ORIGINAL RESEARCH

BC Medical Journal

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Human papillomavirus primary screening can identify those at risk for cervical precancer and cancer earlier and better than cytology. In addition, HPV primary screening offers innovative approaches to screening to reduce access barriers for equity-deserving groups. Articles begin on pages 370 and 375.

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In January 2024, British Columbia began a transition from cytology to human papillomavirus testing for cervical cancer screening. The article "Implementation of human papillomavirus primary screening for cervical cancer in BC" begins on page 375.

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A female NHL coach? This is a game changer

Jessica Campbell is crossing the blue line by becoming the NHL's first female coach.

or the first time in NHL history, a female full-time coach stands behind the bench. At the start of the 2024 season, the Seattle Kraken made history by adding Jessica Campbell as an assistant coach—a groundbreaking decision that has me, and many others, excited.

Hockey is more than just our national sport in Canada; it's practically a religion. So we have one more reason to cheer—Coach Campbell is also a proud Canadian. Originally from Saskatchewan, she's built an impressive résumé, having played in the NCAA, in the Canadian Women's Hockey League, and with Canada's national women's team before turning to coaching. There's even a BC connection—some of her earlier coaching years were in Kelowna, where she describes establishing her coaching voice.¹

It's true that Coach Campbell is not the first woman to make her mark in the NHL. Many women have been impacting professional hockey behind the scenes, including the Vancouver Canucks' own assistant general manager, Cammi Granato. Yet there's something particularly powerful about seeing a woman directly behind the players, leading the action from the bench. It feels like a real "TSN turning point," and a historic moment for hockey fans everywhere.

Even my young daughter likes hockey a little bit more now. It reminds me a little of how football became her favorite sport because Taylor Swift's boyfriend was in the Super Bowl. Although they're vastly different, both Travis Kelce and Coach Campbell give fans, especially women, another reason to feel connected, bringing personal stories and a new dimension to games we thought we already knew.

In the NHL, it was due time that diversity got a power play.

As a lifelong hockey fan, I grew up rooting for the Toronto Maple Leafs, with a Felix Potvin poster proudly displayed on my wall. (Please know that I converted to Canuck-ism when I moved

to BC in 2008 and have been loyal ever since.) My kids have also grown up around the game, and I have spent countless hours in arenas and at tournaments. But in 2022, when Hockey Canada's handling of the 2018

sexual assault allegations against junior hockey players came to light, I paused to consider the culture I was supporting.² After learning of the lack of leadership, transparency, and accountability, I questioned the environment I was encouraging my kids to embrace. That scandal served as a reckoning, costing Hockey Canada over \$23 million in lost sponsorships and prompting a total overhaul of its board of directors.

Campbell's presence behind the bench is a glimmer of hope that change is possible. It's a signal that professional hockey values talent, respect, and integrity. However, there are still plenty of misogynists who deserve a trip to the penalty box for their cowardly comments online. Trolls posting unimaginative quips like "The first thing she's going to do is teach the players to keep the toilet seat down" only demonstrates the need for ongoing efforts to create a more inclusive and respectful sport.

Meaningful culture change will take time. Outdated stereotypes need to be challenged at all levels of the sport, from the locker room to the boardroom to the bleachers. But for young girls watching, Coach Campbell is a beacon, reinforcing the idea that they, too, can reach the top

levels of any field if they work hard and stay passionate. As they say, girls need to "see it to be it," and Jessica Campbell is one example to young athletes that leadership, skill, and perseverance are not bound by gender.

It's also a powerful opportunity for the NHL to telegraph its commitment to fostering a more inclusive hockey community.

As Jessica Campbell and the Seattle Kraken continue to skate forward into new territory this season, perhaps take a moment to tune in and share her success with a hockey fan in your life. For a young athlete, her inspiring story might just be the ultimate assist.

—Caitlin Dunne, MD, FRCSC

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This is a powerful

opportunity for the

NHL to telegraph its

commitment to fostering

a more inclusive

hockey community.

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Finding balance and being intentional to create happiness

Embracing self-care is

not selfish but essential

to providing ongoing

compassionate care.

ith December upon us, many of us have been experiencing what seems like a never-ending cold and flu season, both in clinic and at home. This comes alongside the increased mental and physical work-

load of holiday gatherings, keeping traditions, and spending time with family and friends. With the added stress, I hope you all take time to reflect on how much you have accomplished this year and any goals

you may have set at the beginning. One goal that I set for myself is to be more intentional with how I spend my time and to find what fills my cup.

I recently read the book The Courage to be Disliked by Ichiro Kishimi and Fumitake Koga. It is an engaging and insightful read and especially pertinent at the end of the year when there is time to reflect. The book's core message is that happiness isn't found through acceptance from others but by living true to ourselves. One highlighted concept is to separate tasks and focus on what you can control. In clinical practice, I continue to work on recognizing the boundaries between my tasks and those belonging to others. As physicians, we can strive to provide the best care, but a patient's response and the outcome of treatment are not always predictable. Letting go of what we can't control helps prevent emotional exhaustion. Another idea discussed in the book is self-care, reminding us that we cannot pour from an empty cup. Our job is often about giving, and that can come at the cost of our own well-being. This book reminds us that embracing self-care is not

selfish but essential to providing ongoing compassionate care.

As my career progresses and evolves, I am still trying to find the right balance, one that brings together work, family, self-care, and everything in between. The

> right balance is different for everyone. Being in a group practice has allowed me to see the different ways others have set up their practices to achieve this balance and do what's right for them. It is

also encouraging to see the many initiatives in medical school, residency, and practice focusing on physician well-being. It is important to set up boundaries that help support a sustainable clinical practice for the long term.

As I navigate this winter and holiday season, I hope to be more intentional with how I spend my time with my family and friends and find things that bring me happiness. Maybe the path to true happiness starts with giving ourselves permission to live authentically, set out on our own terms.

-Yvonne Sin, MD

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The provincial #privileging process in British Columbia through a #rural lens

The impact of the PPPDs on rural generalist practice should be thoroughly evaluated to determine whether they have improved patient care and safety.

Read the article: bcmj.org/articles/ provincial-privileging-process-british -columbia-through-rural-lens



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Provincial diagnostic standards for enteric pathogens

The questions raised by Dr Eugene Yeung in the September 2024 issue of the BCMJ regarding the oversight of diagnostic parasitology testing in British Columbia are important and strike to the core of having precision laboratory methods that should be expected in contemporary times. 1 This is even more relevant when, in an era of increasing complexity for medical care, the practising physician is likely to assume that

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state-of-the-art diagnostics have less room for imprecision.

If the dearth of diagnostic parasitology standards, as hypothesized by Dr Yeung, is true, it is imperative to more fully understand the full scope of practice and expectations. Dr Yeung's narrative and the provincial online guidelines for investigating infectious diarrhea are complete, with modifications and exceptions to the general recommendations for laboratory investigation.2 Practically, however, and given the relatively narrow scope of such testing in the scheme of patient presentations generally, the practising generalist is unlikely to know of or have time to seek further details that may be relevant to the laboratory. The current standard laboratory requisition in British Columbia highlights dichotomous choices for a single collection for ova and parasite exam versus the same where two samples are collected for "high risk" settings.3 One would most likely assume that the second diagnostic choice would make the very concerns raised by Dr Yeung as consideration for laboratory triage, including standard microscopic analyses. The addition of more detailed investigations according to the comments entered by a generalist physician on a laboratory requisition are sure to leave more room for error, since such comments are quite unlikely to occur, and understandably so.

Historically, guidelines that apply to laboratory practice have, not uncommonly, been driven by the desire to streamline Medical Services Plan payments for such work. That such guidelines should bind the given laboratory to limit its provision of diagnostic service is simply

mistaken. Whether for diagnostic parasitology or other diagnostic microbiology, a one-size-fits-all approach may not be desirable. For example, diagnostic services in a tertiary care setting such as BC Children's Hospital or tertiary adult or regional hospitals are usually among the last resort when complex patients or uncommon diagnoses are to be investigated. A provincial laboratory's role in outbreak investigation mandates more flexible investigation. A referral travel clinic may have more variant inquiries. Each of these examples should at least allow flexibility for more conventional or detailed examinations as perceived by the diagnostic needs of that sample provider. The laboratory, therefore, must take leadership in understanding its client base and creating the flexibility to ensure that accurate and timely diagnostics are available.

The potential limitations of multiplex nucleic acid amplification testing are also well beyond diagnostic parasitology. One is essentially at the mercy of the testing spectrum for any given in-house or commercial compendium of assessments, including bacteria and viruses. For example, the BC Children's Hospital microbiology laboratory was sentinel in the early findings of a Yersinia pseudotuberculosis outbreak in 1998.4 Communications thereafter with the provincial laboratory and public health soon led to the discovery of a large community outbreak linked to milk production.⁵ This bacterial enteric pathogen would evidently not have been captured in the multiplex testing of today. In this regard, the maintenance of competency for standard testing methods by our tertiary diagnostic laboratories is also imperative.

Dr Yeung's year-long review provides considerable evidence for hypothesis testing. It is difficult to find published data from Canada about the predictive values of such multiplex testing when compared with historic standard laboratory diagnostics and where such assessment is made on a prospective basis. Whether there is a gain or loss in determining infection by using one or a combination of methods, an equally important aspect of such an investigation is the impact that missed or incremental laboratory diagnoses will otherwise have on treatment or patient care. Such relevant investigation is clearly in the capability of our medical microbiologists and their clinical clients.

-Nevio Cimolai, MD, FRCPC Richmond

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Anesthesia assistants in BC: **Building the foundation first**

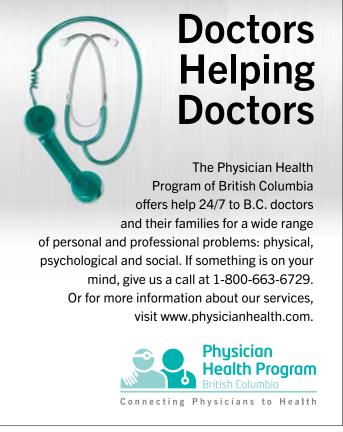
Anesthesia assistants are highly trained medical professionals who work under the supervision of anesthesiologists. They are recognized as key contributors to the anesthesia care team.1 The use of a team-based model of anesthesia care is common in other jurisdictions,² but in British Columbia, the model has been inconsistently applied and is underused. The Ministry of Health's Allied Health Strategic Plan, however, aims to optimize the roles and scopes of practice for allied health professionals to enhance patient care and improve health care system efficiency.

