UBCMJ
Spring 2016
Volume 7, Issue 2
www.ubcmj.com

Social pediatrics and inter-professional practices at UBC
Dr. Christine Loock et al.

Prison health: Interview with Dr. Ruth Martin
Clara Tsui

At ease in the Downtown Eastside: One family physician's perspective
Dr. Steven Yau

Marginalized Populations

ISSN 1920-7425 (Print)
ISSN 1920-7417 (Online)

a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

The University of British Columbia Medical Journal (UBCMJ) is a peer-reviewed, student-run academic journal with the goal of engaging students in medical dialogue and contributing meaningful discourse to the scientific community.

on the cover

Beyond the Privilege Tree

Marginalized populations include those whose members are frequently excluded from, or underserved by, mainstream society. In this artwork, the brightly coloured tree is an abstract representation of the societal privileges that shelter individuals in mainstream society, to the exclusion of those who sit beyond the boundaries of its leaves and branches. The faces of marginalized individuals remain hidden from view in the imagery, emphasizing the need for greater recognition and support of these vulnerable, and often overlooked, populations.

Phoebe Cheng, M.D. Student 2018,
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UBCMJ

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Marginalization in health care

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The United Nations' Millennium Development Goals were celebrated as a groundbreaking achievement in identifying—and initiating the process of reversing—some of the world's most dire problems.[1] Fifteen years later, the United Nations is focusing its attention on the Sustainable Development Goals (SDGs), which includes health as one of the 17 core targets having "critical importance for humanity and the planet".[1] The health agenda of the SDGs brings issues of health inequity to the forefront of public attention by declaring health as a prerequisite for personal and societal development.[1] Although the importance of levelling health inequities may be evident from a global perspective, identifying and reversing these inequities is equally important on a national level. In the Canadian context, certain sub–populations face a disproportionately high burden of health inequities compared with the general population, which limits the ability of these populations to achieve full potential in life.[2] While the underlying causes of health marginalization are complex, engaging in dialogue around the nature of marginalization and possible solutions may stimulate the creation of an equal and healthy population.

Healthcare providers play an integral role in identifying and meeting the unique health needs of marginalized populations; therefore, it is important to understand what it means to be marginalized by the healthcare system. Health Canada defines underserved individuals as having "increased likelihood [to] experience difficulties in obtaining needed care, receive less care or a lower standard of care, experience different treatment by healthcare providers, receive treatment that does not adequately meet their needs, or be less satisfied with healthcare services than the general population".[2] With such a diverse population, it is difficult to define which groups are marginalized in Canada. Generally, those at risk exist on the boundaries of the mainstream population, from a geographical or societal perspective.[3] These can include those without shelter in rural or urban centres, those living in remote parts of the country, families of lower socioeconomic status, disabled persons, recent immigrants and refugees, Indigenous populations, and seniors. Adequately identifying and gaining access to vulnerable communities are essential steps for the health system in order to recognize and address their unique health needs.

The personal and societal factors that subject a person or population to health marginalization is equally complex. McMaster University's Collaboratory for Research on Urban Neighbourhoods, Community Health and Housing (CRUNCH) is a multidisciplinary team of researchers and facilities that seeks to explore various factors affecting the health of populations.[4] Their Canadian Marginalization Index, known as CAN-Marg, tracks geographical and temporal changes in marginalization in order to assess the needs of sub–populations and orchestrate appropriate healthcare interventions.[4] The index is founded on four dimensions that capture the principal determinants of health marginalization: residential instability, material deprivation, ethnic concentration, and dependency.[4] Residential instability is a measure of the consistency in a person's living situation, including location, type of residence, and residential partners.[4] Material deprivation encompasses both material wealth and level of education.[4] Ethnic concentration summarizes the proportion of members of a population who are either recent immigrants or visible minorities, while dependency refers to the proportion of persons who do not participate in the labour force.[4] The CAN-Marg index has been shown to correlate with health outcomes,[4] and therefore these four dimensions provide a good overview of the factors influencing health marginalization.

The scope of articles in this issue of the UBCMJ highlights many potential barriers to receiving adequate care, both unique and common, faced by marginalized populations around the world, but especially in Canada. Our feature articles include an opinion piece by Dr. Stephen Yau, MD, CCFP, focusing on health care in Vancouver's Downtown Eastside, an interview discussing prison health with Dr. Ruth Martin, MD, FCFP, MPH, and a piece on vulnerability and child development by Dr. Christine Loock, MD, FRCPC. Student authors discuss transgender Canadian health (Jones), refugee and immigrant health (Lake), mental health and substance use (Rheaume), as well as contents in the medical curricula that address the needs of marginalized populations (Jutras). This issue also includes an interview with a physician focusing on elder health (Ip, Madden) and an interview with the Director of Clinical Education at the BC Centre of Excellence HIV/AIDS that reviews the HIV situation in Canada (Galts). Research shows that access to care alters the health of a population.[3] Thus, it is vital for healthcare professionals, researchers, policymakers, and other stakeholders to work together to identify and reduce barriers faced by patients in accessing adequate and appropriate care.

disclosures

The authors do not have any conflicts of interest.

references

1. United Nations. Transforming our world: the 2030 agenda for sustainable development. United Nations, The General Assembly; 2015 Oct 21. Cat. No.: A/RES/70/1.
2. Health Canada. 'Certain circumstances': issues in equity and responsiveness in access to health care in Canada. Ottawa: Health Canada; 2001. 256 p. Cat. No.: H39-618/2002E.
3. Hay D, Varga-Toth J, Hines E. Frontline health care in Canada: Innovations in delivering services to vulnerable populations. Ottawa: Canadian Policy Research Networks; 2006 Sep. 106 p. Research Report F|63.
4. Matheson FI, Dunn JR, Smith KLW, Moineddin R, Glazier RH. CAN-Marg Canadian Marginalization Index: User guide version 1.0. Toronto: Centre for Research on Inner City Health; 2012. 11 p.

Prison health: Interview with Dr. Ruth Martin

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Ruth Elwood Martin (pictured here) is a Clinical Professor with the UBC School of Population and Public Health, and an Associate Faculty with the UBC Department of Family Practice. Ruth worked as a Vancouver family physician for over 25 years, and part-time as a prison physician for 17 of these years. She is the Chair of the Prison Health Program Committee, College of Family Physicians of Canada; and, the Inaugural Director of the Collaborating Centre for Prison Health and Education (CCPHE). Her current research includes community-based, participatory health research and preventive health projects that engage both individuals who are in custody and also individuals with incarceration experience who are now living in the community. She is a Site Lead faculty with the FLEX Foundations of Scholarship, UBC Undergraduate Medical Program. She was Lead Research Faculty for the UBC family medicine residency program (1999-2015) and a Course Director for Doctor Patient and Society 410 (2011-2015).

Clara Tsui graduated from UBC with a Bachelors of Science (Hons) in Physiology and is currently studying medicine at UBC as part of the Vancouver Fraser Medical Program, Class of 2017.

Every year from 2006 to 2009, approximately 37,000 individuals were admitted to federal and provincial correctional systems in British Columbia.[1] Ten percent of those admitted were women, many of whom are incarcerated for crimes associated with substance abuse. In addition to a higher prevalence of blood–borne diseases, the estimates for comorbid psychiatric illnesses were as high as 80% in this population.[2] These numbers reflect significant difficulties for healthcare within a prison setting. Although an in–depth discussion of this topic would take years of study, I was fortunate to interview Dr. Ruth Martin of UBC's Faculty of Medicine for a brief overview of prison health.

What is your background and how did you come to specialize in prison health?

Dr. Martin worked as a GP in Vancouver in a thriving private practice. Prison health is not a formal "specialty" and she came upon it by chance: "I had been looking for something different and I got the opportunity to work a shift at the Burnaby Corrections Facility for Women, and I was hooked: it was compelling, meaningful work." Dr. Martin practiced in BC prisons for 17 years, where she provided much–needed access to quality care: "The women are motivated to get healthy, have deep gratitude for the care given, and the medicine in a prison setting is inherently challenging, with a variety of diagnoses and circumstances."

What are the biggest health impacts of institutionalization on incarcerated individuals?

"There are differences in health impacts depending on the length of the sentence," Dr. Martin says. "With shorter sentences, you see more acute, life–threatening medical issues like substance withdrawal. In longer sentences—that is, greater than 2 years—the issues escalate […] they become more complicated and chronic." These issues tie into a multifaceted, complex diagnosis that is both medical and social. "There are fascinating diseases you would rarely see anywhere else, like tertiary syphilis or invasive cervical cancer. What also emerge are the social determinants of health and circumstantiality behind each medical condition. There is a higher prevalence of, for example, traumatic childhoods and lower socioeconomic status [in the incarcerated population]."

Dr. Martin also highlights the dual effects of incarceration. "It's yin–and–yang," she says. "In a way, prison saved them by lifting them out of their life situation... providing clothing, a roof over their heads, a routine. However, the ethos of prison is the restriction of freedom and personal choice…and this reinforces a pattern of increasing institutionalization." It becomes a vicious cycle of re–traumatization and isolation.

"Incarcerated individuals begin as individuals at–risk, and as stresses and insults accumulate, substance use becomes a coping mechanism. Once incarcerated over a longer period of time, the combination of a lack of substances and coping mechanisms breeds a constellation of repeated nightmares, flashbacks, and insomnia," explains Dr. Martin. This 'new' post–traumatic stress disorder, against a backdrop of possible pre–existing developmental, interpersonal, and other undiagnosed psychiatric symptoms, eventually leads to altercations with correctional officers and other incarcerated individuals. [3, paraphrasing from Dr. Martin] This leads to Dr. Martin's next major point:

segregation and its misuse. "The biggest mantra in prison is that security is the focus," she says. "Isolation is used as a form of control." The adverse effects of seclusion on individuals, such as suicide and worsening of mental health, have been well documented.[4] Solitary confinement in individuals with mental illness perpetuates this cycle. As Dr. Martin puts it, "Rather than building on their strengths and giving them new coping skills, this type of punishment has the greatest health impact of all."

What are the resources available to them, and how are they distributed?

The short answer, not surprisingly, is that resources are scarce. B.C. prisons are either provincially or federally funded; however, the distribution of available resources depends on the management team, which is headed by the prison warden. "It depends on the warden," Dr. Martin says, "to bring down the walls of the prison [so that] the community comes in." Support from the community comes in many forms: "Public health nurses, education, training for future employment, counselors, religious services […] all sorts of things—things that rehabilitate [the women], as opposed to locking them up in a cell. These resources help build self–esteem." Unfortunately, connecting with the community is not easy.

What are some structural and systemic barriers that you have faced to ensure optimal care as a physician working in a prison? How did you overcome those barriers?

As discussed, management itself can be a barrier. "The wardens themselves need to have a vision," Dr. Martin says. Furthermore, the healthcare in B.C. prisons is contracted to a private company under the Ministry of Justice; this places restrictions on the system and leaves little room for optimal healthcare. "There are never two doctors in the prison at the same time," says Dr. Martin, "so you can imagine continuity of care is a challenge and communication is key." For an incarcerated individual to see a doctor, she would have to convince the head nurse, who would then find room in the schedule, but it would often be with a different doctor. What about if a patient needed a referral to see a specialist? "I would have to convince the head nurse, who then convinces security, who then convinces the CO [Corrections Officer], who then has to set up an escort and a ride."

How did you overcome those barriers?

Dr. Martin reiterates her dedication to prison health and her passion for research in the field. "You have to ask questions," she says. "[First] describe the situation and then look for ways to improve it." This is exactly what Dr. Martin did. Besides journal articles, some of her findings have been published, together with anecdotes from former incarcerated individuals, in her book Arresting Hope. She also finds teaching helpful: "By promoting prison health among students and getting students involved… [it's] a way of creating that symbiotic relationship between academia and prison health." She also uses the WHO Health in Prisons project as inspiration. Here, a network of prison representatives from 30 European countries exchanged their experiences for more than a decade and created a guide to help make prisons a healthier place for the incarcerated, as well as the staff.[5] In a similar fashion, Dr. Martin organizes monthly telephone conferences to connect with BC physicians as a way of enhancing awareness and sharing evidence to effect change.

What are some potential strategies to mitigate and/or remove those barriers, and what can medical professionals do to change things for the future?

