiences shadowing physicians in their offices and the procedures they've observed or patients they interviewed. They are gaining skills and experience gradually from both simulated and actual patients, and learning how complex people really are, physically and emotionally. I am pleased to hear how focused they are to do their best and learn as much as they can. Beyond wanting to acquire skills and knowledge, I also see their interest in the experiences of their fellow students. I take this as a good sign that a team-based approach to medicine is developing. As a potential future patient, I couldn't be happier.

The last student and the tutor (physician) arrive, so our Thursday morning begins. The tutor and I have worked together many times, so we are accustomed to each other's teaching style. We start with a demonstration of the exam for the students as it is performed on a patient. The tutor gives a brief explanation as an introduction to the rest of the teaching session. Once the demonstration is over, we divide into two groups: four students with two MCTAs per room. The tutor moves between the rooms to answer students' questions that go beyond the MCTA's curriculum.

I am joined by a fellow MCTA; we have worked together before. We start with some general information about the exam—the use of chaperones, glove size options, and how to set up supplies so the exam will move smoothly. Then we move on to the exam itself. One of the four students volunteers to go first. I can see the nervousness as they begin examining me, but it passes quickly as I explain how to perform the exam step by step and guide the student to first observe, then palpate for the appropriate structures in a systematic way. The curriculum stresses the importance of checking in with the patient by looking directly at their face for signs of discomfort. I use this part of the curriculum to assess the student's level of understanding. As we proceed, the student gains confidence, and by the end of the session all show a level of proficiency. When it comes

time for them to perform the exam on a patient, they will be ready.

Thursday mornings are now a favorite part of my week. Helping young medical students on their path to becoming a physician is a great honor. Throughout my involvement as an interviewer and writer for the MMI, I've also come to appreciate the care and attention given by the Faculty of Medicine to every part of the work they do, and I'm honored to be involved.

I dedicate this essay to the memory of my fellow MCTA, Mr Alex Wong, and medical school tutor, Dr Richard Wadge. ■

#### Reference

1. Millar E. Let's all play doctor. *Maclean's* 2009;122:50-51.



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