But anesthesia assistants are not regulated in BC. A regulatory framework would define their scope of practice; standards of practice; and requirements for education, certification, and ongoing professional development. The lack of a governance structure has resulted in variations in the recognition and use of anesthesia assistants. The profession is thus not working to its full scope across the province.

A recent pan-Canadian review and summary of anesthesia assistants' practices across the country showed that BC is an outlier with regard to governance.1 The primary recommendation from the review

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LETTERS

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was a call for recognition that widespread implementation of an anesthesia care team is needed to address growing surgical volumes and backlogs.1 Additional authors have highlighted the opportunity across Canada to align with other team-based anesthesia practices that will increase access to surgical care for our patients.² We agree that the care team approach best serves our patients' needs. But, as a province, we need to first create the foundation on which we can build the team. We need to be proactive and take urgent steps to establish a regulatory framework for anesthesia assistants. We cannot continue with the status quo, which does not support enacting improvements to peri-operative patient care.

-Michelle Scheepers, MBCHB, FRCPC, MBA **Anesthesiologist, Penticton Regional** Hospital, Penticton Medical Director, Surgical Services, Interior Clinical Instructor, University of British

—Pietur Fridriksson, BHSc, RRT, CCAA **Anesthesia Assistant, Royal Inland** Hospital, Kamloops Vice-President, BC Society of Anesthesia **Assistants**

-Yvonne Timewell, BSc, RRT, CCAA **Anesthesia Assistant Educator, Professional Practice Office, Interior Health**

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Supporting the stillbirth journey at BC Women's Hospital and Health Centre

The hospital setting, designed primarily for the delivery of live infants, can profoundly shape the experience and memory of those who have a stillbirth in pregnancy.

Read the article: bcmj.org/articles/supporting -stillbirth-journey-bc-womens-hospital-and







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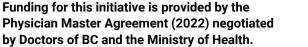
- Schedule a virtual meeting with a health and safety advisor.
- Get an onsite assessment and a health and safety program for your clinic.

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Thank you for helping us be "better together; never alone"

t became clear to me early on that my most important role as president would be to bear witness and find gratitude. As I reflect on the past year, I am sincerely grateful for the opportunity to have served as president and, even more so, for each of you who has continued to show up despite the challenges we have been facing. You encompass what it means to be "better together; never alone."

As physicians, we are happiest when we can give patients the care they need—the care they deserve. Yet in our resource-constrained environment, we continually find ourselves having to do more with less, often unable to bring our best to work. This has led to over 40% of physicians reporting burnout and many reaching out to the Physician Health Program for help. This is the time when we need to lean into one another and be better together; never alone. As Tolstoy wrote, when someone is in distress, our most important role as colleagues and leaders is to "come closer, as close as you can to [he] who suffers, and try to help." By doing so, we can bear witness to their distress and assure them they are not alone.

Over the past year, I have tried to get closer and bear witness to the many challenges facing our colleagues across the province. From Prince George to Grand Forks, from Surrey to Nanaimo, the moral distress and burnout are real. I've sat with colleagues as they spoke of the ever-increasing burdens they face daily—realities I couldn't truly comprehend from afar. And when I met with colleagues in Kelowna, Nelson, Powell River, and Langley, it became clear that they were showing resilience in times more challenging than even I, as a colleague, could have imagined.

Over the past year, I have also witnessed the astounding contributions you each make in the lives of your patients and in your communities. I have watched with admiration as you continue to rise above

> While it is imperative that we address the system's challenges, let's also remember the good we do and receive in our professional lives.

and make a significant and positive impact during a health care crisis in a constrained system. The impact we as a profession have in restoring wellness and hope is real. The joy we feel with our colleagues and friends is real. The excitement I saw at medical staff association and division meetings, at Physician Quality Improvement and UBC Sauder School of Business graduations, and at Joint Collaborative Committees and Representative Assembly events is real. The commitment to do better, as seen in the Canadian Medical Association's apology to Indigenous Peoples, is real. The trust that underpins our relationships with patients and communities is real.

While it is imperative that we address the system's challenges, let's also remember the good we do and receive in our professional lives. We have much to be grateful for, and many are grateful to us. And if we lean into gratitude, I believe we can show

ourselves, our colleagues, and our patients a future of hope and transformation.

Thank you for letting me bear witness to your hard work and your commitment to the profession and your patients this past year. Thank you to the amazing staff at Doctors of BC who work tirelessly to represent and advocate for physicians. Thank you to the incredible individuals that make up the Doctors of BC board, who taught me about leadership, humility, and service. Thank you to my colleagues at St. Paul's Hospital, who helped me care for my patients daily. And thank you to my family and loved ones, who cheered me on and never wavered in their love. Let this gratitude and love guide us in the years to come.

—Ahmer A. Karimuddin, MD, FRCSC **Doctors of BC President**

A call to action: Dermatology's role in combatting colorism

How dermatologists can advance health equity for racialized communities through their practices and collaboration with interested parties.

Chloe Gao, BHSc

ABSTRACT: Colorism is defined as differential or discriminatory treatment of an individual based only on skin shade. In recent years, the field of dermatology has made great strides in highlighting the impacts of racism and racial disparities in health care, from emphasizing the need for increased diversity in the field to uncovering the underpreparedness of trainees to diagnose dermatologic conditions in racialized communities. However, we have largely neglected to identify examples of colorism within dermatology. This paper proposes ways that dermatologists can intervene at both clinical and societal levels to combat colorism through their practices and collaboration with interested parties to advance health equity for racialized communities.

Impact of colorism on communities of color

There is a colorism problem in dermatology.1 Colorism is defined as differential or discriminatory treatment of an individual based only on skin shade.1 Among racialized communities, colorism is far too often the skeleton in the closet, or, perhaps more explicitly, the skeleton at family gatherings, in children's classrooms, at places of employment, in health care settings, and in

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criminal justice institutions.² While it can be associated with racism, it is not necessarily the same.³ For example, Black individuals may experience discrimination due to their race (racism), but the extent of discrimina-

tion may vary based on skin shade, with those of darker shades often experiencing more discriminatory treatment (colorism).4 Additionally, due to the degree to which colorism is

entrenched in the histories of many racialized communities, discrimination based on skin shade often propagates intraracial disparities in addition to interracial disparities.4 Dermatology has recently started to acknowledge the harmful impacts of racism and racial disparities on health care outcomes and experiences.^{5,6} However, we have largely neglected to identify examples of colorism within dermatology.⁷⁻⁹

Physical health impact of colorism

Perhaps the most direct example of colorism that impacts patients' physical health is skin lightening—the purposeful lightening of an individual's skin tone without medical supervision. 10 It is done using agents that block the production of melanin and that often contain drugs such as hydroquinone, potent topical steroids, or mercury, which can cause serious health complications.10 While such compounds are illegal in most countries, as of 2020, communities of color around the globe spent more than US\$8 billion on skin-lightening creams every year, with demand for such products projected to grow to US\$12.3 billion by 2027.11 Although Health Canada is alerting consumers that over-the-counter skin-lightening products are unau-

We have largely

neglected to identify

examples of colorism

within dermatology.

thorized, these toxic products are still widely available on e-commerce platforms such as eBay, Amazon, and Alibaba, rendering them highly accessible. 12,13 In addition,

natural skin-lightening compounds, such as lemon extract, are regularly supplemented into skin care products and often used for skin-lightening purposes; however, they can cause skin irritation.14

Mental health impact of colorism

Studies have consistently highlighted that colorism is also harmful to the mental health of people of color.¹⁵ A UK study showed that perceived colorism was associated with worse body image and psychological distress for Black, Asian, and other racialized or ethnic minority people, while a Canadian study showed that Black adolescents with darker skin tones had higher levels of depressive symptoms than their peers with lighter skin tones. 16,17 The significant influence of intraracial rather than interracial inequities in mental health outcomes due to colorism was highlighted by a study that found that darker-skinned Black respondents were at a significantly higher risk of poorer self-rated overall mental health outcomes than lighter-skinned Black respondents.¹⁷

Social impact of colorism

Academics and historians have emphasized the negative consequences of colorism on people's relationships and life opportunities starting from an early stage of life.2 According to a 2005 survey, White Americans between 25 and 44 years of age have an average of 10.2 more months of education than Black Americans.¹⁸ In comparison, the gap in educational attainment between the lightest- and darkest-skinned Black Americans aged 25 to 44 was 15.4 months between 2001 and 2003, highlighting that the educational gap appears to be larger among Black Americans of varying skin shades than between White and Black Americans. 18,19 Furthermore, one study among British Asian and African Caribbean young adults found that they generally experienced skin tone dissatisfaction and desired lighter skin tones than they currently had.20

Taken together, discussions of colorism remind us that racialized communities are made up not of monolithic racial or ethnic identities, but rather of unique subjectivities colored by varied shades and hues.

Role of dermatologists in combating colorism

Dermatologists can intervene at the clinical and systems levels to combat colorism through their practices and collaboration with interested parties.

Clinical interventions

Historically, there has been a lack of focus on providing culturally safe care for racialized communities in dermatological settings in both Canada and the US.5,21 The reasons for this gap in care may be related to a lack of representation. Black and Hispanic dermatologists make up only 3% and 4.2% of dermatologists in the US, respectively, which contributes to a lack of awareness and investment in skin concerns that disproportionately impact racialized communities.²²

Accordingly, culturally safe preventive and clinical care for racialized patients who may have experienced colorism has not been widely implemented. For example, screening patients for skin-lightening product use is not routinely integrated into many dermatologists' workflows, despite a high prevalence of harmful skin-lightening product use in racialized communities both in Canada and globally.²³⁻²⁵ Dermatologists might consider implementing additional screening questions when gathering patient histories to assess for the use of skin-lightening products, especially for racialized patients who are at increased risk. Nonjudgmental questions to incorporate into a history-gathering session might include: Do you put anything on your skin to help even out, brighten, or lighten your skin? Are any of those products prescribed or recommended to you by a dermatologist? While the average skin exam lasts approximately 6 minutes, integrating these questions into related conversations about sun safety or general skin product use would preserve efficiency without compromising comprehensiveness.26

To illustrate, discussing safe-sun practices is an important and frequent part of a dermatologist's work and an opportunity to correct colorist beliefs, attitudes, and behaviors. For example, in Asia, sun umbrellas, full-face visors, arm warmers, and long sleeves and pants are often used to shield skin from sun exposure. 27,28 However, the practices are often rooted in concerns for skin darkening, not skin cancer.^{29,30} By explaining the link between sun exposure and risk of skin cancer, dermatologists can separate these practices from their colorist origins while still promoting sun safety. Likewise, while encouraging the daily use of sunscreen, dermatologists should take care to recommend inclusive formulas that complement skin color and do not leave unsightly white casts or masks.31 Beyond decreasing adherence to use, these inappropriate sunscreens can further promote colorism by marginalizing patients and causing them to internalize feelings of