"Organize and network," Dr. Martin says. She calls for the creation of a "tool kit of best practice, while improving the profile of prison health by increasing interest." She references prison healthcare in Alberta as a feasible way forward. The Ministry of Justice runs the prison system in Alberta, but the Ministry of Health runs healthcare in prison. "That is something very interesting and promising in terms of what we could see happen in BC."

Incarcerated individuals are marginalized in every sense—physically, socially, culturally, financially, and even in terms of their self and identity. Dr. Martin emphasized to me the importance of words as labels in prison health: for example, the use of the word "inmate" in the provincial system, and "offender" in the federal system. In her practice, she chooses to use "incarcerated individual." The different nuances of these words emphasize the depersonalization that incarceration imposes.

"Prison health is population health," Dr. Martin says. "By giving the best possible care, and achieving [healthcare] equity, we are really helping the population at large because incarcerated individuals will rejoin the community." By providing the right opportunities to change prison from a punitive measure to a therapeutic environment, we are helping not only the marginalized incarcerated, but pushing for a better future for everyone.

disclosures

The author and Dr. Martin do not have any conflicts of interest.

references

1. Statistics Canada. Adult correctional services, admissions to provincial, territorial, and federal programs (British Columbia) [Internet]. 2012 Oct 30 [cited 2015 Oct 10]. Available from: http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/legal30l-eng.htm
2. Martin RE, Buxton JA, Smith M, Hislop TG. The scope of the problem: The health of incarcerated women in BC. B C Med J. 2012 Dec;54(10):502 8.
3. Collins J, Bailey SL. Traumatic stress disorder and violent behavior. J Trauma Stress. 1990 Apr;3(2):203 20.
4. MacDonald N, Hucker S, Hebert PC. The crime of mental illness. CMAJ. 2010 Sep;182(13):1399.
5. Moller L, Stover H, Jurgens R, Gatherer A, Nikogosian H (editors). Health in prisons: A WHO guide to the essentials in prison health. Copenhagen: WHO Regional Office Publications; 2007. 179 p.

Interview with Dr. Ruth Martin over telephone, conducted on October 11, 2015.

Linking in and linking across using a RICHER model: Social pediatrics and inter-professional practices at UBC

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Christine Loock MD, FRCPC, (shown here with her team) is a developmental pediatrician at Children's and Women's Health Centre of British Columbia, including Sunny Hill Health Centre for Children and BC Children's Hospital where she is medical director of the Cleft Palate/ Craniofacial Program and specialist lead for the Social Pediatrics RICHER Program. A distinguished teacher and clinical researcher, she is an Associate Professor in the Department of Pediatrics, Faculty of Medicine, University of British Columbia (UBC). Early in her medical training at Harvard and the University of Washington, she developed an interest in 'Social Pediatrics'. Her earlier clinical and research work focused on children and youth with congenital conditions and developmental disorders, including Fetal Alcohol Spectrum Disorders (FASD) and birth defects prevention. She has been a board member on the Canadian Centre on Substance Abuse and co-author of the Canadian National Guidelines for Diagnosis of Fetal Alcohol Spectrum Disorders. Over the past decade she has been engaged in collaborative interdisciplinary research to practice partnerships with [Lynam et al] UBC School of Nursing to develop innovative and effective 'RICHER' health service delivery models for socially vulnerable children and families in Canada. Dr. Loock is a recipient of the 2012 Queen' Diamond Jubiilee Medal for community service awarded by the Governor General of Canada.

Back row left: Eva Moore, Judy Lynam, Chris Loock, Kristina Pikksalu, Lorine Scott, Clea Bland, Tamera Stilwell, Jane Hailey, Natasha ProdanBhalla, Gwyn McIntosh, Tram Nguyen. Front left: Shazeen Suleman, Denise Hanson, Joan McNeil, Curren Warf, Dzung Vo. Not pictured; Ashley Roberts, Mia Remington, Kelly Luu, Kelley Zwicker, Grace Yu, Myles Blank, Wingfield Rehmus, Warda Toma, Janet Greenman, Parveen Johal, Val Liao, Jaclyn Pennington, Vivian Nawrocki, Koushambhi Khan, Sabrina Wong, and Ingrid Tyler.

In 1991, the Canadian government vowed to eradicate child poverty by the year 2000. More than 20 years later, over 20% of children in Canada remain in poverty and conditions have deteriorated for children in the most vulnerable communities.[1] British Columbia has the highest child poverty rate in Canada, with Vancouver's Downtown Eastside (DTES) being one of Canada's most at–risk and poorest neighbourhoods.[2] There are no shortages of community organizations in the DTES—the Vancouver Sun reports over 260 agencies. Yet, the contributions of poverty and socio–economic conditions to health remain more significant than genetics or environment alone, as shown in Figure 1.[3,4]

Social and material poverty, and other adverse childhood experiences (ACEs) have been shown in many studies to be associated with poor neurodevelopmental and physical health outcomes.[5,6] Living on the social margins not only limits children's access to supports, it can also prompt them to question their social value and disrupt their sense of promise for a future.[7] Moreover, population studies have shown that the impact of adversities are cumulative over the life course.[8,9]

However, early investments in children's health and education have been shown to benefit children and society. Fostering connectedness and creating enduring social relationships have been shown to be protective against such forms of adversity as highlighted in Emmy Werner's pioneering longitudinal study of Kauai's children.[10] Additionally, James Heckman, a Nobel prize laureate for economics, has shown that the estimated rate of return on investment for early childhood education is as high as 16%, which highlights the economic advantage of investing in vulnerable children.[11]

the RICHER model

Envisioned in 2006, the RICHER initiative (Responsive, Interdisciplinary, Intersectoral Child and Community Health Education and Research) developed as a collaborative partnership among interdisciplinary primary health care providers, including nurse practitioners, public health, family and specialist physicians, researchers, and community partners, to build evidence–based services for socially–isolated, marginalized, and materially–disenfranchised families in the DTES. RICHER serves an inner–city population of approximately 4000 children that includes new immigrants and Indigenous families, many of whom have experienced significant trauma, the effects of which can be profound for adults and children alike.

In the 2007-8 academic year, over two-thirds of children in the DTES neighbourhoods

of focus were developmentally vulnerable at school entry, among the highest in the province.[12] And while the current rates of vulnerability remain over 50%, with the implementation of RICHER and other community–driven, 'place–based' strategies, there has been a 'critical difference' in vulnerability, with a decrease of almost 20%.[12] RICHER's interdisciplinary research–to–practice model has been recognized internationally for developing an effective health service delivery model that links into services and across sectors for socially vulnerable children and families. The key values and organizational features of RICHER, as outlined in Figure 2, are discussed below.[13]

intersectoral service integration

Primary care providers and pediatric specialists provide direct health care to children and their families through scheduled consultations with individual families. At a community level, child development screening is performed in partner daycares. There is a kindergarten readiness screening program, initiated in 2014, which operates in partnership between the Vancouver School Board and Vancouver Coastal [Public] Health Authority. RICHER continues to grow along with a number of partnerships. It now offers access to a multitude of youth health services and dental services, and works to build the community infrastructure to create access to developmentally appropriate environments.

The needs of families and children drive the RICHER priorities. As a program of BC Children's & Women's Hospitals, RICHER partnerships have created access to public health, mental health, parent education and support programs, child care programs, legal services, and more. Most importantly, these services are distributed in neighbourhood spaces. Providers work in, and in partnerships with, schools, daycares, and community centres, including two evenings per week.

In 2015, RICHER moved into a townhouse in a public housing complex in the DTES. The townhouse was converted into examination rooms for children and youth, obstetrics and mental health, and includes a community kitchen and resource centre. With this move, RICHER has become a permanent part of the community fabric by being a literal "next–door neighbor" to families. RICHER members are invited to partner with local daycares, community centres, parent groups, and other community agencies to ensure culturally and developmentally appropriate supports for children, youth, and their families. By breaking down invisible barriers of power, culture, and location, and promoting care centered on relationships with families, children, and youth, the clinicians have effectively recognized and benefitted from the community's expertise.[13]

horizontal leadership

There is no one lead for the RICHER model as governance is horizontal.[14] Every professional engaged in the RICHER initiative is accountable to their colleagues and to the families to foster responsiveness and respect, while maintaining high–quality services. RICHER values many different forms of expertise, as evidenced by the diversity of perspectives represented at their weekly community round–table discussions. Health care professionals and researchers learn from community members, who share their experience of living in poverty, and from elders, who provide insight into the social impact of residential schools. In the RICHER model, each voice is welcomed, acknowledged, and respected.

engaging and brokering community trust

RICHER's roots run deep and are embedded within pioneering partnerships with the Vancouver [Coastal] Health Department in research, policy, and primary health care service delivery. Early relationships forged with the community in the early 90's with school and street nurses and not–for–profit agencies, such as YWCA Crabtree Corner, Vancouver Native Health, and RayCam Community Cooperative, have led to the development of an innovative hospital community partnership with Children's & Women's Hospital and UBC. In these early years, the shared goal was to prevent adverse pregnancy outcomes (e.g. low birth weights, fetal alcohol syndrome, and neonatal abstinence syndrome) and the "separation of the mother–baby pair".[15] The Sheway Program (1993), YWCA Crabtree (1985) and Cause We Care Housing (opening 2016), and the "Our Place" Graduation strategy from the RayCam/NICCSS Networks are examples of interdisciplinary and intersectoral programs that have developed through community engagement and relationship building. By drawing on the expertise of several community champions, these connections have helped to broker trust.[16] Prerequisites for successful engagement include nurturing longstanding relationships, spending time knowing, listening and understanding, and not parachuting into a community.[17]

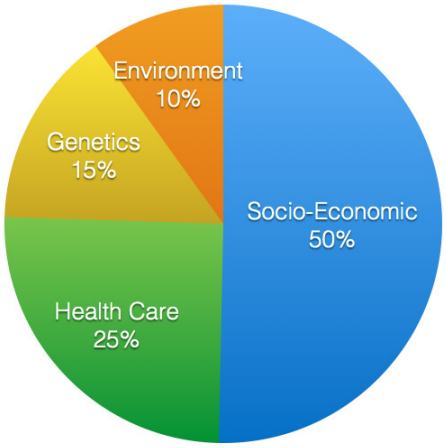

Figure 1: Determinants of health and their relative contributions to health.[4]

creating inter-professional practice and training

RICHER has also developed into an inter-professional clinical training site for public health, social work, medical, nursing, and law students. Rooted in service learning, students gain an understanding and appreciation for the impact of the social determinants of health on children, youth, and families. More importantly, they learn first–hand the benefit of working across sectors in partnership. UBC nursing and medical students and pediatric residents are sponsored to engage in weekly activities in the inner–city community daycares as part

Figure 2: Linking in and linking across: Key values of the RICHER model[13, 17, 20]

1. Committing to health equity, through relationship-centered care and intersectoral service integration
2. Promoting horizontal leadership, sharing power and status
3. Engaging and brokering trust with community citizens
4. Creating inter-professional practice and training opportunities
5. Empowering families and community members through advocacy and alliance and a commitment to activating systems to be responsive

of their exposure to child development and advocacy. The MusicBox Children's Charity of Canada is in its seventh year of sponsoring a community service learning option for second year medical students through required longitudinal courses emphasizing the bio–psychosocial model of care. This project combined MusicBox strategies to engage preschool–aged children who would otherwise have limited access to early music experiences with earlier developmental screening.

empowering community through advocacy

Drawing on partnerships, RICHER has advocated within formal sectors to mobilize essential resources as needs have been identified. An overriding goal is to foster care that is responsive at the individual level and at the organizational level: a goal that is accomplished by ongoing dialogue with community partners and by working to ensure the perspectives of the community members are considered as plans are made. Key examples include work with Vancouver Coastal Health and BC Ministry of Education to screen for kindergarten readiness based on UBC's Human Early Learning Partnership (HELP) data and to improve graduation rates for inner–city Aboriginal youth through the inner–city 'Graduation Strategy'.[12] These initiatives directly support several highly publicized provincial reports, reviews, and investigations of the BC Representative for Children and Youth,[18] RICHER team members currently hold numerous leadership roles (e.g. Children and Youth with Special Needs, Circle of the Child and the Youth Matters Forum) to address improved services and case management for higher–risk children in care and youth in transition. They also partner with key community agencies, emergency room services, mental health and social work services (i.e. BC Ministry for Child and Family Development (MCFD) and Child and Youth Mental Health Services), and municipal police. Encouraging community initiated programs, such as NASKARZ ['Never Again Steal Cars'], exemplify the effectiveness of respectful and enduring partnerships across sectors with target populations to enhance their social capital.[19] Advocacy is about 'working with' and not just 'working for.'

research: measuring the impact of RICHER

We have knowledge of conditions that can mitigate the impact of social and material adversities and we have sought to harness these in the RICHER approach. The participatory approach used in our research enabled us to capture the key structural features and characteristics of RICHER's clinical engagement.[20] Our research has demonstrated that this model fosters access to quality primary health care for this vulnerable population.[14] Our research has also demonstrated characteristics of the patient–provider relationship associated with an outcome measure of parental empowerment which is characterized by improved knowledge and the capacity to activate systems, as well as manage child and youth health conditions.[13,14,20] Population research through UBC's Human Early Learning Partnership (HELP) continues to capture significant improvements in child developmental vulnerability in DTES neighbourhoods. In other words, RICHER has been a good investment. By investing in children and youth, we have the opportunity to improve the health of the entire population.

"It is better to build strong children than repair broken men." – Frederick Douglass

disclosures

The authors do not have any conflicts of interest to disclose.

references

1. UNICEF. Children of the recession: The impact of the economic crisis on child well–being in rich countries, Innocenti Report Card 12 [Internet]. Florence: UNICEF Office of Research; 2014 Sep [cited 2015 Nov 7]. Available from: http://www.unicef-irc.org/publications/pdf/rc12-eng-web.pdf
2. First Call: BC Child and Youth Advocacy Coalition. British Columbia 2014 Child Poverty Report Card [Internet]. Vancouver: First Call: BC Child and Youth Advocacy Coalitition; 2014 Nov [cited 2015 Nov 7]. Available from: http://still1in5.ca/wp-content/uploads/2014/11/First-Call-Coalition-Report-Card-2014-FINAL-WEB.pdf
3. Culbert L, McMartin P. Downtown Eastside: 260 agencies, housing sites crowd Downtown Eastside. Vancouver Sun. [Internet]. 2014 Jun 27. [cited 2015 Nov 7]. Available from: http://www.vancouversun.com/health/Downtown+Eastside+agencies+housing+sites+crowd+Downtown+Eastside+with+video/9983274/story.html
4. Marmot M, Allen J. Social Determinants of Health Equity. *A J Public Health*. 2014 Sep;104(S4):S517-9.
5. Luby J, Belden A, Botteron K, Marrus N, Harms MP, Babb C, et al. The effects of poverty on childhood brain development. *JAMA Pediatr.* 2013 Dec;167(12):1135 42.
6. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP, Marks JS. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) study. *Am J Prev Med.* 1998 May;14(4): 245-58.
7. Lynam MJ, Cowley S. Understanding marginalization as a social determinant of health. *Crit Public Health*. 2007 Jun;17(2):137 49.
8. Power C, Hertzman C, Matthews S, Manor O. Social differences in health: Life-cycle effects between ages 23 & 33 in the 1958 British birth cohort. *A J of Public Health*. 1997 Sep;87(9):1499-503.
9. Power C, Stansfeld S, Matthews S, Manor O, Hope S. Childhood and adulthood risk factors for socio-economic differentials in psychological distress: Evidence from the 1958 British birth cohort. *Soc Sci & Med.* 2002 Dec;55(11):1989-2004.
10. Werner, E., High risk children in young adulthood: A longitudinal study from birth to 32 years. *Am J Orthopsychiatr.* 1989 Jan;59(1):72-81.
11. Heckman JJ, Masterov DV., The productivity argument for investing in young children [IZA Discussion Paper No. 2725]. 2007 Apr. [cited 2015 Nov 7]. Available from: http://ssrn.com/abstract=982117
12. Human Early Learning Partnership. [Internet]. Vancouver, BC: University of British Columbia; 2014. [cited 2015 Nov 9]. Available from: http://earlylearning.ubc.ca/maps/edi/nh/critical-difference?sd=39
13. Tyler I, Feller A, Ford-Jones L, Loock C, Lynam J, Makin S, et al. Social pediatrics realist review. Presented at: The Ontario Public Health Conference (TOPHC); 2015 Mar 26; Toronto, CA.
14. Lynam MJ, Scott L, Loock CL, Wong S. The RICHER social pediatrics model: Fostering access and reducing inequities in children's health. *Healthc Q.* 2011 Oct;14 Special Issue(3):41 56.
15. Loock CA, Kinnis C, Robinson GC, Segal S, Blatherwick FJ, Armstrong RW. Targeting high risk families: Prenatal alcohol/drug abuse and infant outcomes. Vancouver, B.C.: Department of Pediatrics, Faculty of Medicine, University of British Columbia; 1993.
16. Lynam MJ, Grant E, Staden K. Engaging with communities to foster health: The experience of inner–city children and families with learning circles. *Can J Nurs Res.* 2012 Jun;44(2):86 106.
17. Wong ST, Lynam MJ, Khan KB, Scott L, Loock C. The social pediatrics initiative: A RICHER model of primary health care for at risk children and their families. *BMC Pediatr*: 2012 Oct;12:158.
18. British Columbia's Representative for Children and Youth. Paige's story: abuse, indifference and a young life discarded [Internet]. Victoria: 2015 May [cited from 2015 Nov 9], 80 p. Available from: https://www.rcybc.ca/sites/default/files/documents/pdf/reports_publications/rcy-pg-report-final.pdf
19. NASKARZ Turning Point. [Web streaming video]. 2014 Feb [cited 2015 Dec]. Available from: http://byutv.org/watch/0256de75-38d7-4b47-9b54-eb46cd1ae881/turning-point-naskarz#ooid=RzaHJrazoXPAWncP_tLJKWlQ5HM2NE1X
20. Lynam MJ, Loock C, Scott L, Wong S, Munroe V, Palmer B. Social pediatrics: Creating organizational processes and practices to foster health care access for children 'at risk'. *J Res Nurs.* 2010 Jul;15(4):331 47.

At ease in the Downtown Eastside: One family physician's perspective

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John leaned quietly on the side of the building on one of the side streets near Main and Hastings, smoking his cigarette and staring distantly when I walked by during my lunch break. He looked gaunt and weak, but not short of breath considering his advanced small cell lung cancer. His long grey hair and beard betrayed his relatively young age—he was barely over his fifties. He recognized me immediately and extended his hand, palm thickened with callus from a lifetime of physical labour and rough life in Vancouver's Downtown Eastside neighbourhood. His grip was firm and warm, but bony. He smiled and said, "Hello doctor," in a weak but genuine voice. He coughed, like most smokers do, but it made him even weaker and more short of breath. I asked if he was doing okay, if he had any breathing problems; but despite apparent dyspnea, he said, "No." His response did not surprise me. His denial, unlike others dying of advanced lung cancer, was not a means of self–preservation but a result of schizophrenia, which had taken hold of his life long before smoking likely caused his cancer. Like many of my patients, John was alone and had no contact with his family and virtually no other support network.

Marginalized populations continue to disproportionately utilize our healthcare services, with poor health outcomes in Canada.[1] Homeless and marginally–housed people continue to suffer from higher disease burden and will likely die earlier than the general population.[2,3] Numerous studies have identified leading causes of morbidity and mortality among this population, including trauma, cardiovascular diseases, HIV, hepatitis C, mental health, addictions, and injection drug–use.[3,6]

Vancouver's Downtown Eastside (DTES) includes some of the city's oldest neighbourhoods. For decades, it has been home to tens of thousands of people who occupy the lower socioeconomic stratum with a disproportionate representation of single men, the elderly, immigrants, at–risk youths, and those who have been incarcerated.[7,8] While the population in the DTES is extremely diverse, there are many common challenges, such as mental illness, substance use disorder, poverty, homelessness, and marginalized housing.[7,8]

Unfortunately, traditional approaches to medical care delivery have failed to improve the health status of these patients.[5] This is exemplified by the HIV epidemics during the early to mid 90's that rivalled sub–Saharan African countries.[9] While much progress has been made to improve access and quality of care-including concerted efforts to create a more patient–centered, community–based, and multidisciplinary model of care — more is needed.[8]

Providing services for patients in the DTES can be challenging as many of them suffer from past trauma and abuses, while many more continue to face ongoing suffering. Trust in physicians can be difficult to gain, with episodic care and sometimes demanding, manipulative, or violent patient behaviours.[10] Eliciting a reliable medical history can be trying due to language/literacy, mental health, and addiction challenges. Often, physicians need to take extra time to collaborate with other care providers to verify or gather collateral information to assist in clinical decision–making.

A sensitive facet of serving the DTES population is balancing the physician's responsibilities to their patients with the physicians' professional and ethical standards. To achieve this, it is crucial to use a flexible and pragmatic approach without compromising the standards of care. Not surprisingly, effective and empathetic listening skills become even more paramount when trying to decipher what is real in the history and what is not, as well as when collaborating with patients to come up with a pragmatic

and sensible plan to address their needs. Specifically, a trusting, therapeutic relationship can be established using communication that is at a level appropriate for patients' ability and capacity, a delicate use of medical terms in history–taking that avoids jargon, and a genuine interest in their concerns.

To reduce the stigma associated with patients' illnesses, particularly with addiction and mental health, physicians need to recognize not only their own biases and values, but also the emerging evidence that addiction is a primary, chronic disease of the brain's reward, motivation, memory, and related circuitry. Regrettably, the medical system and society at large continues to treat these patients with preconceived ideas, assumptions, and judgments. Therefore, ethically speaking, the motivation to provide care for the heroin addict who relapsed should be no different than that for the poorly–controlled diabetic patient who failed oral hypoglycemic agents.

Meaningful advocacy is another important skill physicians can leverage to overcome barriers to care for DTES patients. With increasing demands for the assortment of outreach services provided by the regional health authority, partnered non–profit organizations, and peer groups, physicians need to be actively involved in advocating for equitable services not only for those who can communicate their needs, but also for those who often suffer in silence as a result of negative symptoms of mental illness, stigma, or discrimination associated with their illnesses. In particular, advocacy requires physicians to step beyond their role as the medical expert and become involved in activities such as attending discharge planning meetings, liaising with other community health services, and leveraging support for timely access to other resources. Different care providers and services—from wound care, medication administration, and homecare/home support visits to outreach visits by physicians, nurses and nurse practitioners—need to collaborate to provide more effective clinical care, case management, disease prevention, and health promotion to avoid the traditional silos of care between hospitals, private offices, and community organizations.

Given the intense nature that is the DTES, it can be daunting for compassionate and well-meaning practicioners and medical learners to feel confident and competent enough to provide sustainable care for their patients. To avoid burnout, physicians need to be mindful of their well-being and develop resilience. Dealing with stress is an essential skill to foster, particularly in those who bear witness to loss, grief, trauma, and suffering. Practicing regular, interactive (external) reflection and empathy can prevent and cure cynicism and exhaustion.[11] Recognition of one's "red flags" is also a crucial skill for all learners and practitioners to develop. The old adage of "physician, heal thyself" reminds us and our learners to not ignore our own needs and to maintain our physical, emotional, and spiritual health.

"Despite the seemingly daunting task, caring for patients in the DTES is not necessarily different than those who live elsewhere in Vancouver; however, it does require physicians to be mindful of the specific skills... required for a more impactful therapeutic relationship..."

Despite the seemingly daunting task, caring for patients in the DTES is not necessarily different from those who live elsewhere in Vancouver; however, it does require physicians to be mindful of the specific skills and strategies that are required for a more impactful therapeutic relationship in this neighborhood. Fortunately, many of these skills were grounded from my family medicine training, while many more were learned (sometimes frustratingly) on the job. Despite all the challenges, I take comfort in the thought of being surrounded by like–minded people, and I witness humanity and dignity every day—with that, I feel at ease when I walk the streets of the DTES.