If a patient uses skin-lightening agents, dermatologists should approach the situation with cultural humility. They should acknowledge the societal pressure of colorism and understand the patient's motivations to use such products. They should also encourage cessation of use and counsel patients on the adverse consequences of unsupervised skin lightening.¹ In light of the association of skin lightening with poorer mental health outcomes and body image concerns, psychosocial screening with patients using skin-lightening agents may be important.32

Systems-level interventions

At the systems level, it is important to develop and implement clinical referral pathways and standard interprofessional collaboration practices to provide patients who use skin-lightening products with the psychosocial supports they need. For example, given that colorism can manifest as bullying from peers or abuse or neglect from parents, pediatric dermatologists can play an important role in identifying such cases and collaborating with the patient's primary care team to advocate for safer school and home environments.^{2,3,33}

Skin-lightening products are disproportionately marketed and sold to Asian, African, and Middle Eastern populations using colorist language such as "white," "fair," and "light." For example, Unilever sold its skin-lightening product line under the name Fair & Lovely—equating fair skin with beauty—until mounting criticism forced the company to rename the product in 2020.34 Dermatologists, as the experts on skin health, are uniquely positioned to advocate for these companies to eliminate colorism from their marketing and advertising. To assist in preventing the illegal sale of unauthorized and prescription-only skin-lightening agents, dermatologists can also report their concerns to Health Canada (https://healthycanadians.gc.ca/apps/ radar/MD-IM-0005.08.html). Furthermore, since a visit to the dermatologist often exposes patients to advertisements for dermatologic products in waiting rooms and exam rooms, it is also important that the advertisements show people with darker skin shades and products that can be used by people with darker skin shades (e.g., tinted sunscreens).

To build consensus and create formal national guidelines regarding screening for skin lightening, dermatologists can work within societies such as the Canadian Dermatology Association,35 Skin of Color Society,36 and Women's Dermatological Society.37 Finally, given dermatology's presence on social media and in pop culture—a presence unique among medical specialties-dermatologists can consider using their platform to partner with influencers and celebrities to disseminate the harms of skin lightening and colorism.³⁸ ■

Competing interests

None declared.

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Cervical screening in BC— Change inspired by First Nations and Métis communities

For human papillomavirus—based screening to be effective and to avoid exacerbating inequities, the health care system needs to prioritize culturally appropriate, difference-based approaches.

ABSTRACT: To eliminate cervical cancer in Canada, the Canadian Partnership Against Cancer has set priorities and targets, including a goal of screening 90% of eligible individuals. British Columbia is falling below this goal, with markedly lower rates in rural and remote locations and among First Nations and Métis communities. To address the Canadian Partnership Against Cancer targets in these communities, innovative and Indigenous-led cervical screening initiatives are required. Human papillomavirus testing offers a high-performance and innovative method for cervical screening and includes the option for self-collection, which removes many barriers associated with inclinic screening. In partnership with three First Nations and Métis organizations, we offered uniquely designed human papillomavirusbased self-collection programs, screened more than 230 eligible individuals, and found high levels of acceptability and feasibility. As British Columbia transitions to primary human papillomavirus screening, our findings bolster the existing evidence to support the adoption of human papillomavirus—based self-collection, especially for rural, remote, First Nations, and Métis communities.

ince 1956, Pap tests (cytology) have been the cornerstone of British Columbia's Cervix Screening Program. In BC and Canada, organized cervical screening has contributed to a significant decline in morbidity and mortality associated with cervical cancer. However, participation in cervical screening in BC has plateaued at less than 70%, 1 lower than

the Canadian Partnership Against Cancer's cervical cancer elimination targets of 90% screening uptake overall and no less than 80% for any single identifiable group.²

Within BC and Canada, First Nations, Métis, and Inuit women and individuals with a cervix (WIC) experience a disproportionate burden of cervical cancer³ and attend screening less frequently than other WIC.⁴ Commonly reported barriers to attending cervical screening include rural and remote geography; lack of access to a regular health care provider; being too busy; experiencing embarrassment, pain, or discomfort during the exam; financial and child care challenges; past trauma; and a colonial health system with prevalent anti-Indigenous racism.⁵⁻¹² (The term *Indigenous* encompasses First Nations, Métis, and Inuit.)

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The Canadian Partnership Against Cancer's call for the elimination of cervical cancer in Canada includes a focus on high-performance tests, innovative approaches, and an equity-based lens,2 in alignment with the World Health Organization's global strategy for cervical cancer elimination.¹³ More than 65 years after the introduction of Pap tests in BC, there is a new primary cervical screening method that addresses the Canadian Partnership Against Cancer priorities: human papillomavirus (HPV)-based testing. Cervical screening with HPV-based testing looks for the presence of high-risk (oncogenic) HPV genotypes and can detect cervical precancer earlier and more accurately than cytology.¹⁴ HPV-based screening detects more cases of cervical intraepithelial neoplasia (CIN) grade 2 or worse (CIN2+) at initial screen than cytology,¹⁴ is just as safe,¹⁵ is more cost-effective,16 and has a higher negative predictive value.17

Furthermore, because HPV testing detects the presence of oncogenic HPV, the sample does not need to be collected from the cervix; it can be obtained either cervically (by a provider) or vaginally (either by a provider or self-collected by the screened individual). When HPV-based screening is offered via self-collection, individuals are provided with an option for cervical screening that they can do by themselves, at home, at any time, thereby addressing many of the barriers traditionally associated with clinic-based cytology, especially for First Nations, Métis, and Inuit individuals 18,19 and those living in rural and remote locations. HPV-based self-collection is highly acceptable to patients²⁰ and has already been introduced in various jurisdictions around the world.21 A recent meta-analysis found that self-collection of an HPV sample almost doubles the likelihood of screening participation compared with collection by a health care provider.²²

As a province with a long-standing, organized, and centralized screening program, BC is well poised to transition to HPV-based testing as the primary method for cervical screening, with self-collection as

an option that increases equity and accessibility. Moreover, an essential component of the success of introducing HPV-based screening and HPV-based self-collection is the support and endorsement of health care providers.

In this article, we highlight the benefits of HPV-based primary screening, present the positive feedback received from patients regarding HPV-based self-collection, and address some of the common concerns providers have about this testing method. We also describe the inequities that First Nations, Métis, and Inuit individuals face as a result of systemic oppression when trying to access health services and discuss our research team's experience in delivering HPV-based self-collection collaboratively with First Nations communities and organizations and Métis Nation British Columbia Chartered Communities in BC. We aim to provide information and reflections that will better equip health care providers in BC to use HPV-based testing, with the ultimate goal of increasing screening coverage and reducing cervical cancer burden, specifically among marginalized and underserved communities.

Why shift from cytology to HPV-based screening?

While cervical screening via Pap tests has substantially reduced the incidence and mortality of cervical cancer in Canada and BC, ^{23,24} HPV testing introduces a better way to screen for and prevent cervical cancer. ¹⁴⁻¹⁶ Screening using HPV testing offers numerous advantages over cytology, including improved detection of cervical dysplasia and the ability to safely extend the interval between negative screens, both due to an increased sensitivity and increased negative predictive value. ¹⁷

The landmark BC-based Human Papillomavirus For Cervical Cancer (HPV FOCAL) randomized clinical trial demonstrated that "among women undergoing cervical cancer screening, the use of primary HPV testing compared with cytology testing resulted in a significantly lower likelihood of CIN3+ at 48 months." 14 This is

because the HPV test is more sensitive than cytology; it identifies more abnormalities at baseline and thus catches potentially cancerous lesions before they have a chance to progress. The HPV FOCAL trial was one of the first to show the protective effect of HPV-based screening, along with research from Europe^{17,25,26} and Australia.²⁷ These findings have continued to be replicated in studies and real-world evaluations from around the globe.²⁸⁻³⁰

A longer interval between negative HPV screens is recommended because of the HPV test's increased sensitivity and improved negative predictive value. 31,32 The HPV FOCAL trial found that "cytology-based screening at 2-year intervals missed over 8 times as many pre-cancers as HPV-based screening at 4-year intervals," indicating a significant difference between the protective value of the two tests. Thus, not only is an extended interval for the HPV test noninferior, but the HPV test is the better option as it catches more precancers than cytology would at the current standard interval.

While HPV-based screening offers a proven superior method for cervical screening, it is still of the utmost important that WIC attend necessary follow-up. The increased sensitivity and negative predictive value of HPV-based screening is null if WIC with positive HPV results do not attend follow-up and continue through the cascade of care. Health care providers should continue to stress the importance of attendance at follow-up, even with this new, more accurate testing method.

What are the benefits of HPV-based self-collection for patients?

On its own, HPV-based screening offers a variety of benefits for cervical screening programs, and when self-collection is introduced, the benefits multiply, especially for WIC, who face significant barriers to engagement. HPV-based self-collection, as a World Health Organization—endorsed form of self-care,³³ involves the collection of a vaginal sample, usually at home, at a health care provider's office, or in another private location where the individual feels

most comfortable. After collection, the individual returns the sampling kit to a laboratory, either by mail or drop-off, and the test results are provided to the individual (often within 4 to 6 weeks) through a digital platform, by phone, or in an appointment with a health care provider. If the test comes back negative for high-risk HPV types, the individual has successfully screened for cervical cancer without having to leave home, and with the assurance that another test is not needed for at least 5 years.32

A review of recent literature indicated that self-collection is highly acceptable and feasible and resulted in increased participation, especially among unscreened and underscreened populations.34 The convenience of HPV-based self-collection for both the individuals who are screening and the health care system cannot be understated. The test is easy to perform, is not painful, and eliminates the time and travel constraints associated with attending a clinic,20 which is especially important considering the vast geography of BC. In a province where an individual might have to travel for hours to reach the nearest medical office, mailed HPV-based self-collection kits can save patients a substantial amount of time.

Additionally, removing the necessity of a pelvic exam from the initial step in the cascade of care for average-risk individuals undergoing cervical screening increases the likelihood of participation by individuals who experience discomfort, pain, or embarrassment during a Pap test. For those who are hesitant or uncomfortable having a pelvic exam performed by a male health care provider, HPV-based self-collection also eases those concerns.35

There is a dearth of robust, comprehensive data on cervical cancer rates among Indigenous WIC in Canada; however, the existing data indicate that First Nations women are more likely to be diagnosed with cervical cancer than non-First Nations women;^{3,9,36} thus, innovative, culturally appropriate screening strategies are critical. Among First Nations, Métis, and Inuit WIC, HPV-based self-collection provides an opportunity to engage in cervical screening outside a conventional, Westernized medical system that is inherently racist and unaccommodating of Indigenous ways of delivering and receiving health care. 12,37,38 In Australia and New Zealand, studies have found that Indigenous women are open to the idea of HPV-based self-collection as a means of overcoming fear, shame, and negative screening experiences. 39,40 By putting screening in the hands of Indigenous WIC and communities, there is space for culturally sensitive, safe, and appropriate reproductive health care that might help address the innate barriers of a colonial health care system.