I visited with John for a few more minutes on the street as he was clearly having trouble maintaining a prolonged conversation. I shook his hand again and wished him well. He thanked me for stopping by to say hello and for the care I gave him. A week later, his case manager told me that John died in his sleep peacefully in his room at May's Place (hospice). It had been less than 3 months since I first met John and I took comfort that he lived his last days with dignity and free of pain, and that I had played a small part in it.

disclosures

Dr. Yau has no conflicts of interest to disclose.

references

1. Phipps S. The impact of poverty on health. Ottawa, ON: Canadian Institute for Health Information; 2003. 39 p.
2. Jones A, Vila-Rodriguez F, Leonova O, Langheimer V, Lang D, Barr A, Procyshyn R, et al. Mortality from treatable illnesses in marginally housed adults: a prospective cohort study. BMJ Open. 2015 Aug;5(8):e008876 doi:10.1136/bmjopen-2015-008876
3. Vila-Rodriguez F, Panenka WJ, Lang DJ, Thornton A, Vertinsky T, Wong H, et al. The hotel study: multimorbidity in a community sample living in marginal housing. Am J Psychiatry. 2013 Dec;170(12):1413 22.
4. Hwang SW, Wilkins R, Tjepkema M, O'Campo PJ, Dunn JR. Mortality among residents of shelters, rooming houses, and hotels in Canada: 11 year follow-up study. Brit Med J. 2009;339:b4036.
5. Hwang SW. Homelessness and health. Can Med Assoc J. 2001Jan;164(2):229 33.
6. Walker ER, McGee RE, Druss BG. Mortality in mental disorders and global disease burden implications: a systematic review and meta-analysis. JAMA Psychiatry. 2015 Apr;72(4):334 41.
7. Vancouver Coastal Health. A health and social profile: Community health area 2 – Fall 2013 [Internet]. Vancouver; 2013 [cited 2015 Nov 6]. 81 p. Available from: https://www.vch.ca/media/VCH-Profile_CHA2-Nov-2013.pdf
8. Government of BC. Ministry of Health Report. Improving health services for individuals with severe addiction and mental illness [Internet]. Victoria; 2013 Nov 15 [cited 2015 Nov 6]. 32 p. Available from: http://www.health.gov.bc.ca/library/publications/year/2013/improving-severe-addiction-and-mental-illness-services.pdf
9. Strathdee SA, Patrick DM, Currie S, Cornelisse PG, Rekart ML, Montaner JS, et al. Needle exchange is not enough: Lessons from the Vancouver injection drug use. AIDS. 1997 Jul;11(8):F59 F65.
10. Adilman S, Kliewer G. Pain and wasting on Main and Hastings: A perspective from the Vancouver Native Health Society Medical Clinic. B C Med J. 2000 Nov;42(9):422 5.
11. Jensen PM, Trollope-Kumar K, Waters H, Everson J. Building physician resilience. Can Fam Physician. 2008 May;54(5):722 9.

Point of care ultrasound in undergraduate medical education: A survey of University of British Columbia medical student attitudes

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abstract

Objectives: Ultrasound is a low–cost, rapid, and safe imaging modality with expanding roles across many specialties. Integration of ultrasound into undergraduate medical education is concomitantly becoming more common, particularly to enhance regional anatomy and as an extension of the physical examination. In this study, medical students were surveyed after attending a hands–on ultrasound symposium to investigate their views on ultrasound in undergraduate medical education.
Methods: We surveyed 59 University of British Columbia (UBC) medical students after attending a four–hour ultrasound symposium. A Likert scale was used to query students on perceived comfort with ultrasound before and after the symposium, the effect of ultrasound on anatomical knowledge of the scanned areas, and opinions on ultrasound training in undergraduate medical education.
Results: Students indicated that attending the symposium significantly improved their comfort with obtaining basic abdominal, vascular, pleural, and cardiac ultrasound images. As well, the students' perceived anatomical knowledge of the scanned areas was significantly improved. Collectively, students appear to strongly support the integration of ultrasound into their medical undergraduate education.
Conclusions: Ultrasound appears to be a potentially valuable medical undergraduate learning resource, and the medical students surveyed would support integrating ultrasound into all years of their undergraduate medical training.

introduction

Point of care ultrasound (POCUS) is a rapid, cost–effective, and accurate diagnostic tool with expanding application in a variety of medical specialties.[1-3] Although not designed to replace formal sonographic investigations, POCUS provides clinicians with real–time visualization of deep pathology, and can help answer specific clinical questions at the bedside.[4, 5] For example, intra–abdominal fluid can be visualized at the bedside during a trauma resuscitation, which can help determine the need for immediate surgical intervention;[4] pneumothorax can also be diagnosed by ultrasound with better sensitivity than standard chest radiographs.[5, 6] In addition, medical procedures, such as central line placement, can be performed under ultrasound guidance, decreasing rates of adverse events.[7, 8] Ultrasound is a valuable tool with a wide range of clinical indications across specialties, making it an important skill for clinicians to develop.[9]

For many physicians–in–training, ultrasound education does not begin until clerkship or residency and exposure is variable, potentially leaving gaps in education and practice with POCUS.[10] Recently, some medical undergraduate programs have introduced a core ultrasound curriculum into their pre–clinical years. Some schools have adopted ultrasound into pre–clinical anatomy, whereas others have integrated ultrasound into clinical skills sessions and emphasized its use as an extension of the physical exam.[9, 11-15] Early exposure to the fundamentals of ultrasound could provide a theoretical and practical foundation that can be built on during later clinical years.[2] As well, ultrasound can help solidify medical students' understanding of "living anatomy" and the spatial relationships of deep anatomical structures.[16, 17] Therefore, ultrasound is an important skill to integrate early into the medical undergraduate curriculum.

At the University of British Columbia (UBC), most of the medical student pre–clinical ultrasound exposure is delivered during radiology lectures, and limited opportunities exist for hands–on practice during pre–clinical years. The objective of this study was to survey and report medical student perceptions, attitudes, and comfort levels with POCUS after a combined didactic and hands–on ultrasound symposium.

methods

The UBC Ultrasound Club was formed in September 2014, consisting of 12 medical student executives and 2 faculty mentors: Dr. Daniel Kim (DK), and Dr. Andrew Neitzel (AN). The mission of the Ultrasound Club is to increase awareness of POCUS by providing theoretical and hands–on ultrasound education for medical undergraduate students.

ethics statement

The UBC Behavioral Research Ethics Board waived ethics requirements for this study under Article 2.5 of the Tri Council Policy Statement.

study participants

All UBC medical students were invited by email to express interest in attending an ultrasound symposium on January 24, 2015. Due to logistical constraints, only students from the Vancouver–Fraser Medical Program (VFMP), the largest of UBC's four distributed sites, were eligible to attend. Among interested medical students, Microsoft Excel (Microsoft Corp., Redmond, WA) was used to randomly select 49 attendees for the ultrasound symposium. As Canadian Resident Matching Service (CaRMS) interviews took place on the day of the symposium, Year 4 medical students were unable to attend. In attendance were also 12 Ultrasound Club executives. The two co–authors (JM, RP) who attended the symposium were excluded from participating in the survey leaving 59 total survey respondents.

workshop

The ultrasound symposium took place at the Medical Student and Alumni Center (MSAC) on January 24, 2015 from 0900h to 1300h. Figure 1 outlines the schedule of the symposium. This interdisciplinary event taught students the basics of bedside ultrasound, including ultrasound physics and abdominal, cardiac, pleural, and vascular imaging. Ultrasound machines were generously donated by Sonosite (Bothell, WA), General Electric (Fairfield, CT), and the Center of Excellence for Simulation Education and Innovation (CESEI). The event was sponsored by the Medical Undergraduate Society. Didactic sessions were led by AN and DK. Students broke into small groups of 6 for the hands–on sessions, led by 4 clinicians from the Division of Critical Care, 1 from the Department of Anesthesiology, Pharmacology, and Therapeutics, 4 from the Department of Emergency Medicine, along with 2 emergency medicine residents.

0900-905: Introductions
0905-925: Didactic on ultrasound physics and knobology
0930-1000: Hands-on knobology
1000-1020: Didactic abdominal exam
1020-1100: Hands-on abdominal exam
1100-1115: Didactic pleural
1115-1200: Hands-on pleural
1200-1215: Didactic cardiac
1215-1300: Hands-on cardiac
13:00-13:10: Thank-you's, complete survey

Figure 1: Schedule for the half–day ultrasound symposium hosted at the Medical Student and Alumni Centre on January 24, 2015

survey

Students completed a survey after the symposium querying their previous ultrasound experience, comfort level before and after the symposium, beliefs on the utility of ultrasound in undergraduate medical education and in learning anatomy, and thoughts on optimal group size to learn ultrasound (see supplemental material). A Likert scale was used to grade students' responses: strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree were assigned numerical values of 1-5 respectively. Students were also encouraged to provide written feedback.

statistics

Survey data was abstracted into Microsoft Excel spreadsheets, and the medians and first and third quartiles were calculated using Microsoft Excel. Statistical significance for pre– and post–symposium user knowledge comfort was calculated using a two–tailed Wilcoxon Signed–Rank Test using the online VassarStats calculator (http://vassarstats.net/).

results

The symposium generated significant student interest and 279 students from Year 1 to Year 4 expressed interest in attending. Among interested students, 248 were from the VFMP and 31 were from the other three distributed UBC sites combined. VFMP students applied in the following distribution: 21 students from Year 4, 38 students from Year 2, and 93 students from Year 1. Due to logistical constraints, only 61 students were selected to attend. Of these 61 students, 4 were in Year 3, 28 were in Year 2, and 29 were in Year 1. Fifty–nine (excluding two co–authors) medical student attendees completed the survey for a response rate of 100%.

There were 13 (22%) students who had previous hands–on ultrasound exposure, most of which was unstructured and limited in scope. For all the ultrasound views obtained, students indicated a significant increase in their comfort level with performing the instructed scans after each module (Table 1). In addition, for all ultrasound scans, students felt their anatomical knowledge of the scanned region improved (Table 2). The general feedback from students was overwhelming support for the integration of ultrasound into all years of the medical undergraduate curriculum (Table 3). Furthermore, students indicated a strong desire to have more ultrasound education during all medical undergraduate years. The symposium increased the participants' understanding and appreciation for the clinical utility of POCUS. Collectively, the symposium appeared to be a positive experience, and students strongly felt that they would recommend a similar experience to their peers (Table 3). The group size also appeared to be appropriate, as 58/59 (98%) respondents indicated that a group of six was appropriate for learning ultrasound. Some general feedback provided in the comments section suggested that having anatomy models and reference materials at the bedside would have helped better correlate the ultrasound scans with underlying anatomy. In addition, several students found the cardiac module the most challenging, and suggested they would have benefited from more time with both the practical and didactic components.

"students strongly felt that they would recommend a similar experience to their peers"

Table 1: Pre– and post–symposium Likert scores for students' comfort with the physics and knobology, FAST, pleural, vascular, and cardiac ultrasound modules delivered at the symposium.

	Likert Scale n (%)					Median (Q1-Q3)	Wilcoxon Signed–Rank Test
	1	2	3	4	5		
Pre-symposium comfort[A] with ultrasound physics and knobology	22(37)	23(39)	9(15)	5(9)	0(0)	2 (1-2)	Z = -6.38
Post-symposium comfort[A] with ultrasound physics and knobology	1(2)	1(2)	6(10)	46(78)	5(8)	4 (4-4)	P < 0.0001
Pre-symposium comfort[A] with FAST scan[B]	43(74)	14(24)	0(0)	1(2)	0(0)	1 (1-1)	Z = -6.56
Post-symposium comfort[A] with FAST scan[B]	1(2)	2(3)	7(12)	36(62)	12(21)	4 (4-4)	P < 0.0001
Pre-symposium comfort[A] with basic pleural ultrasound	45(76)	12(20)	0(0)	2(3)	0(0)	1 (1-1)	Z = -6.68
Post-symposium comfort[A] with basic pleural ultrasound	0(0)	2(3)	5(9)	40(68)	12(20)	4 (4-4)	P < 0.0001
Pre-symposium comfort[A] with IJ and Carotid vascular scans	41(69)	12(20)	2(3)	4(7)	0(0)	1 (1-2)	Z = -6.62
Post-symposium comfort[A] with IJ and Carotid vascular scans	0(0)	0(0)	4(7)	39(66)	16(27)	4 (4-5)	P < 0.0001
Pre-symposium comfort[A] simple cardiac echo	47(80)	11(18)	0(0)	1(2)	0(0)	1 (1-1)	Z = -6.56
Post- comfort[A] with simple cardiac symposium echo	1(2)	7(12)	21(36)	25(42)	5(8)	4 (3-4)	P < 0.0001

[A]Comfort performing the specified scan under supervision
[B]N=58, one respondent did not complete this section.
FAST – Focused assessment with sonography in trauma
IJ – Internal Jugular, Q1 – 1st Quartile, Q3 – 3rd Quartile

discussion

This study surveyed medical student attitudes towards POCUS and the integration of ultrasound into the medical undergraduate curriculum after students attended a four–hour ultrasound symposium. The symposium itself attracted significant student interest: 61 students attended out of 279 interested students among a total medical school enrollment of approximately 1150 students from Years 1 to 4. Survey results showed that the symposium significantly increased medical student comfort with the practiced scans, and helped solidify understanding of regional anatomy (Tables 1 and 2). Students also strongly supported the idea of integrating ultrasound into all years of the UBC medical undergraduate training, and wished to have more exposure to ultrasound (Table 3).

Based on the substantial interest in attending the symposium, it would appear that students are interested in learning ultrasound, particularly in Years 1 and 2. However, there was a significant difference in the numbers of students expressing interest between graduating class. Several explanations are possible. Students in Years 3 and 4 have significant time constraints due to clinical duties. Also, students in Years 3 and 4 do not know their schedule several months in advance and are potentially less likely to commit to an extra–curricular event. It is also possible that Year 3 and 4 students felt that learning ultrasound at their stage of education was less valuable. As our survey did not assess reasons for disinterest in ultrasound, it is not possible to determine the cause of the discrepancy in interest between graduating classes.

Many options exist for integrating ultrasound into a medical undergraduate curriculum. Ultrasound could be integrated into the current radiology or

Table 2: The effect of ultrasound on students' perceived anatomical knowledge of scanned regions.

	Likert Scale n (%)					Median (Q1-Q3)
	1	2	3	4	5	
Increased abdominal anatomy knowledge	0(0)	0(0)	15(26)	29(50)	14(24)	4 (3.3-4)
Increased thoracic anatomy knowledge	0(0)	1(2)	12(20)	31(53)	15(26)	4 (4-4.5)
Improved neck vasculature anatomy knowledge	0(0)	0(0)	10(17)	35(59)	14(24)	4 (4-4)
Improved cardiac anatomy and physiology knowledge	0(0)	1(2)	12(20)	36(61)	10(17)	4 (4-4)

Q1 – 1st Quartile
Q3 – 3rd Quartile

anatomy curricula at UBC. This would help students visualize "live anatomy" and explore some of the dynamic processes that occur within the body. Alternatively, ultrasound could be integrated into a clinical skills course as an adjunct to the physical exam.[13, 14] This approach could emphasize clinical applications of ultrasound and help students correlate physical exam findings to underlying anatomy.[16, 18] In addition, ultrasound could become a core component of a core clerkship rotations such as anesthesia, emergency medicine, obstetrics, and/or internal medicine.[11] A combination of these approaches could also be adopted. Several students provided written feedback that cardiac imaging should be delayed until Years 3 or 4 because of the difficulty of obtaining echocardiographic images; however, students still indicated that performing cardiac scans improved their understanding of regional anatomy and physiology (Table 2).

Implementing a standardized ultrasound curriculum could benefit medical students in several ways. Despite the short exposure to ultrasound at the symposium, students felt that their understanding of regional anatomy improved (Table 2). This aligns with previous studies showing that ultrasound is a valuable anatomy teaching tool.[16, 18]

An ultrasound curriculum could also help students appreciate broader applications for POCUS in their future practice, serving students well across a range of future medical disciplines.[1-3] Having an ultrasound curriculum integrated into medical undergraduate education could help ensure all students have a basic, evidence–based skill set in bedside sonography that can be built upon in later clinical years.[10, 19, 20]

Although an integrated ultrasound curriculum would be very beneficial for students, integrating ultrasound into the medical undergraduate curriculum has its challenges. The cost of ultrasound machines is not insignificant.[9] In addition, recruiting instructors with ultrasound experience to supervise might be associated with additional costs.[14] It is therefore critical to involve POCUS–practicing physicians from a wide range of medical specialties, including emergency medicine, critical care, anesthesia, cardiology, obstetrics, internal medicine, and trauma. Another possible solution is to use non–physician healthcare professionals, such as sonography technicians.[10] A balance between having small groups with enough machines, and the cost associated with such an endeavor might be difficult to achieve. Our results suggest a group size of six was effective for teaching and learning ultrasound.

There are several limitations to our survey data. There were no Year 4 students in attendance due to CaRMS interviews, so their opinions were not represented. In addition, only data from VFMP students were included in this study. Selection bias is another limitation as students who attended the symposium might hold more favorable views of ultrasound than those that did not attend, making the results less generalizable. Finally, student comfort with the scans and anatomy was self–reported, and there was no objective criteria or testing to assess improvement.

Table 3: Post–symposium student perspectives on ultrasound in medical undergraduate education.

	Likert Scale n (%)					Median (Q1-Q3)
	1	2	3	4	5	
Ultrasound should be integrated into medical undergraduate Years 1 and 2	0(0)	0(0)	4(7)	13(22)	42(71)	5 (4-5)
Ultrasound should be integrated into medical undergraduate Years 3 and 4	0(0)	0(0)	4(7)	13(22)	42(71)	5 (4-5)
Appreciation for the utility of ultrasound increased	0(0)	0(0)	1(2)	18(30)	40(68)	5 (4-5)
Wish to have more exposure to ultrasound during medical undergraduate training	0(0)	0(0)	0(0)	16(27)	43(73)	5 (4-5)
Recommend a similar symposium to peers	0(0)	0(0)	0(0)	11(19)	48(81)	5 (5-5)

Q1 – 1st Quartile
Q3 – 3rd Quartile

"Ultrasound could be integrated into the current radiology or anatomy curricula at UBC. This would help students visualize "live anatomy" and explore some of the dynamic processes that occur within the body."

conclusion

Despite the limitations of our survey, ultrasound has been shown to be a powerful educational tool, particularly to enhance understanding of regional anatomy and as an extension of the physical exam. The extensive interest demonstrated by UBC medical students and their expressed desire to have more ultrasound exposure during their training suggests that integration of ultrasound into the UBC medical undergraduate curriculum should be considered.

acknowledgments

We would like to thank the nine instructors (authors excluded) for donating their time to teach at the symposium. We would also like to thank the UBC Ultrasound Club Executive Team for their

assistance with organizing the symposium. We thank Sonosite, General Electric, and CESEI for donating ultrasound machines. We are grateful to Dr. David Hardwick, Scott Walker, and Nancy Thompson at the MSAC for hosting the symposium and providing the audiovisual support. We would also like to thank the Medical Undergraduate Society for sponsoring the symposium.

disclosures

The authors do not have any conflicts of interest to disclose.

references

1. Deshpande R, Akhtar S, Haddadin AS. Utility of ultrasound in the ICU. *Curr Opin in Anaesthesiol* 2014;27:123-132.
2. Cook T, Hunt P, Hoppman R. Emergency Medicine Leads the Way for Training Medical Students in Clinician-based Ultrasound: A Radical Paradigm Shift in Patient Imaging. *Acad Emerg Med* 2007;14:558-561.
3. Moore CL, Copel JA. Point-of-care ultrasonography. *N Engl J Med* 2011;364:749-757.
4. Kern SJ, Smith RS, Fry WR, Helmer SD, Reed JA, Chang FC. Sonographic examination of abdominal trauma by senior surgical residents. *Am Surg* 1997;63:669-674.
5. Volpicelli G. Sonographic diagnosis of pneumothorax. *Intensive Care Med* 2010;37:224-232.
6. Blaivas M. A Prospective Comparison of Supine Chest Radiography and Bedside Ultrasound for the Diagnosis of Traumatic Pneumothorax. *Acad Emerg Med* 2005;12:844-849.
7. Brass P, Hellmich M, Kolodziej L, Schick G, Smith AF. Ultrasound guidance versus anatomical landmarks for subclavian or femoral vein catheterization. *Cochrane Database Syst Rev* 2015;1:CD006962.
8. Barr L, Hatch N, Roque PJ, Wu TS. Basic ultrasound-guided procedures. *Crit Care Clin* 2014;30:275-304.
9. Bahner DP, Adkins EJ, Hughes D, Barrie M, Boulger CT, Royall NA. Integrated medical school ultrasound: development of an ultrasound vertical curriculum. *Crit Ultrasound J* 2013;5:1-9.
10. Killu K, Coba V, Mendez M, Reddy S, Adrzejewski T, Huang Y, et al. Model Point-of-Care Ultrasound Curriculum in an Intensive Care Unit Fellowship Program and Its Impact on Patient Management. *Crit Care Res Pract* 2014;2014:1-6.
11. Fernandez-Frackelton M, Peterson M, Lewis RJ, Perez JE, Coates WC. A Bedside Ultrasound Curriculum for Medical Students: Prospective Evaluation of Skill Acquisition. *Teach Learn Med* 2007;19:14-19.
12. Hoppmann RA, Rao VV, Poston MB, Howe DB, Hunt PS, Fowler SD, et al. An integrated ultrasound curriculum (iUSC) for medical students: 4-year experience. *Crit Ultrasound J* 2011;3:1-12.
13. Butter J, Grant TH, Egan M, Kaye M, Wayne DB, Carrión-Carire V et al. Does ultrasound training boost Year 1 medical student competence and confidence when learning abdominal examination? *Med Educ* 2007;41:843-848.
14. Dinh VA, Frederick J, Bartos R, Shankel TM, Werner L. Effects of Ultrasound Implementation on Physical Examination Learning and Teaching During the First Year of Medical Education. *J Ultrasound Med* 2014;34:43-50.
15. Brown B, Adhikari S, Marx J, Lander L, Todd GL. Introduction of Ultrasound into Gross Anatomy Curriculum: Perceptions of Medical Students. *J Emerg Med* 2012;43:1098-1102.
16. Ivanusic J, Cowie B, Barrington M. Undergraduate student perceptions of the use of ultrasonography in the study of "Living Anatomy." *Anat Sci Ed* 2010;3:318-322.
17. Teichgräber UK, Meyer JM, Poulsen Nautrup C, von Rautenfeld DB. Ultrasound anatomy: a practical teaching system in human gross anatomy. *Med Educ* 1996;30:296-298.
18. Syperda VA, Trivedi PN, Melo LC, Freeman ML, Ledermann EJ, Smith TM, et al. Ultrasonography in preclinical education: a pilot study. *J Am Osteopath Assoc* 2008;108:601-605.
19. Finnoff JT, Berkoff D, Brennan F, DiFiori J, Hall MM, Harmon K, et al. American Medical Society for Sports Medicine (AMSSM) Recommended Sports Ultrasound Curriculum for Sports Medicine Fellowships. *PM&R* 2015;7:e1-11.
20. Heller MB, Mandavia D, Tayal VS, Cardenas EE, Lambert MJ, Mateer J, et al. Residency training in emergency ultrasound: fulfilling the mandate. *Acad Emerg Med* 2002;9:835-939.

The meanings, barriers, and facilitators of Anishinaabe health: Implications for culturally-safe health care

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introduction

Aboriginal health is a multi-factorial concept that is influenced by the unique intersection of historical, political, economic, physiological, spiritual, geographic, personal, and community factors.[1,2] General definitions of "Aboriginal health" tend to centre around the importance of holism and balance.[1,3] While these definitions generally help clarify the basic ontological differences between Aboriginal and Euro-Western notions of health, it is important to recognize and appreciate the tremendous diversity in Aboriginal communities, and with that, a corresponding diversity of ways in which "health" might be understood.[4] In developing culturally-safe and respectful approaches to working with Aboriginal peoples, medical and health professional students would be well-served by understanding the ways in which Aboriginal peoples in their region understand and define health and wellbeing in their "own ways and words."