Overall, HPV-based self-collection offers a solution to many challenges and barriers associated with traditional cytology screening and thus facilitates a more equitable approach.

Who has benefited from HPV-based self-collection?

For more than 5 years, our research team has worked alongside First Nations communities and organizations and Métis Nation British Columbia Chartered Communities in BC to deliver HPV-based self-collection projects in an effort to enhance equitable access to screening. Taking guidance from community Elders, leaders, and knowledge keepers, we committed to ensuring our pilot research processes were culturally safe and culturally relevant and improved accessibility without causing harm. In partnership with Métis Nation British Columbia, Carrier Sekani Family Services, and the First Nations Health Authority, more than 230 WIC completed HPV-based self-collection testing across northern BC, and more than 90% attended necessary follow-up care when it was recommended.

While cytology-based screening has successfully reduced cervical cancer incidence and mortality, it does not allow for variability in approaches to offering screening and has thus created barriers and challenges for many WIC. To improve equitable access to screening and inform future directions for screening programs, our projects were rooted in a differences-based approach. For each of our partnerships, we focused on finding an approach that fit the needs of the communities precisely and uniquely, given their diversity of cultures, geographies, health infrastructure, and community preferences. Despite the precision approach used for each pilot project, there were similarities throughout: all projects included extensive community engagement and staff training during planning, implementation, and evaluation, and adhered to ownership, control, access, and possession principles and ownership, control, access, and stewardship principles at all stages.

The first of our pilot research projects was conducted in partnership with Carrier Sekani Family Services at nine health centres in north-central BC. The process started with open discussion and engagement sessions with Chiefs, councils, community health teams, and community members, with the goal of integrating HPV-based self-collection into an established First Nations-led primary care system. Leaders from the Carrier Sekani communities led the development of the projects and had significant input and decision power throughout planning and implementation. During health care centre visits, screening kits were offered to eligible WIC and, after collection, were mailed to the provincial laboratory by health care staff. In total, 103 samples were collected from WIC aged 25 to 65 years; 17 (16.5%) were positive for high-risk HPV, and attendance at follow-up was 94%. Among all participants, an average of 5.9 years had passed since their last cervical screen, which reinforces self-screening as an option that can be transformative for the health of WIC in these communities. This initiative has now transitioned from a research project to a sustained and routine health care practice within Carrier Sekani Family Services' primary care services.

Following the successful implementation of the Carrier Sekani Family Services project, we launched our pilot research project with Métis Nation British Columbia, which was anchored in a digital health approach. Given the distribution of Métis Nation British Columbia citizens and self-identifying Métis persons across northern BC, recruitment occurred through a combination of social media, mailed initiations, newsletters, and community engagement sessions. Culturally relevant, gender-inclusive materials were created, emphasizing the importance of screening as an empowered way for Métis people to take control of their own health. We started in three communities-Prince Rupert, Smithers, and Terrace—and had expanded to seven more—Hudson's Hope, Kelly Lake, Chetwynd, Tumbler Ridge, Dawson Creek, Fort Nelson, and Fort St. John-by the end of the project. Participants could register on the CervixCheck website, and if determined eligible for participation by a study team member, a self-collection kit was mailed to their home. After testing, participants received their results online. If a participant was HPV-negative, they did not require an in-person clinic visit, which is especially beneficial for those living in rural or remote communities. In total, 63 participants collected a sample. The positivity rate was 5.5%, and all HPV-positive participants attended recommended follow-up. An average of 7.0 years had passed since participants were last screened.

Our third HPV-based self-collection project was implemented in partnership with the First Nations Health Authority. It delivered cervical screening to three remote First Nations communities in northern BC: Fort Nelson First Nation, West Moberly First Nations, and Saulteau First Nations. Extensive community engagement and preparation occurred before we began offering cervical screening, including a long deliberation process led by the First Nations Health Authority to determine which communities were most interested and able to host the new initiative. Self-collection was offered as a parallel strategy alongside existing community health engagement initiatives. Screening kits were available in health care centres and were accessed through the support of trained staff, as well as during community health and wellness days. Over 18 months, 38 WIC were screened, and an

average of 5.1 years had passed since their last screening. In total, 2.6% of participants tested positive for HPV, and attendance at follow-up was 100%.

As part of our research with the Carrier Sekani Family Services communities and Métis Nation British Columbia participants, we conducted acceptability surveys to determine whether offering HPV self-collection was having the intended beneficial effect. Overall, 70% of Carrier Sekani Family Services respondents and 84% of Métis Nation British Columbia respondents reported HPV self-collection for cervical screening as acceptable. Participants describe the process as "easier, faster, and less embarrassing" and "[easier], less painful, and more private." We plan to continue exploring acceptability and feasibility of this testing among First Nations and Métis Nation British Columbia Chartered Communities.

Our projects in partnership with Carrier Sekani Family Services, Métis Nation British Columbia, and the First Nations Health Authority have produced key learnings that have helped guide discussions and implementation of the provincial transition to primary HPV-based screening, especially as it relates to WIC, in rural and remote and Indigenous communities, and their attendance at necessary follow-up. We are deeply grateful for our First Nations and Métis partners and are indebted to their wisdom. Adopting culturally informed approaches and culturally safe care will lead to improved health services for all.

How will this change the future of screening in BC?

BC's Cervix Screening Program is an ideal setting for the integration of HPV-based testing for cervical screening. HPV-based testing and self-collection are safe, effective, and equitable alternatives to cytology. As the province continues navigating the transition to HPV-based primary screening, the lessons learned from our research with First Nations communities and Métis Nation British Columbia Chartered Communities and partners will be invaluable.

All WIC should be offered the option to do self-collected screening, but it is especially appropriate for unscreened and underscreened WIC and First Nations and Métis communities. Moreover, continuing to offer WIC the choice of cervical screening method—self-collection or provider collected—is equally important so as not to introduce new inequities or barriers with this transition.

During the transition, it will be critical to ensure that the changes are suitable and appropriate for the populations that have endured historical harm from a colonial medical system and who continue to experience harm and oppression. We believe that for primary HPV-based screening to be effective and to avoid exacerbating inequities, the health care system in BC needs to prioritize culturally appropriate, difference-based approaches, as evidenced by our research.

The future of cervical screening in BC includes offering screening choices to all WIC, in particular those who have not regularly attended provider-collected screening in the past. With HPV-based self-collection, patients can take screening into their own hands and make health care decisions with autonomy and agency, at their own pace, in a safe environment. We hope that all WIC, including those in rural, remote, and Indigenous communities, will feel empowered to participate in cervical screening, regardless of geographic barriers or a lack of in-community health care providers. Ideally, all WIC will have more control over how, where, and with whom they screen, and will have the option of reducing the number of uncomfortable or distressing pelvic exams. When health care and health service accessibility are improved for equity-deserving groups, it improves the health of all.

As health care providers, you will be on the front lines of this exciting transition. You are uniquely situated to be the best advocates for your patients' health and well-being and will be at the forefront of this monumental practice change. You have the opportunity to fully educate yourselves

on how this will affect and ultimately benefit your patients, especially WIC in rural and remote communities, in Indigenous communities, and more broadly across the entire province.

Competing interests

None declared.

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Implementation of human papillomavirus primary screening for cervical cancer in BC

Human papillomavirus primary screening can identify those at risk for cervical precancer and cancer earlier and better than cytology.

ABSTRACT: In January 2024, British Columbia began a transition from cytology to human papillomavirus testing for cervical cancer screening. Human papillomavirus testing has a higher sensitivity for identifying patients with cervical precancer (cervical intraepithelial neoplasia grade 2 or worse) and cancer. Testing can be completed on either liquid-based samples collected from the cervix by a health care provider during a speculum exam or a sample from the vagina collected using a dry FLOQSwab by either a patient or a health care provider. Self-collected samples have similar accuracy to provider-collected samples and reduce many historical barriers to cervix screening. The implementation of human papillomavirus screening offers sample collection choice to patients and providers and is expected to improve access and equity in cervix screening.

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ritish Columbia has been a pioneer in population-based cervical cancer screening due to the initiation of the first cervix screening program in the world in 1955.1 Since the implementation of cervix screening, the incidence of cervical cancer in BC has decreased by more than 70%. Prior to the availability of cervix screening, 28.4 in 100 000 women were diagnosed with cervical cancer annually.1 The 2020 incidence rate in BC was 8.1 in 100 000.2

The World Health Organization has identified the elimination of cervical cancer as a global public health goal. However, the reduction in cervical cancer incidence in BC has plateaued due to the limited sensitivity of cytology as a screening test and the ongoing challenge with improving the participation rate.

To overcome these factors, BC's Cervix Screening Program began a transition

to human papillomavirus (HPV) primary screening in January 2024. People now have a choice in how they would like to receive cervix screening. HPV primary screening allows for health care provider-collected or patient-collected samples. The screening detects high-risk (oncogenic) genotypes of HPV and thus identifies people more at risk of having cervical dysplasia. Persistent high-risk HPV infections, over 15 to 20 years, cause 99.7% of cervical cancers.³

HPV testing can be done on liquidbased cytology samples containing cervical cells collected by a health care provider during a speculum exam and transferred into PreservCyt (ThinPrep vials) [Figure 1]. Patients or providers can use a red-capped Copan dry FLOQSwab for



FIGURE 1. ThinPrep vial used for providercollected cervical samples. Can be used for cytology and/or HPV testing.

vaginal collection that is then eluded into PreservCyt at the laboratory. Both collection types are tested using DNA amplification by polymerase chain reaction using the Roche Diagnostics cobas HPV assay, which provides information on the presence of genotypes HPV 16 and HPV 18 and pooled results for 12 other high-risk HPV genotypes (31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, and 68). HPV 16 and HPV 18 are known to cause 70% of cervical cancers. The cobas HPV assay uses beta-globin found in human DNA as an internal control to indicate sufficient sample collection. Results are reported as invalid if the internal control is absent.

Unlike cytology, HPV testing does not require a sample of cells from the squamocolumnar junction of the cervix; therefore, it can be conducted on vaginal samples collected by either the health care provider or the patient. Self-collected samples have been shown to have similar accuracy to provider-collected samples.⁴ In BC, self-screening is available to all age-eligible cervix screening participants.