The following case study examines the ways in which local Anishinaabe ("Ojibwe") persons in Sudbury, Ontario understand health and wellness. The goal of this research was to determine the various meanings that Anishinaabe people have for the term 'health', as well as to identify factors that are perceived by members of the Sudbury community as supportive or challenging to these concepts of health.

methodology

The researcher engaged with an Anishinaabe elder during the design of the study for guidance on conducting the research in a respectful way. Participants were approached with sema'a (ceremonial tobacco) in recognition of the gifts of knowledge they would be sharing with the researcher. Semi–structured interviews focusing on defining health, and describing factors that support and challenge health, were conducted with sixteen Anishinaabe participants.

Open coding was used to identify themes and a grounded theoretical approach to data analysis and interpretation was employed. Word lists and key words in context tables were used to assist in thematic identification. The study was approved by the Laurentian University Research Ethics Board (REB#20141110). Informed consent from participants was obtained via both written and verbal means.

results and discussion

Seven themes emerged in how participants defined health and being healthy: learning and speaking Anishinaabemowin (an Aboriginal language), having mental, emotional, spiritual, and physical balance, living by traditional teachings, being self-determined; (re)connecting with the land; living with respect and reciprocity, and having healthy family relationships (Table 1).

Factors that were perceived as impeding health included: the lack of common gathering spaces, tension between Indigenous and non–Indigenous peoples, structural and institutional violence, feeling disconnected from home communities, and lateral tension within the urban Aboriginal community itself (Table 2).

Elements that facilitated Anishinaabe health (see Table 3) were divided into community factors (proximity to nature, access to Aboriginal health facilities, and access to cultural resources) and individual factors (resilience and personal agency).

Learning and revitalizing regional Indigenous languages was seen as a significantly important element in both the "meaning and practice of [their] health." Connecting youth with elders was frequently referenced as a means to building and sustaining healthy family and community relationships that contribute to overall health. Participants overwhelmingly highlighted the importance of living in a balanced way in their daily life, and explained that "keeping culture and tradition alive" played a key role in being and staying healthy.

Participants frequently defined their health in relation to the belief in and practice of the Anishinaabe Seven Grandfather Teachings of Respect, Honesty, Wisdom, Bravery, Truth, Humility, and Love, and identified these as key teachings in keeping healthy.

Self-determination was seen as a critical factor in being healthy: "being allowed to go about things in our own way, on our

Table 1: Defining health and being healthy

Theme	% Respondents
Learning and speaking Anishinaabemowin	94
Having mental, emotional, spiritual, and physical balance	88
Living by the Seven Grandfather Teachings	88
Being self-determined	88
(Re)connecting with the land	81
Having healthy family relationships	81
Living with respect and reciprocity	81

own terms is the most important factor for health." accessing culturally-safe health care was also seen as important in staying healthy, with one participant indicating she could "be healthier when getting care from people who respect [Aboriginal peoples'] way of doing things."

Several participants explained that living far from their home communities contributed to difficulties in being healthy, and highlighted the importance of "reconnecting with nature and our land" in staying healthy.

"Having places to come together to celebrate our culture and tradition" was identified as an important factor contributing to health, but participants frequently expressed that access to such spaces is notably lacking.

Table 2: Factors perceived as impeding health

Factor	% Respondents
Lack of common gathering spaces	100
Tension between Aboriginal and non-Aboriginal peoples	100
Structural and institutional violence	94
Feeling disconnected from home communities	94
Lateral tension within the urban Aboriginal community itself	88

Previous research on Anishinaabe health has typically focused on detailing traditional healing practices, patient experiences, and the integration of Anishinaabe health with biomedicine, rather than on exploring the meanings and experiences of health for Anishinaabe peoples.[5] This research highlights the ways in which Anishinaabe peoples define and understand their own health, and demonstrates how a blanket approach to defining Indigenous health might be limited in its applicability to local communities.

The ways in which Anishinaabe peoples define their health highlights both the similarities and differences between concepts of Anishinaabe health, the health ontologies of other Aboriginal peoples and nations, and Euro-Western concepts of health. Anishinaabe definitions of health, and the factors that support and challenge it, clearly present unique relationships informed by local context beyond what might be typically captured in general definitions of Aboriginal health. Considering, exploring, and understanding these nuances can be an important step toward working in culturally-safe ways with Aboriginal communities.

conclusion

Understanding Aboriginal health, and the factors that support and challenge it, "in our own words, in our own way," as expressed by one participant, is critical for health professionals and students seeking to work in respectful and culturally-safe ways with Aboriginal peoples. While similarities do exist in the way Aboriginal peoples across Canada define 'health and wellness,' it is important to consider and appreciate the diverse contexts in which Aboriginal communities and peoples define their own health. By understanding how local Aboriginal peoples experience and interpret health in their own ways, we as medical students can deliver culturally-safe healthcare that better supports the aspirations, values, identities, and perspectives of local Aboriginal peoples.

Table 3. Factors perceived as supporting / empowering health

	Factor	% Respondents
Community Factors	Proximity to nature	100
	Access to Aboriginal health facility	94
	Access to cultural resources	94
Individual Factors	Resilience	88
	Personal agency	82

disclosures

The authors have no conflicts of interest to disclose.

references

1. Waldram J, Herring D, Young T. Aboriginal Health in Canada: Historical, cultural and epidemiological perspectives. Toronto: University of Toronto Press; 2006. 28-42 p.
2. Reading C, Wein F. Health inequalities and social determinants of Aboriginal peoples' health. Prince George: University of Northern British Columbia. National Collaborating Centre for Aboriginal Health; 2009. 1-21 p.
3. National Collaborating Centre for Aboriginal Health: An overview of health in Canada. Prince George: University of Northern British Columbia; 2009. 2-7 p.
4. Stephens C, Porter J, Nettleton C, Wills R. Disappearing, displaced and undervalued: A call to action for Indigenous health worldwide. *Lancet.* 2006;367(9527): 2019-2028.
5. Manitowabi D, Shawande M. The meaning of Anishinaabe health on Manitoulin Island. *Pimatiswin: A Journal of Aboriginal and Indigenous community health.* 2011;9(2): 441-58.

The right to accessible healthcare: Bringing palliative services to Toronto's homeless and vulnerably housed population

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abstract

In comparison with the general Canadian population, homeless persons and the vulnerably housed face significantly shorter lifespans and experience higher rates of chronic disease, mental illness and polysubstance abuse. Despite their high mortality and morbidity rates, this vulnerable and marginalized population continues to have difficulty accessing essential services such as palliation and end–of–life care. More needs to be accomplished in this area, as dying with dignity is a right that all Canadians should share.

I received the call on a sunny street corner in Vancouver. A voice on the other end of the phone introduced himself as Dr. Naheed Dosani, a palliative medicine doctor from the City of Toronto. I recalled the name; it belonged to the preceptor of my upcoming elective in palliative medicine. Dr. Dosani's next few sentences were unexpected. He asked me what I knew about palliative medicine, what I knew about Toronto's homeless and finally what I knew about the PEACH program. Embarrassingly, I knew very little on the subject of the last question; to me, PEACH was a delicious fruit. As I struggled to answer these impromptu questions, my eyes gazed towards a dishevelled man sleeping against the wall of a nearby coffee shop—oddly, only seconds prior, this man was just part of the scenery. Luckily, Dr. Dosani did not question me further; instead, he informed me that I was in for a "different" experience. He certainly was not wrong. I left on a flight to Toronto the next day not knowing that the next two weeks would expose me to the realities of a marginalized homeless population and challenge my perceptions of palliative healthcare in Canada.

PEACH, as it turns out, stands for Palliative Education and Care for the Homeless. Launched in July 2014, PEACH is a new initiative headed by Dr. Dosani, a young palliative medicine doctor from Toronto, and an interdisciplinary team of nurses and social support workers. As a mobile support and consultation service for the homeless and vulnerably housed in the City of Toronto, PEACH serves a unique population that is more likely to experience higher rates of cancer, heart disease, infectious disease, psychiatric illness and substance abuse compared to the general population.[1] Furthermore, I was shocked to learn that homeless persons have a mean age at death reported to be between 34-47 years—considerably lower than the 81 years of age that Canadians can, on average, statistically hope to attain.[2] Despite the significant morbidity and mortality rates seen in this population, the homeless and the vulnerably housed continue to face barriers to accessing healthcare services.[1] Reports indicate that half of Toronto's homeless do not have access to a primary care physician, and that many face end–of–life without palliative care specialists.[3] This is where the PEACH program hopes to make a meaningful contribution. Canadian palliative care services were traditionally designed to serve the mainstream population, rather than marginalized populations such as the homeless and the vulnerably housed.[3] As a pilot program, PEACH hopes to test the effectiveness of bringing palliative services to Toronto's streets and shelters.

There are, however, challenges. These include, but are not limited to, a lack of resources, funding, and time dedicated to supporting a transient population that has traditionally been difficult to approach. Conversely, the strength of the PEACH program lies in its ability to meet its clientele where they are. This is

Despite the significant morbidity and mortality rates seen in this population, the homeless and the vulnerably housed continue to face barriers to accessing healthcare services. Reports indicate that half of Toronto's homeless do not have access to a primary care physician, and that many face end–of–life without palliative care specialists.

unique, as it helps the physician better individualize care and helps the patient avoid the complexities of a healthcare system that is not designed to serve their needs. Time will be the real test for the practicality and effectiveness of the PEACH program. The program is actively expanding and greater attention has been drawn to its efforts not only to support but also to educate Toronto's mainstream palliative services on effective practice for the homeless and vulnerably housed.

As one can imagine, this was a lot to take in. After my months of inpatient electives focussed on hospital care, visiting homeless persons on the streets and in shelters to provide palliative services seemed a bizarre concept. Additionally, in stark contrast to our work with the homeless, my preceptor and I spent days providing palliative services in the more traditional and mainstream healthcare setting found at Brampton Civic Hospital. I could not have asked for a more reflective experience in medicine. One day we would be doing a consultation in a downtown Tim Hortons for a forty–year–old male withering away from polysubstance abuse and untreated HIV, while the next day we would see a ninety–year–old grandmother in her large, immaculate home in suburban Toronto, surrounded by loving family. The contrast was striking, and the stories moving. I can recall the agony and despair in the eyes of a loving husband whose wife lay dying in a clean hospital bed with all the comforts modern medicine can provide. Conversely, I can recall the look of suffering in a gentleman with end–stage colon cancer who I met in a downtown Toronto shelter. The man was living in an unhygienic environment, without the supports and love that I had previously associated with end–of–life care. Moreover, this gentleman was not connected to the basic community home care services (e.g. nursing, personal support worker visits or medical equipment) that would help him to pass with dignity and comfort. In reflecting on the final stages of these two patients' lives, I couldn't help but wonder: why the stark contrast in care?

Canadian palliative care services were traditionally designed to serve the mainstream population, rather than marginalized populations such as the homeless and the vulnerably housed. As a pilot program, PEACH hopes to test the effectiveness of bringing palliative services to Toronto's streets and shelters.

It is estimated that 30,000 people in Canada are homeless on any given night.[3] We know from research that homeless persons and those vulnerably housed have increased morbidity and significantly decreased lifespans when compared to the general population.[1,2] Would it not make sense, then, that this particular population be given more opportunities to access essential services such as palliation and end–of–life care? The reality is that such opportunities, where they do exist, are in short supply. The PEACH program is in its infancy, with one palliative medicine specialist working just one day a week to provide services in an area with an overwhelming need. Why, as a society, do we fall short in providing essential services to a population with such great need? The truth is that homeless persons and those vulnerably housed are marginalized by our healthcare system—whether it be due to a lack of social support, financial means, or purely stigma and discrimination. Services such as palliation are simply not offered to this population or they are assumed to be unimportant. Yet, it took me two weeks of visiting homeless shelters, hearing the stories of the terminally ill and witnessing the conditions in which the homeless die in Canada to recognize that there is a major problem here, and more must be done to address it. The 'E' in PEACH stands for education, and although the focus is patient–centered care, the larger message here is that palliation and end–of–life care is not only a right for those with houses and social supports, but a right that all Canadians should be able to access.

disclosures

The authors have no conflicts of interest to disclose.

references

1. Cowan L, Hwang S, Khandor E, Mason K. The 2007 Street Health Report [Internet]. Toronto: Street Health; 2007 Sept [cited 2015 Oct 17]. Available from: http://www.streethealth.ca/downloads/the-street-health-report-2007.pdf.
2. Haig T. Palliative care doctors working to aid homeless [Internet]. Montreal: Radio Canada International; 2014 Aug 7 [cited 2015 Oct 17]. Available from: http://www.rcinet.ca/en/2014/08/07/palliative-care-doctors-working-to-aid-homeless/.
3. Sultana A. PEACH Program Provides Compassionate Palliative Care for City's Homeless [Internet]. Toronto: University of Toronto: Global Health Magazine Juxtaposition; 2015 Feb 18 [cited 2015 Oct 17]. Available from: http://juxtamagazine.org/2015/02/18/peach-program-provides-compassionate-palliative-care-for-citys-homeless/\.

Moving towards a weight–neutral approach to obesity management

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abstract

Obesity is a leading public health challenge in the world today, due to its high prevalence and role as a risk factor for many health conditions, including cardiovascular disease, diabetes, and certain cancers. The substantial health risks to individuals and immense costs to the healthcare system posed by obesity could be diminished by successful management and prevention of obesity.[1] However, there continues to be a lack of effective obesity treatment or prevention strategies,[2] and obesity remains immensely stigmatized despite its prevalence.[3,4,5,6] This commentary aims to discuss the inefficacy and adverse effects of traditional obesity care, the stigma carried by obesity, and the potential of a novel approach to obesity management known as Health at Every Size.

weight-based stigma and healthcare

Individuals with obesity face weight–based prejudice and discrimination in workplaces, educational institutions, interpersonal relationships, and the media.[3] Even in medical settings, individuals with obesity are faced with stigma and discrimination. Higher patient body mass index (BMI) is associated with lower physician ratings of respect,[4] and physicians report spending less time with patients with obesity, but ordering more tests,[5] which suggests poorer patient outcomes and increased costs to the healthcare system.

Increased understanding of the complex etiology and refractory nature of obesity does not decrease stigmatization. A study of healthcare professionals specializing in obesity found significant implicit weight-based biases, and associations between obesity and laziness, stupidity, and worthlessness.[6]

effects of stigma on health and obesity

Weight stigmatization is a significant risk factor for depression, anxiety, low self-esteem, and body dissatisfaction, even when controlled for BMI.[7] In turn, lower body satisfaction is associated with binge eating, physical inactivity, and less healthy diets.[8]

Weight stigmatization may contribute to the development and maintenance of obesity. Exposure to weight–based teasing in youths is related to lower levels of physical activity and higher levels of unhealthy eating behaviours.[7] Exposure to weight stigmatization in the form of apparent exclusion from a research activity on the basis of body size resulted in elevated cortisol levels in women who perceived themselves as overweight. This finding suggests weight–stigmatization may play a role in the pathogenesis of obesity, as cortisol stimulates appetite and abdominal fat deposition.[9] Accordingly, individuals who report exposure to weight-based discrimination are more likely to become or remain obese at follow–up.[10]

inefficacy of traditional obesity interventions

The primary goal of traditional obesity management is to achieve weight loss via decreased caloric intake and increased physical activity.[4] The 2015 guidelines for management of obesity in adults provided by the Canadian Task Force on Preventative Health Care continue to recommend this approach,[11] despite the persistent increase in obesity prevalence of 66% in the United States within the context of this approach.[3]

A review of long–term outcomes of calorie–restrictive approaches to obesity treatment found that one–to–two thirds of dieters regain more weight than they lost on their diets.[12] Weight regain consists mostly of fat and does not replace bone and lean mass lost during the previous weight loss. Weight loss may therefore have adverse health effects such as increased risk of osteoporosis, in addition to being difficult to achieve and maintain. Individuals that successfully maintain weight loss generally must maintain high levels of restraint and physical activity.[2] This likely contributes to

A study of healthcare professionals specializing in obesity found significant implicit weight-based biases, and associations between obesity and laziness, stupidity, and worthlessness.

observed low rates of successful weight loss maintenance.

Traditional approaches to obesity management view physical activity as a tool for weight loss, which may impair perception of physical activity as having intrinsic value for health promotion.[13] However, considerable evidence demonstrates health benefits of physical activity independent of weight loss. Several studies have demonstrated that accounting for physical fitness greatly reduces or even eliminates the widely cited link between obesity and increased mortality.[14] Individuals who are obese but physically fit have been found to have lower mortality risk than individuals who are normal weight but physically unfit.[15] In youth with obesity, exercise training improves insulin action, independent of changes in body weight or composition.[16] There is thus evidence to support the value of increased physical activity in individuals with obesity regardless of weight loss outcomes. Furthermore, the emphasis of traditional obesity care on weight loss rather than intrinsic benefits of physical activity may result in decreased adherence to exercise programs, as patients may see failure to lose weight as an indicator that the program is not beneficial.[1]

Current approaches to treating obesity have the potential to worsen weight–based stigma by conceptualizing obesity solely as a matter of caloric excess and physical inactivity. Within this paradigm, individuals are implied to be personally responsible for their obesity.[2] A study of obesity–related attitudes found that women assigned to a non–dieting program promoting eating when hungry and making healthy food choices reported significantly less negativity about obesity and less internalization of appearance standards than women in the traditional caloric–restriction dieting condition.[17] This suggests that non–dieting approaches may have psychological benefits not present in calorically restrictive approaches.

Several studies have demonstrated that accounting for physical fitness greatly reduces or even eliminates the widely cited link between obesity and increased mortality.

Health at Every Size: a novel approach to obesity care

If traditional weight–targeted approaches to obesity care are both ineffective and potentially harmful or stigmatizing, what should healthcare practitioners do for patients with obesity? Evidence is accumulating in support of a holistic and weight–neutral approach to obesity management known as Health at Every Size (HAES). HAES promotes a healthier lifestyle at the individual's existing size, rather than focusing on weight loss as a primary goal.[18]

There are three major components to the HAES approach. The first component is to encourage size acceptance, self–acceptance, and appreciation for the natural diversity of human bodies.[18] The second component is to promote increased physical activity for pleasure and intrinsic health benefits, without emphasis on calorie burning or weight loss.[18] The third component is to normalize eating by encouraging patients to listen to internal hunger and satiety cues, and by reducing food–related anxiety through avoiding restrictive dieting.[18]

A review of six randomized controlled trials (RCTs) comparing HAES to waitlist controls or diet–based approaches found that a HAES approach was associated with improvements in physiological measures including blood pressure and blood lipids, health behaviours including physical activity and eating disorder pathology, and psychological outcomes including self–esteem and body image. None of the trials detected adverse changes in any measured variable after treatment with a HAES approach. Attrition was significantly lower in the HAES group compared to control group across five of the six RCTs.[19] This is important given the poor retention rates of current obesity treatment methods.[2] Additionally, a recent RCT assessing changes in patterns of dietary intake in a HAES approach versus social support and waitlist control groups found a significant decrease in hunger and total daily energy intake in the HAES group compared to both control groups.[20] As previously discussed, non–dieting programs may also have psychological benefits through reduced anti–obesity attitudes and reduced internalization of appearance standards compared to dieting programs.[17] It should be noted that none of the RCTs investigating HAES had large sample sizes, and only one RCT compared HAES to a more traditional diet–based method of obesity treatment.[19] More research is required to establish the efficacy of a HAES approach over traditional obesity treatment methods. There has also been concern that a HAES approach may increase excessive food consumption and weight gain.[2] Although not observed in the existing literature, this possibility cannot yet be dismissed given the previously noted limitations of current HAES research.

Current approaches to treating obesity have the potential to worsen weight–based stigma by conceptualizing obesity solely as a matter of caloric excess and physical inactivity. Within this paradigm, individuals are implied to be personally responsible for their obesity.

If additional research confirms the efficacy of HAES for obesity care, this approach can be implemented on a public health level through the use of weight–neutral language in anti–obesity campaigns, public education on intrinsic health

benefits of physical activity, and inclusion of HAES and anti–weight bias training in medical school.[2]

From a clinical perspective, physicians can implement a HAES approach through self–education and discussions with their patients about advantages and disadvantages of HAES compared to traditional obesity care. Physicians should avoid admonishing their patients to lose weight, and focus instead on fostering positive health changes by encouraging their patients to accept, love, and care for themselves and their bodies through physical activity and a nutritious diet. Physicians should discuss the benefits of physical activity independent of weight loss with their patients, and help patients devise ways in which to incorporate pleasurable physical activity into their lives. Finally, physicians should discuss with their patients the limited efficacy and adverse effects of dieting, as well as strategies for more intuitive approaches to eating in accordance with internal body cues.[18]

Physicians should avoid admonishing their patients to lose weight, and focus instead on fostering positive health changes by encouraging their patients to accept, love, and care for themselves and their bodies through physical activity and a nutritious diet.

conclusion

Traditional approaches to obesity management recommend caloric–restriction and increased physical activity to achieve weight loss. These approaches have low success rates, with few individuals achieving and maintaining weight loss.[2] Additionally, traditional approaches to obesity management may pose health risks associated with weight regain and may perpetuate weight–based stigma.[2,17] Physical activity has tremendous health benefits independent of weight–loss, and should thus be encouraged in patients as a health-promoter in its own right.[13-16] A HAES approach to obesity management promotes healthy lifestyle choices at the individual's current weight, rather than targeting weight loss as a goal.[18] Preliminary research shows promise for this approach in terms of physiological measures, health behaviours, and psychological outcomes.[19,20] Evidence thus suggests that a weight–neutral approach including promotion of physical activity and a nutritious diet may offer a promising new direction for obesity management.

disclosures

The author does not have any conflicts of interest to disclose.

references

1. Ross R, Blair S, de Lannoy L, Després JP, Lavie CJ. Changing the endpoints for determining effective obesity management. *Prog Cardiovasc Dis.* 2014 Oct;57(4):330-6.
2. Bombak A. Obesity, health at every size, and public health policy. *Am. J. Public Health.* 2014 Feb;104(2):60-7.
3. Puhl RM, Heuer CA. The stigma of obesity: a review and update. *Obesity.* 2009 May;17(5):941-64.
4. Huizinga MM, Cooper LA, Bleich SN, Clark JM, Beach MC. Physician respect for patients with obesity. *J Gen Intern Med.* 2009 Nov;24(11):1236-9.
5. Hebl MR, Xu J. Weighing the care: physicians' reactions to the size of a patient. *Int J Obes (Lond).* 2001 Aug;25(8):1246-52.
6. Schwartz MB, Chambliss HON, Brownell KD, Blair SN, Billington C. Weight bias among health professionals specializing in obesity. *Obesity.* 2003 Sep;11(9):1033-9.
7. Puhl RM, Heuer CA. Obesity stigma: important considerations for public health. *Am J Public Health.* 2010 Jun;100(6):1019-28.
8. Neumark-Sztainer D, Paxton SJ, Hannan PJ, Haines J, Story M. Does body satisfaction matter? Five-year longitudinal associations between body satisfaction and health behaviors in adolescent females and males. *J Adolesc Health.* 2006 Aug;39(2):244-51.
9. Himmelstein MS, Belsky ACI, Tomiyama AJ. The weight of stigma: cortisol reactivity to manipulated weight stigma. *Obesity.* 2015 Feb;23(2):368-74.
10. Sutin AR, Terracciano A. Perceived weight discrimination and obesity. *PLoS ONE.* 2013 Jul;8(7):70048.
11. Brauer P, Gorber SC, Shaw E, Singh H, Bell N, Shane ARE, et al. Recommendations for prevention of weight gain and use of behavioural and pharmacologic interventions to manage overweight and obesity in adults in primary care. *CMAJ.* 2015 Jan;187(3):184-95.
12. Mann T, Tomiyama AJ, Westling E, Lew A-M, Samuels B, Chatman J. Medicare's search for effective obesity treatments: diets are not the answer. *Am Psychol.* 2007 Apr;62(3):220–33.
13. Sallis R, Franklin B, Joy L, Ross R, Sabgir D, Stone J. Strategies for promoting physical activity in clinical practice. *Prog Cardiovasc Dis.* 2014 Oct;57(4):375-386.
14. Lee DC, Sui X, Blair SN. Does physical activity ameliorate the health hazards of obesity? *Br J Sports Med.* 2008 Oct;43(1):49-51.
15. McAuley PA, Blair SN. Obesity paradoxes. *J Sports Sci.* 2011 Mar;29(8):773-782.
16. Shaibi GQ, Ryder JR, Kim JY, Barraza E. Exercise for obese youth: refocusing attention from weight loss to health gains. *Exerc Sport Sci Rev.* 2015 Jan;43(1):41-7.
17. Crerand CE, Wadden TA, Foster GD, Sarwer DB, Paster LM, Berkowitz RI. Changes in obesity-related attitudes in women seeking weight reduction. *Obesity.* 2007 Mar;15(3):740-747.
18. Robison J, Putnam K, Mckibbin L. Health at every size: A compassionate, effective approach for helping individuals with weight-related concerns--Part II. *Workplace Health Saf.* 2007 May;55(5):185-92.
19. Bacon L, Aphramor L. Weight science: evaluating the evidence for a paradigm shift. *Nutr J.* 2011 Jan;10(9):1-13.
20. Leblanc V, Provencher V, Bégin C, Corneau L, Tremblay A, Lemieux S. Impact of a health-at-every-size intervention on changes in dietary intakes and eating patterns in premenopausal overweight women: results of a randomized trial. *Clin Nutr.* 2012 Aug;31(4):481-8.