Provider-collected liquid-based cytology samples are triaged at the laboratory to HPV testing, cytology testing, or both HPV and cytology testing (cotest) based on the patient's screening history and age. A step-down approach to phase out primary cytology screening is in progress. Currently, liquid-based cytology samples are triaged to HPV testing for patients age 55 years and older to ensure they have at least one high-quality screening before aging out of screening. The age for triaging samples to HPV testing may continue to decrease as BC progresses through the transition. Once the transition to HPV primary screening is complete, all liquid-based cytology samples will undergo HPV testing when received at the laboratory. Table 1 shows a comparison of test collection and testing options for liquid-based cytology and dry FLOQSwab vaginal collection.

HPV testing: Improved accuracy

HPV testing is superior to cytology for detecting cervical precancer (cervical intraepithelial neoplasia [CIN] grade 2

 TABLE 1. Liquid-based cytology collection versus FLOQSwab collection.

	Liquid-based cytology	FLOQSwab
Collected by	Health care provider	Health care provider or patient
Collection site	Cervix, during speculum exam	Vagina; no speculum exam required
Test type	Cytology and/or human papillomavirus (HPV)*	HPV only
Sample stability	Stable at room temperature; HPV testing can be completed up to 3 months postcollection	Stable at room temperature; avoid delays in sending the sample to the lab to allow for a short elution window in the lab (maximum of 28 days from collection date)

^{*} Liquid-based cytology samples are triaged to HPV screening, cytology screening, or cotest (both cytology and HPV testing) based on the patient's age and clinical history.

TABLE 2. Human papillomavirus (HPV) testing and cytology sensitivity and specificity.

	HPV test	Cytology
One-time sensitivity in detecting CIN2+*	96.1% (94.2%–97.4%)	53.0% (48.6%–57.4%)
One-time specificity in detecting CIN2+	90.7% (90.4%–91.1%)	96.3% (96.1%–96.5%)

^{*}CIN = cervical intraepithelial neoplasia.

or worse) and cancer. HPV screening has a one-time sensitivity for detecting CIN grade 2 or worse (CIN2+) of 96.1%, versus 53.0% for cytology,5 and a Cochrane review showed a lower likelihood of missing cases of CIN2+ and CIN3+ compared with cytology6 [Table 2]. The HPV FOCAL trial conducted between 2008 and 2016 determined that, compared with cytology, HPV testing resulted in a significantly lower likelihood of CIN2+ and CIN3+ four years after testing,7 consistent with other studies in the literature.8-10 Moreover, HPV FOCAL trial participants have been followed for 10 years or more, and the risk of CIN2+ detection has remained low across all age groups for at least 7 years, thus highlighting the high negative predictive value.11,12 The improved sensitivity and improved negative predictive value of HPV testing support extending the interval between routine screening to every 5 years. 12,13

Reducing barriers to screening

HPV testing can be collected cervically or vaginally by a health care professional or vaginally by the patient, which reduces many historical barriers to cervix screening. Several approaches have been implemented over the years to improve reach and participation in screening among underserved populations, including partnering with the First Nations Health Authority to promote community-based screening awareness, conducting engagement at temples and other cultural centres, and partnering with non-health care settings such as salons, but the participation rate for cervix screening has slowly declined to less than the 70% provincial target. Participation in cervix screening is not evenly distributed across populations or cultures: some populations are less likely than others to participate. Factors contributing to the inequity in care are multifactorial, and barriers are both personal and systemic. Cervix screening rates are known or suspected to be lower for the following populations:14-21

- · Low income.
- · Immigrant.

- Indigenous (First Nations, Métis, and
- Transgender, gender diverse, and nonbinary.
- Those who are not attached to a primary care provider.
- Rural and remote communities.
- Those who are less familiar with the BC health care system.
- Those who do not speak the language in which service information is available.
- Those with a history of trauma and/or violence.

A history of trauma, cultural barriers, not having a primary care provider, and having difficulty getting to an appointment (e.g., taking time off work, child care needs, distance to clinic) are all known barriers to cytology screening. The ability of patients to collect their own sample at home or wherever they feel most comfortable offers, for the first time, the opportunity to remove many of these barriers.

In a meta-analysis of 56 accuracy studies, the clinical sensitivity of self-collected HPV samples was equivalent to clinician-collected samples for the detection of CIN2+ and CIN3+, for polymerase chain reaction-based assays.²² These results were confirmed in a subsequent randomized trial that compared physician-collected samples to patient-collected samples.23 In a systematic review and meta-analysis, participants reported that they would prefer self-sampling over health care provider HPV testing, citing factors such as ease and privacy.²⁴ This provides confidence that we can safely offer an acceptable alternative collection method for cervix screening in BC. Effectively, patients and health care providers now have a choice for cervix screening.

Eligibility

Screening is recommended for people with a cervix (including women and Two-Spirit, transgender, and gender-diverse individuals), aged 25 to 69 years, who are or have been sexually active. In BC, the next recommended time to screen is provided on the screening test laboratory report from the Cervical Cancer Screening Laboratory. Obtaining the last screening test report from the laboratory is the most accurate way to know if someone is due to screen again. Generally, patients are due to screen if their previous result was:

- Negative for intraepithelial lesion or malignancy cytology result more than 36 months prior.
- HPV-negative more than 60 months
- Low-grade cytology (atypical squamous cells of undetermined significance [ASCUS] or low-grade squamous intraepithelial lesion [LSIL]) more than 6 months prior.

Patients with a history of CIN2+ and immunocompromised patients may undergo earlier screening based on recommendations from the colposcopist or laboratory based on the patient's history.

Most patients are eligible to self-screen if they prefer. In some circumstances, the patient's clinical history would indicate a health care provider-collected liquid-based cytology sample for cotesting. Detailed information on nonaverage risk screening recommendations and follow-up after receiving screening test results is available in the BC Cancer Cervix Screening Program: Program Overview (www.screeningbc.ca/ health-professionals). Figure 2 shows the current screening and follow-up algorithm for average-risk patients.

Importance of providers in cervix screening

Some patients may not be up to date with cervix screening and may have been hesitant to have a pelvic exam. However, the availability of cervix self-screening now provides patients with another choice. Identifying underserved patients and offering self-screening can increase access to care.

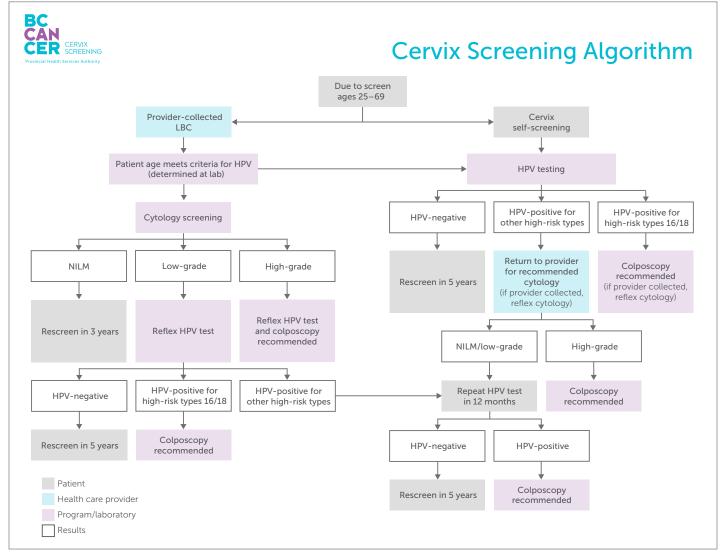
Cervix screening is effective only when patients with positive results are willing and able to access follow-up services and treatment. Patients who are willing to self-screen may still be hesitant for follow-up with a specialist for colposcopy. Counseling patients who are recommended for colposcopy to support them in understanding their positive HPV test result and the importance of follow-up testing and to explain what will happen at the time of the colposcopy procedure have been shown to significantly increase rates of adherence to follow-up.25,26

Determining the concerns patients have about follow-up procedures and providing support from a trusted care provider are also important aspects of adherence to follow-up. Some patients may benefit from multiple appointments to discuss follow-up and what to expect. Informing patients that colposcopy clinics are often high-volume procedure areas and that they may interact with clerks, nurses, and colposcopists can help patients prepare for the follow-up environment. Patients can also be advised that they can bring a support person with them to the procedure, they have the right to ask questions and seek more information prior to the procedure, and they can ask to stop or pause the exam at any time if they need a break or feel they need to return on another day.

Several patient resources are available, in multiple languages, including brochures, explanatory videos, and patient stories about their experience with colposcopy (www. screeningbc.ca/health-professionals).

Unattached patient process

In January 2024, a provincial unattached patient process was implemented to offer cervix self-screening to eligible people who do not have a health care provider. Legislative and regulatory changes were made to designate the Cervix Screening Program as a "prescribed person." Patients with a negative HPV test result are provided with their results and are advised to rescreen in 5 years and see a health care provider if they have any symptoms, even if their screening test is negative. Patients who are recommended for follow-up are linked with a clinic in their community to access cytology follow-up testing, speak with a health care provider about their results, and/or obtain support to feel comfortable accessing colposcopy.



 $\textbf{FIGURE 2.} \ Current \ cervix \ screening \ and \ follow-up \ algorithm \ for \ average-risk \ patients \ in \ British \ Columbia.$

LBC = liquid-based cytology; HPV = human papillomavirus; NILM = negative for intraepithelial lesion or malignancy.

Across BC, the Divisions of Family Practice worked with local clinics and health care providers to identify a clinic or provider for unattached patients with positive screen results in each of the 219 Community Health Service Areas in BC. Thanks to the support and creativity of the Divisions of Family Practice, this offers local solutions and community-based care for residents if their screening test results indicate further follow-up is needed. This linking process is the first of its kind in BC and has enabled the Cervix Screening Program to provide an automated, scalable, and sustainable process for population-based screening.

Early outcomes of implementation

From 1 February to 30 June 2024, the following were observed in the program:

- 60 065 cervix self-screening kits were mailed to patients.
 - 11 004 of those patients had never been screened in BC.
- 25 154 HPV self-screens were conducted.
 - 4680 of those patients had never been screened in BC.
- 19 776 HPV tests on liquid-based cytology-collected samples were conducted.
- 50% of cervix screening transitioned from cytology to HPV testing.

- 4400 patients used the unattached patient process to request and return screening kits.
- 1100 health care provider offices asked to have self-screening swabs available for patients.

Common questions about the transition to HPV screening are addressed in the **Box**.

Conclusions

HPV primary screening can identify those at risk for cervical precancer and cancer earlier and better than cytology. In addition, HPV primary screening offers innovative approaches to screening to reduce access barriers for equity-deserving groups.

BOX. Common questions about the transition to HPV screening.

Is human papillomavirus (HPV) testing done on liquidbased cytology samples?

HPV testing and cytology testing can both can be completed on liquid-based cytology samples. Samples received in the laboratory are triaged to HPV, cytology, or both (cotest) depending on the patient's age and clinical history. The transition to HPV testing of liquid-based cytology samples started with anyone age 55 years or older who had completed HPV testing. The age for HPV primary screening with liquid-based cytology samples may decrease over time as the province transitions fully to HPV testing.

Do a liquid-based cytology sample and an HPV vaginal swab both need to be collected for patients that have an indication for a cotest, with both cytology and HPV testing required?

A provider should never submit both a liquid-based cytology sample and a vaginal swab for the same patient. If cotesting is indicated, only the liquid-based cytology test should be conducted. The liquid-based cytology sample can be used for both cytology and HPV testing.

Can a patient with a previous atypical squamous cells of undetermined significance (ASCUS) or low-grade squamous intraepithelial lesion (LSIL) result complete self-screening, or is a health care provider-collected sample required?

Patients with a previous ASCUS or LSIL result can complete vaginal self-screening. Most often, patients will be recommended to return to routine HPV screening every 5 years if their result is negative after having a previous ASCUS or LSIL result. Occasionally, the laboratory may recommend a liquid-based cytology collection, depending on the number of previous ASCUS or LSIL results and the length of time since the last abnormal cytology result.

Should clinics wait to have several vaginal self-swabs before returning completed swabs to the laboratory?

It is important to return collected self-screening swabs to the laboratory every 1 to 2 days to reduce the time between collection and when the sample can be eluded into PreservCyt. This can reduce the testing invalid rate.

How can my clinic get access to vaginal self-swab devices to offer in the clinic?

Use the Cervical Cancer Screening Laboratory online order system (https://bccancer.silverbacksystems.io/ dashboard/login) to request liquid-based cytology supplies and vaginal swabs. This is the same system that is used to order liquid-based cytology (i.e., Pap test) supplies.

Why are patients with a test result of negative HPV and ASCUS or LSIL cytology recommended for screening in

In patients with ASCUS who are HPV-negative, the risk for CIN2+ is very low, similar to those with a negative cytology and HPV test. The absolute risk for CIN3 for women with ASCUS and negative HPV is 0.54% at 5 years; therefore, it is recommended to return to routine cervical screening.8,27

What does an invalid HPV test result mean?

Samples with insufficient cellularity will yield an invalid result, and recollection will be required. Insufficient cellularity could be due to inadequate time spent during collection or could be related to cells being compromised on the swab prior to elution in PreservCyt in the laboratory. Rotate the swab slowly for 20 seconds to ensure sufficient sample is collected.

Why was cytology not completed on the liquid-based cytology sample I submitted?

The usual reason is that the patient was 55 years of age or older and had a negative HPV screen; therefore, cytology would not be reported in addition to the HPV test result. Cytology and HPV results are both reported only if a reflex cytology was indicated due to a positive HPV screen, if a reflex HPV test was indicated due to an abnormal cytology screen, or if a cotest was indicated. The following are indications for a cotest:

- Following CIN2 or CIN3 excisional treatment and discharge from colposcopy, the patient should have one negative cotest prior to returning to HPV screening every 3 years.
- Following adenocarcinoma in situ excisional treatment and discharge from colposcopy, the patient should have a cotest every 3 years until 69 years of age.
- Following adenocarcinoma in situ excisional treatment, immunocompromised, and discharge from colposcopy, the patient should have a cotest every year until 74 years of age.
- Following total hysterectomy and a history of CIN2, CIN3, or adenocarcinoma in situ, the patient should have a negative cotest prior to discontinuing cervix screening.

Together, these two changes in cervix screening will further reduce the incidence of cervical cancer in BC to less than 4 in 100 000, which will meet the World Health Organization's criteria for eliminating the disease. More importantly, they are expected to improve equity in screening by reaching vulnerable and underserved populations.

Competing interests

None declared.

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Tips for billing WorkSafeBC when asked to submit a Physician's Report (Form 8/11)

ecent WorkSafeBC data show a high rejection rate when physicians bill for Physician's Reports that WorkSafeBC has requested. To make the billing process smoother, this article explains when and how to bill two applicable fee codes (19927 and 19559) and offers tips to help ensure timely payments.

- Fee code 19927 should be billed for submitting a Physician's First Report (Form 8) that WorkSafeBC has requested.
- Fee code 19559 should be billed for submitting a Physician's Progress Report (Form 11) that WorkSafeBC has requested.

Both fee codes can be billed electronically via Teleplan. However, you must fax the related report to WorkSafeBC at 604 233-9777 (or toll-free at 1 888 922-8807).

Billing fee code 19927 when WorkSafeBC requests a Physician's First Report (Form 8)

Why might WorkSafeBC request a Form 8, and how could you respond as the attending physician?

Let's say a patient comes to see you on 15 December 2024 after twisting their ankle but does not mention this is in relation to an incident at their workplace. On 2 January 2025, the patient reports the injury to WorkSafeBC. WorkSafeBC doesn't have any medical information on file from any practitioner so reaches out to those the patient has seen. Since your patient has reported that you were the first physician they saw for the ankle injury, WorkSafeBC

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

faxes you a request to complete a Form 8 for the 15 December 2024 visit. The request from WorkSafeBC is dated 7 January 2025 and is received by your office 8 January 2025. Ideally, you would promptly respond by sending a Form 8 to WorkSafeBC on 9 January 2025. You'd use the date you first saw the worker—15 December 2024—as the date of the report and the date of service on both the report and the invoice.

Tips for billing fee code 19927

- Use the date you first saw the injured worker for the injury as both the date of service and the date of the report.
- Bill fee code 19927 via Teleplan, and use the date you first saw the injured worker as the date of service.
- The report must be received by Work-SafeBC within 10 business days of the day it is requested. (WorkSafeBC may make the request by phone or by fax.) Any report received after 10 business days will not be paid.
- Do not bill fee code 19904 in addition to 19927, as 19904 includes copying an existing report from an injured worker's
- Do not bill fee code 19927 for regular Form 8 report submissions.

Billing fee code 19559 when Work-SafeBC requests a Physician's **Progress Report (Form 11)**

You may bill fee code 19559 only if Work-SafeBC requests that you provide a Form 11 for one or more patient visits. As with Form 8 requests, WorkSafeBC requests Form 11 in cases where it was not clear at the time of the visit that a Form 11 was needed.

Tips for billing fee code 19559

- Fee code 19559 can be billed separately for each Form 11 you complete (for each requested date of visit).
- Use the date the injured worker was seen as both the date of service and the date of the report.
- Bill fee code 19559 via Teleplan, and use the date the injured worker was seen as the date of service.
- The report must be received by Work-SafeBC within 10 business days of the day it is requested. (WorkSafeBC may make the request by phone or by fax.) Any report received after 10 business days will not be paid.
- Do not bill fee code 19904 in addition to 19559, as 19904 includes copying an existing report from an injured worker's
- Do not bill fee code 19559 for regular Form 11 report submissions.

More information

For more details on WorkSafeBC fee codes, or if you have questions about the agreement between Doctors of BC and WorkSafeBC, please see the Physicians and Surgeons' Work-SafeBC Services Reference Guide at www. worksafebc.com/en/health-care-providers/ provider-types/physicians. ■

Physicians may also email questions to physicians@worksafebc.com or worksafe bc@doctorsofbc.ca.

—Patrick Wong

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Bibliotherapy: The review, organization, and dissemination of recommended reading for psychiatry patients

A high-quality, low-barrier form of therapy.

Martina Scholtens, MD, MPH, FRCPC

Background

Bibliotherapy is the prescription of literature for healing. The term was coined by American essayist and minister Samuel Crothers in a 1916 Atlantic Monthly article, in which a fictional character named Bagster prescribes books for various afflictions.1 However, the "reading cure" was in use a century earlier, when libraries were a part of many Victorian-era psychiatric hospitals and army hospitals.2-4 In 1802, Benjamin Rush, widely considered the founder of American psychiatry, stated, "For the amusement and instruction of patients in a hospital, a small library should by all means compose a part of its furniture."5 In 1853, American physician John Minson Galt outlined five reasons why reading is beneficial to psychiatric patients in his essay "On reading, recreation, and amusements for the insane."3,5 Bibliotherapy may include imaginative materials such as short stories, novels, and poetry, and didactic materials, which are nonfiction and instructive.^{2,3,5}

Bibliotherapy has enjoyed a fresh surge of attention in the mainstream media over the past few years, with articles in the New Yorker, the National Post, and Maclean's.

Dr Scholtens is a clinical assistant professor in the Department of Psychiatry, Faculty of Medicine, University of British Columbia.

This article has been peer reviewed.

Various organizations and experts have generated reading lists for patients with virtually any mental health disorder. Bibliotherapy has practical utility in medicine due to its acceptability, ease of use, low cost, and availability. It can be used alone, as adjunctive treatment, or while a patient awaits other treatment. But at the point of the clinical encounter, how is a physician to know what reading to recommend for which patient? Clinical guidelines do not recommend specific books, and there is no catalog of existing reading lists.

Objectives

The objectives of this project were to review, organize, and disseminate recommended reading for psychiatry patients and their families. The first step was to review the medical research literature for evidence for bibliotherapy, review clinical guidelines for references to recommended reading, and scan for existing patient reading lists. The next step was to review available books, organize and catalog them, and publish this catalog on a public website.

Methods

A systematic review of the medical research literature was undertaken to answer the topic question: What is the evidence for bibliotherapy for psychiatric disorders? Databases searched included all UBC Library indexes, databases, and articles, including Medline (Ovid), PubMed, and Google Scholar. Medical Subject Heading (MeSH) terms used were bibliotherapy, psychiatry, depression, anxiety, bipolar, schizophrenia, psychosis, personality disorders, borderline, dementia, and eating disorders. Systematic reviews and meta-analyses were favored. Twenty-two articles were reviewed.

Next, clinical guidelines were reviewed for references to bibliotherapy. These included the Canadian Network for Mood and Anxiety Treatments (CANMAT) 2016 depression guidelines; the CANMAT and International Society for Bipolar Disorders 2018 guidelines for the management of patients with bipolar disorder; Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress, and obsessive-compulsive disorders (2014); the Canadian schizophrenia guidelines (2017); the American Psychiatric Association clinical practice guidelines; and the National Institute for Health and Care Excellence guidelines.

A search was then undertaken for existing recommended reading lists for psychiatric patients. First, widely known groups were scanned, such as the Canadian Psychiatric Association, the Centre for Addiction and Mental Health, the Canadian Mental Health Association, the Mood Disorders Society of Canada, the Schizophrenia Society of Canada, the American Psychiatric Association, the National Institute of Mental Health, and the American Academy of Child and Adolescent Psychiatry. Then a Google search was used to determine what recommended reading lists existed for psychiatric patients. Search terms used

were bibliotherapy, recommended reading, books, psychiatry, mental illness, depression, anxiety, bipolar, schizophrenia, psychosis, personality disorders, borderline, dementia, and eating disorders. Inclusion criteria required that the lists be in English; be produced by professional organizations or programs, patient advocacy groups, literary or library programs, or mental health clinicians; and have no apparent conflict of interest in the recommendations (e.g., lists by booksellers).

Books with multiple recommendations were reviewed, and a decision was made to accept or reject each book for the catalog. For books where there was uncertainty regarding suitability, another search of the medical literature with the MeSH term of the book title was undertaken for further information. Selected books were organized by illness, audience, genre, and category of evidence. The number of books in each category was limited to a maximum of six.

To disseminate the resulting catalog, the domain bibliotherapy.ca was purchased. A website was built using the Squarespace platform. The final collection of accepted books was published on the public website, named Pacific Bibliotherapy.

Results

Most robust research studies on bibliotherapy have focused on its efficacy in unipolar mild to moderate depression. A 1997 meta-analysis by Cuijpers and colleagues reported a mean effect size of 0.82 (95% CI, 0.50-1.15) for six studies comparing cognitive-behavioral therapy (CBT) bibliotherapy patients with wait list controls. Analysis of five contrast groups comparing bibliotherapy to individual therapy resulted in an effect size of 0.10 (95% CI, -0.48 to 0.28), demonstrating that bibliotherapy is as effective as individual therapy for unipolar depression.⁶ Similarly, a 2004 meta-analysis of 17 studies of CBT bibliotherapy for depression reviewed by Gregory and colleagues yielded an effect size of 0.77 (95% CI, 0.61-0.94).7 Gualano and colleagues' 2017 systematic review of randomized clinical trials on the long-term effect of bibliotherapy in depression, looking at follow-up from 3 months to 3 years, concluded that bibliotherapy maintained its effect long term.8 Yuan and colleagues' 2018 meta-analysis of randomized clinical trials looking at the efficacy of bibliotherapy for depression and anxiety disorders in children and adolescents, including eight studies of 979 participants, concluded that bibliotherapy is significantly more effective than control conditions in reducing symptoms of depression or anxiety, with a standardized mean difference of -0.52 (95% CI, -0.89 to -0.15), although the evidence was more robust for depression than for anxiety.9

Of the guidelines reviewed, two referred to bibliotherapy. The CANMAT 2016 depression guidelines state:

"Overall, bibliotherapy has practical utility due to ease of use and low cost, may be useful for people waiting to be seen for clinical care, and remains a second-line treatment, either alone or as an adjunct to medication, ideally with clinician encouragement and monitoring."10

The Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress and obsessive-compulsive disorders (2014) state:

"[A] variety of self-directed or minimal intervention formats (e.g., bibliotherapy/ self-help books, or internet/computer-based programs with or without minimal therapist contact) have demonstrated significant improvements in anxiety symptoms."11

The Canadian guidelines state that for panic disorder and agoraphobia, bibliotherapy is "more effective than wait-list or relaxation controls, as effective as face-to-face CBT, and may be cost-effective options particularly for agoraphobic patients who are unwilling or unable to attend a clinic," and with regard to obsessive-compulsive disorder (OCD), "[b]ibliotherapy in the form of self-help manuals delivered to patients via email has demonstrated significantly greater improvements in OCD symptoms compared with wait-list control groups in two [randomized controlled trials]."11

A search for existing recommended reading lists for psychiatric patients yielded 35 reading lists, summarized in the **Table**.

TABLE. Sources for existing recommended reading lists for psychiatric patients.

Health
profes-
sional
organiz-
ations

Canadian

- BC Children's Hospital Kelty Mental Health Resource Centre
- Canadian ADHD Resource Alliance
- · School Mental Health Ontario
- · Toronto Public Health

International

- · American Academy of Child and Adolescent Psychiatry
- · Association for Behavioral and Cognitive Therapies
- · Children's Wisconsin
- **US Department of Veterans**

Patient advocacy groups

Canadian

- Centre for ADHD Awareness, Canada
- Ottawa Network for **Borderline Personality** Disorder

International

- · Alzheimer's Association
- · Anxiety and Depression Association of America
- · Australian BPD Foundation
- Bipolar UK
- · Child Mind Institute
- DailyCaring
- · International Bipolar Foundation
- National Alliance on Mental Illness
- **National Education Alliance** for Borderline Personality
- SANE Australia
- · Senior Link

Libraries and literary programs

- · Regina Public Library
- · Surrey Libraries
- · Toronto Public Library
- · Vancouver Public Library

International

- · Carnegie Library of Pittsburgh
- · New York Public Library
- · Read Yourself Well
- · Reading Well Books on Prescription
- · Reading Well for Children
- BookTrust

Expert opinion

International

- BookAuthority
- DBT-Linehan Board of Certification
- · MentalHealth.com

PREMISE

Eighty-four books with multiple recommendations were selected for review. After considering quality, appropriateness, availability, practicality, and duplication of material when compared with other books in the same category, 51 books were accepted for the catalog, and 33 were rejected. The selected books were published on www. bibliotherapy.ca under seven illness categories: depression and anxiety, bipolar illness, schizophrenia, borderline personality disorder, eating disorders, dementia, and child and adolescent mental health [Figure 1]. Each illness category was divided into nonfiction and creative reading recommendations. A brief review of each book and a list linking the evidence and/or the sources of the recommendations were included for each title [Figure 2].

A section summarizing the major bibliotherapy research studies and clinical guideline references was included on the website, as was a section on the history of bibliotherapy.

Discussion

Bibliotherapy has been in use for centuries. Meta-analyses have demonstrated a large effect size when bibliotherapy is used to treat unipolar mild to moderate depression, and this effect has been shown to be enduring. Bibliotherapy has also been shown to be effective in reducing symptoms of depression and anxiety in children. Current Canadian guidelines for the treatment of depression and anxiety recommend bibliotherapy. A scan of current resources yielded 35 existing recommended reading lists for a wide range of mental health issues. Until now, there has been no catalog of these efforts. This project reviewed and organized these reading recommendations and published them on a website.

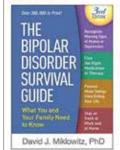
The website has limitations. There is a lag between a book being published, it being included on a recommended reading list, and that recommendation being reviewed and added to the website. Known resources for reading lists may add books not currently included on this website, and new resources may emerge that were not

Bibliotherapy

ANXIETY & DEPRESSION BIPOLAR SCHIZOPHRENIA BORDERLINE DENENTIA CHILDREN EATING DISORDERS

BIPOLAR DISORDER

NON-FICTION



Bipolar II

SECOND EDITION

Bipolar

Workbook

Monica Ramirez Basco, PhD

DISORDER

WORKBOOK

THE RIPOLAR DISORDER SURVIVAL GUIDE BY DAVID J. MIKLOWITZ, PHD

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RECOMMENDED BY

- International Ripolal Foundation
- Chaosing Thorsey

THE BIPOLAR II DISORDER WORKBOOK BY STEPHANIE ROBERTS ET AL



RECOMMENDED

- · Imenational Stocker Franchistor
- · Channing Therspy

THE BIPOLAR WORKBOOK: TOOLS FOR CONTROLLING YOUR MOOD SWINGS BY MONICA RAMIREZ

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RECOMMENDED BY

- Association for Sehwassesl and Cognitive Therapies
- Charles Therapy

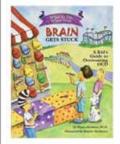
CREATIVE



AN UNQUIET MIND: A MEMOIR OF MOODS AND MADNESS BY KAY REDFIELD JAMISON

The thread was written by American critical preprotogets and reason/hel Dis Kay Redibad, Jameson and published in 1995. Jameson in Professor of Psychiatry and Co-Obscitor, Mood Disorders. Certiss, at Johns Hopkins University's School of Medicins. Her memoir charts her file from childhood in a milliony family, in her diagnosis of Display limens as a 26-year-old exvisions professor of psychiatry at UCLA, Prompt an sub-phood of energiating institutings, and career wells remited literate. She clearly like expeniences of himse and dispression, including a subcode attempt, and her relationships were stroom and with fear psychiatrial. This brains is honest, overeiting, and beautiful.

FIGURE 1. A screenshot of a portion of the bipolar category of the Pacific Bibliotherapy website, www.bibliotherapy.ca.



WHAT TO DO WHEN YOUR BRAIN GETS STUCK BY DAWN HUEBNER

where to be when their part owns such is Acces south to Create and the control of Assences street paychings cover receiver. The book guides children through oppositive behaviorated inchniques for branches or OCD, is not been registered CCD as a "invent corter" problem, where the brain has brought occuping which thoughts he seep and which to throw every. She guides the reset through identifying observable and computations, "alking back" as OCD, and factors for "shewing OCD which book" declarate response preventions. There are pages in the Book for writing and drawing exhibits. It is illustrated in black and white by Boronie Matthews. The Scots is interclad for children specific to U. years.

RECOMMENDED BY

- American Academy of Child & Addressent Psychiatry
- BC Children's Hospital Kirly Mercal Hospit
- Artistry & Depression Association of America

FIGURE 2. A screenshot of a book listing on the Pacific Bibliotherapy website, www.bibliotherapy.ca.

discovered on the initial scan. The website includes books on select topics but does not include books on other important subjects, such as substance use disorders or postpartum mental health, although more categories may be added in the future.

Bibliotherapy has its own limitations. Most of the evidence is for mild to moderate depression and anxiety and used CBT-based books. Exclusion criteria for most studies included comorbidities, as well as severe depression, cognitive issues, suicidality, and crisis situations.6 Risks of the patient using bibliotherapy without professional guidance include incorrect self-diagnosis (e.g., major depressive disorder versus bipolar illness)7 and experiencing failure when not finishing a book (e.g., phobias).6 However, when used judiciously, bibliotherapy can be a high-quality, low-barrier form of therapy. The website www.bibliotherapy.ca aims to make book prescriptions more accessible to clinicians and their patients.

Acknowledgments

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Competing interests None declared.

Meta-analyses have demonstrated a large effect size when bibliotherapy is used to treat unipolar mild to moderate depression, and this effect has been shown to be enduring.

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Screen time: A call for action

he next time you are in a public place, look around: chances are you will see a child, teen, or even a toddler looking at a screen. Perhaps their parents are as well. You have likely observed how frequently children walk into your clinic holding a screen in front of their faces. Maybe in your practice you are overwhelmed with the demand to manage an explosion of teens with depression, anxiety, self-harm, poor sleep, or disordered eating. Counseling families about the need for physical activity, sleep hygiene, and interpersonal interactions has become part of medical practice.

Screens are now ubiquitous in daily life, and their negative impact was accelerated during the isolation of the pandemic. However, in contrast to the rapid pandemic response, the crisis of screen time's negative impact on children is being addressed too slowly. Authorities including the Canadian Paediatric Society (CPS) and the Office of the Surgeon General are calling for action against the normalization of unregulated social media that are negatively affecting speech development, cognition, social-emotional development, attention, and physical health in young children and

Policy intervention is crucial. Although some opine that it is an individual's responsibility to formulate a family media plan, the surgeon general reminds us that "parents and their children, trying to figure it out on their own, [are] pitted against some of the best product engineers and most well-resourced companies in the world."1

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The CPS reminds us that the safe amount of screen time for children under 2 years of age is 0 hours per day. Any exposure to an activity or substance that has been demonstrated to reduce a child's ability to think, learn, and communicate should be reacted to urgently.

The surgeon general calls the mental health crisis among young people an emergency. The CPS states: "We are in the midst

of a youth mental health crisis that demands meaningful and conscientious mitigation measures."2 Research shows that face-to-face interactions among teens have declined sharply since the advent of smartphones. The CMAJ highlights the clear impact of social

media in causing an "increase in mental distress, self-injurious behaviour and suicidality among youth; there is a dose-response relationship, and the effects appear to be greatest among girls."3

Social media use exposes youth to cyberbullying and exploitation, including sextortion, negatively affecting self-view and relationships. High social media use and media multitasking are related to chronic sleep deprivation, harming cognitive control, academics, and social-emotional functioning. The rise of smartphones has drastically reduced how much children and teens see each other and talk to each other, which is detrimental—potentially catastrophic—for their well-being.

What can we do?

Start education about the effects of screen time on the brains of infants, children, and youth at prenatal visits, and give it the same importance as discussions about breastfeeding, plans for birth control, vaccines, dental

health, and other anticipatory health topics.

Include information, guidelines, and warnings about screen time—specifying that the right amount of screen time before age 2 is 0 hours per day—both with postnatal discharge material and at every public health visit.

Equip parents with knowledge about social, developmental, mental, and physical health effects of screen time, gaming,

> and social media early and often, and provide accessible and equitable resources on the importance of face-to-face time with others and the importance of media-free times and spaces.

Start educating children and youth early in school with a curricu-

lum on the effects of screen time, social media, and gaming on their brain health, and empower them as their own health advocates.

Support public funding, grants, and innovations for free and low-cost activities and parent coaching in safe public spaces that encourage face-to-face time and development of literacy and social skills. ■

- —Jennifer Balfour, MD, FRCPC
- —Aven Poynter, MD, FRCPC

Members, Council on Health Promotion

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activity or substance that

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Syphilis: Overview for BC health care providers and online course

yphilis is a sexually transmitted infection caused by the spirochete bacterium Treponema pallidum. Its natural history is well described in medical literature and typically includes primary, secondary, and latent stages. If left untreated, syphilis can lead to serious complications in multiple organ systems. Syphilis can also be transmitted vertically at any time during pregnancy or delivery and may lead to miscarriage, stillbirth, or complications in infants due to congenital syphilis infection.

Cases of infectious syphilis are on the rise in BC. In 2012, BC saw 369 cases (8.1 per 100 000). In the 4-year period from 2018 to 2022, rates of infectious syphilis increased 98%: from 932 cases (18.6 per 100 000) to 1971 cases (36.8 per 100 000).1

While gay, bisexual, and other men who have sex with men represented the majority of reported infectious syphilis cases over the past decade, the epidemiology is changing. This change is reflected in the sharp rise in the number and proportion of cases among heterosexual populations, most evidently seen among women.

Infectious syphilis cases among women increased 938% between 2018 (53 cases) and 2022 (550 cases).1 In 2022, over 90% of women with infectious syphilis were of childbearing age (i.e., 15-49 years old), thus raising concern about congenital syphilis.^{1,2} BC reported no congenital cases from 2014 to 2018. However, between 2019 and 2022, 29 congenital syphilis cases were reported: 15 early congenital probable, 11 early congenital confirmed, and 3 late congenital confirmed.1,3

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

Syphilis overview course

In 2019, the Provincial Health Officer declared an outbreak of syphilis in the province.4 Subsequently, the syphilis team at BCCDC (composed of doctors, nurse practitioners, certified practice registered nurses, and educators) noted a significant uptick in the number of requests for support and education among providers, who were seeing the epidemiological trends reflected in their practices. In response, and to provide equitable access to information and education, the team developed a self-directed online course to support providers involved in the case management and follow-up of syphilis cases and their contacts.

The Overview of Syphilis for Health Care Providers in BC online course is broken into three modules and a tool kit:

- Module 1: Introduction to Syphilis. Reviews the impact of syphilis on public health in Canada and BC, as well as the etiology, transmission, and clinical presentation.
- Module 2: Testing Screening and Diagnostic Tests. Reviews available screening and diagnostic tests (serological and lesion specific) that enable the correct diagnosis and staging.
- Module 3: Case Management. Reviews the diagnosis and case management process.
- Tool kit. Offers additional resources and tools for providers who want to increase their knowledge and capacity to provide effective, strengths-based, person-led sexual health communication.

The course is available on the Provincial Health Services Authority Learning Hub. 5 It takes approximately 2 hours to complete and is accredited by the Division of Continuing Professional Development, University of British Columbia Faculty of Medicine, for up to 2.0 Mainpro+/MOC Section 3 credits.

In BC, syphilis is centrally managed at the BCCDC. For information about syphilis screening, case management, or follow-up, contact the BCCDC public health nurse at 604 707-5607 or physician at 604 707-5610. For the most current syphilis surveillance reports, refer to the BCCDC Sexually Transmitted and Blood Borne Infection (STBBI) and Tuberculosis (TB) Report dashboard.² For further information about the syphilis overview course, contact sticourse@bccdc.ca. ■

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



Dr Harry Senges 1940-2024

Dr Harry Senges of Vancouver, BC, passed away peacefully at Burnaby Hospital on 9 July 2024. This was the hospital where he had spent his 32-year career as a pathologist and director of laboratories.

Harry was born in a small German village in Ukraine on 22 December 1940, to Meta and Jonathan Senges. As World War II progressed, the family made the harrowing journey back to Germany and then to Canada, arriving in Vancouver in May 1951.

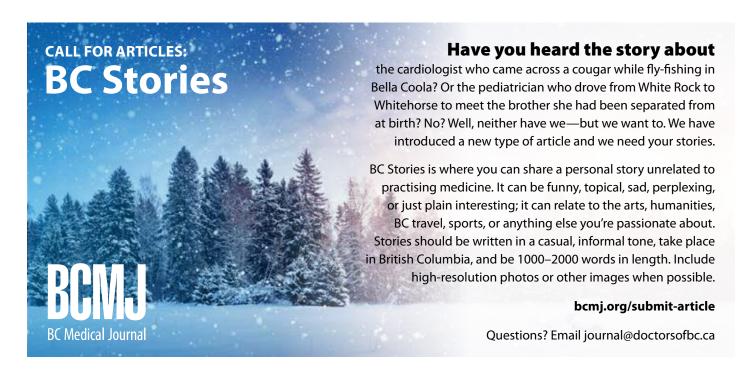
After graduating from high school, Harry earned a bachelor of arts degree in English and history at the University of British Columbia in 1963, and then an MD degree from UBC in 1967. After a year-long internship in California, Harry returned to Vancouver General Hospital to complete a fellowship in pathology in 1972. In January 1973, he began his 32-year career at Burnaby Hospital, retiring in 2024. Those were years of quality laboratory services,

hospital expansion, and wonderful colleagues and staff.

Harry was a man of deep faith. He loved people; he was a man of kindness, integrity, generosity, and compassion. His family remembers his interest in world affairs, history, travel, gardening, church activities, and music. Harry struggled with polycythemia for 20 years and was very grateful for all the medical care he received.

He will be missed by his wife, Heather; two daughters, Christine and Kathy (Dr Daniel Holmes); 11 dearly loved grandchildren and partners; and many extended family and friends.

—Senges Family



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RICHMOND—MEDICAL OFFICE FOR SALE

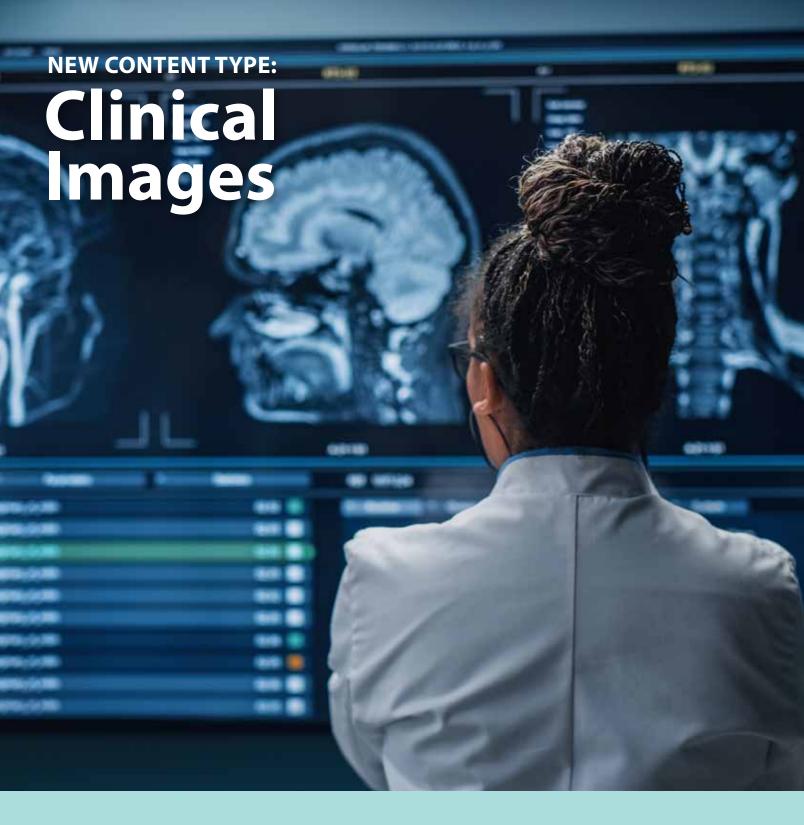
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