Screening for intimate partner violence: Understanding SAFE

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abstract

We introduce the SAFE screening tool to help guide students through taking a medical history in the setting of Intimate Partner Violence. Intimate Partner Violence is one of the most common forms of violence experienced in Canada and, more poignantly, we see a much higher incidence of violence among marginalized populations including refugees, persons of varying abilities, and Aboriginal women. In particular, greater than 50% of Aboriginal populations across Canada experience incidents of violence in their lifetime. This article is dedicated to Intimate Partner Violence survivors and their communities and families and strives to enable medical students to take part in the movement toward change.

In the first term of medical school, students are taught to use the acronym FIFE (feelings, ideas, functions, and expectations) while taking a history. As a result, the acronym and its letters help us engage in meaningful history-taking and understand the patient's perspective. Acronyms are powerful memory tools and can be incredibly useful when taking a patient history in the context of violence where many medical students may at times feel uncomfortable. When a patient has unexplained bruises, a black eye, or more subtle signs such as difficulty keeping appointments, what should one do? This article aims to enable change by presenting a straightforward memory tool to help navigate history-taking tasks in the setting of Intimate Partner Violence—are you 'SAFE'?[1]

We bring attention to the SAFE tool within the context of the current social climate in which students practice medicine. In Canada, Intimate Partner Violence is one of the most prevalent forms of violence experienced, making up over one quarter of violent crime reported to the police, and is defined by the Center for Disease Control as:

"Physical, sexual, or psychological harm by a current or former partner or spouse. Regardless of sexual orientation, Intimate Partner Violence can take place in any relationship and does not require sexual intimacy."[3]

Troublingly, we see a much higher incidence of violence among marginalized populations such as refugees, people of varying abilities, and Aboriginal women than in the general population. In British Columbia, the reported rate of all Intimate Partner Violence among Canadian women is 22.2% in their lifetime.[1] Notably, the reported rate of all Intimate Partner Violence among B.C.'s Aboriginal women is 42.1%, almost double the reported rate in non-Aboriginal–identifying populations.[1] Even more concerning is that Aboriginal women experiencing Intimate Partner Violence are more likely to experience extreme and life-threatening violence, such that these populations are reported to be eight times more likely to be killed by their partner as a result of escalating intimate partner violence.[1] It should be noted that while other acronyms are also available, SAFE was chosen by the authors from several presented by the Society of Obstetricians and Gynecologists' (SOGC) Report on Intimate Partner Violence as a Health-Canada recommended screening tool that is gender-neutral, of average length, and simple for interviewers to recall.[1] Most importantly, the SOGC poignantly reminds healthcare providers that while several validated questionnaires exist for Intimate Partner Violence screening, the nature of the patient-physician relationship, and how questions are phrased, is more important than the choice of screening tool.[1] A further discussion around Intimate Partner Violence screening is available in the closing of this article.

So what can be done to create change?

Ask if the patient is 'SAFE'.

S - Spouse. How would you describe your spouse?
A - Arguments. What happens when you argue?
F - Fights. Do you fight? Are you ever slapped, kicked or punched?
E - Emergency Plan. Do you have an escape plan in case of emergency?

The SAFE Acronym begins with an S for "spouse", prompting the interviewer to begin an open and non-judgemental line of questioning that starts with learning more about a patient's partner. One might ask, "How would you describe your relationship with your spouse?" or have the patient characterize their relationship. This is followed by asking if they feel safe, supported, if they tend to be in agreement or disagreement when communicating with their partner, and if they feel loved. Follow the patient's lead to help develop rapport. Being empathetic is more important than phrasing one's questions perfectly. Open ended questions and a safe space for the patient are key to understanding the full context of the patient history.[1]

The next letter, A, stands for arguments. Start by asking "What happens when you and your partner argue?" Then, have the

patient describe how often they fight, who is present in the home when this happens, and if police have ever been called before. You should also ask what the last argument was about. It is essential to phrase questions in a non-judgemental manner to ensure the patient does not feel faulted while sharing information.[1] If children are at risk, engage in further assessment—disclosure may be required by law.[1]

Next, detail fights and what happens when they arise as the F section of the acronym SAFE. Begin with questions such as, "Do you fight? If so, do you ever get hit, punched, slapped, or kicked?" Evidence demonstrates the importance of using descriptive terms such as hit, punched, and kicked to be as clear as possible since terms such as "abuse" or "domestic violence" can be misunderstood, are overly academic, or do not have meaning for patients.[1] Be explicit when asking questions such as: When did the violence start? Has it increased in severity? Are there weapons in the home? Have your children been harmed?

Lastly, the letter E involves completing a safety screen and explicitly eliciting information around a patient's emergency plan. Explain that, much like a fire drill, the patient may want to consider having safety checks in place should the situation necessitate that they leave the home quickly. Leaving an abusive partner is the most dangerous time for women and their children.[1] A safety plan may include an emergency shelter or resource phone numbers, important travel documents such as passports and driver's license, money, and a code word to alert family and friends to the situation. The last detail is especially important if communication lines are being monitored by an abusive partner.

It is fundamental that healthcare providers become comfortable with routinely asking the questions that the SAFE acronym generates. Most recently, the 2013 Canadian Task Force on Preventative Health Care acknowledged that there is not enough evidence within the Canadian population to recommend the regular Intimate Partner Violence screening of women of childbearing age that is encouraged by the United States guidelines on Intimate Partner Violence.[4] However, remember that women do not routinely disclose for many reasons such as "shame and embarrassment, fear of discussing violence, guilt or self-blame, fear professionals will not believe them, and fear of government involvement or disruption to family".[5] For Indigenous women, in particular, the barriers to disclosure may include "fear of stereotypical attitudes and stigmatization, impact of residential schools including mistrust of institutions, threat of apprehension of… children by social service agencies and lack of service or support in remote or rural communities".[5]

While assessment of the effectiveness of Intimate Partner Violence screening tools is fraught with statistical and research limitations,[6,7] and can cite sensitivities as broad as 35-71%,[8] the SAFE acronym is presented here as an easy-to-remember, gender-neutral acronym of moderate length that is notable for being one of the few screening tools integrating open-ended questions.[1] These factors help establish rapport and create a comfortable environment for a survivor of Intimate Partner Violence which the writers feel is necessary for any successful interview. Further screening tools are available from the CDC [9] but it is important to note that emphasis should be placed on the way in which questions are asked more than the type of screening tool utilized.[1] When evaluating further screening tool options, be aware that the sensitivity and specificity of Intimate Partner Violence screening tools is difficult to establish, since the tests need to be compared against a gold standard exam which does not exist in the case of Intimate Partner Violence.[6] Unlike the exemplary screens for hypertension and resultant identification and treatment of a patient, there is no consensus on appropriate action following disclosure in the setting of violence.[1]

In conclusion, simply having conversations around SAFE categories in an empathetic manner, regardless of the formal screening tool used, will help create a safe space for conversation that can help empower the survivors of Intimate Partner Violence. Focus on empowering patients, reinforcing how common domestic violence and interpersonal violence is, and keeping children safe. Together we can work toward eradicating violence in our homes and communities.

This article is dedicated to all communities enduring violence.

disclosures

The authors do not have any conflicts of interest to disclose.

references

1. Cherniak D, Grant L, Mason R, Moore B, Pellizzari R. SOGC clinical practice guidelines. Intimate partner violence consensus statement. *J Obstet Gynaecol Can.* 2005 Apr;27(4): 365-388.
2. Canadian Centre for Justice Statistics. Family violence in Canada: A statistical profile, 2013. Ministry of Industry (CAN); 2015 Jan. 84 p. Cat No. 85-002-X 22.
3. Center for Disease Control and Prevention. Injury Prevention & Control: Division of Violence Prevention, Intimate Partner Violence[Internet]. (US); [updated 2015 May 28, cited 2016 Dec 19] Available from: http://www.cdc.gov/violenceprevention/intimatepartnerviolence/
4. The Public Health Agency of Canada. The Canadian Task Force for Preventive Health Care. Guidelines on domestic abuse: Critical appraisal report. 2015 (http://canadiantaskforce.ca/appraised-guidelines/2013-domestic-abuse/
5. Etheridge A, Gill L, McDonald J. Domestic violence toolkit for health care providers in BC. Surrey (CAN): Kwantlen Polytechnic University BSN-PB Nursing 5610 Project;2014 Aug. [cited 2015 Nov 15]. Available from: https://www.kpu.ca/sites/default/files/NEVR/DV%20Toolkit%20%20PDF%20August%2024.pdf.
6. Rabin FR, Jennings JM, Campbell JC, Bair-Merritt MH. Intimate partner violence screening tools. *J Prev Med* [Internet]. 2009 May [cited 2015 Dec 12]; 36(5):439-445. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2688958/
7. Northcott M. Intimate partner violence risk assessment tools: A review [Internet]. Ottawa (CAN): Research and Statistics Division Department of Justice Canada;2012. Available from: http://www.justice.gc.ca/eng/rp-pr/cj-jp/fv-vf/rr12_8/rr12_8.pdf
8. Cronholm PF, Fogarty CT, Ambuel B, Harrison SL. Intimate partner violence. *Am Fam Physician* [Internet]. 2011 May [cited 2015 Dec 12]; 83(10):1165-1172. Available from: http://www.aafp.org/afp/2011/0515/p1165.html
9. Basile KC, Hertz MF, Back SE. Intimate partner violence and sexual violence victimization assessment instruments for use in healthcare settings: Version 1.0. Atlanta: Centre for Disease Control and Prevention, National Centre for Injury Prevention and Control, 2007. Available from: http://www.cdc.gov/violenceprevention/pdf/ipv/ipvandsvscreening.pdf

The utility of U.S. medical electives to the Canadian medical student

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abstract

While medical schools stress the importance of graduating well–rounded physicians, the unfortunate reality is that competitive residency programs drive some medical students to both pick a speciality early on in their training and book electives in this one speciality across the country to maximize their chances of matching.[1,2] One can make the argument that flying across the country to secure strong letters of reference in a chosen discipline trumps the drive to broaden the medical school experience by booking electives outside of Canada. To date, there appears to be little incentive for the Canadian applicant to pursue medical electives in the United States, especially if they do not intend on participating in the U.S. residency match.

Herein, we document the experiences of two Canadian medical students who completed electives in the United States. Neither participated in the U.S. Match, and both ultimately applied to CaRMS entry positions in Canada in Plastic Surgery and Ophthalmology.

Cardiac Transplantation, Los Angeles

For my third year elective, I travelled to Los Angeles for an elective in cardiothoracic transplantation. I worked at one of the largest cardiac transplantation programs in North America, with the opportunity to learn from world experts in the field.

During my stay, I was assigned to the transplant fellow and was expected to attend every procurement and transplant he undertook. Since an organ could become available at any moment, this essentially meant that we were always on–call. I recall the fellow's pager going off the first night and us being escorted by hospital security to the rooftop of the hospital where a helicopter awaited. Our team consisted of a staff surgeon, a fellow, a nurse, and a transplant coordinator. I learned that an essential first step in any procurement was assessing the viability of the organs themselves. I was told that one particular donor's heart and lungs were contused from an accident and this introduced too high a risk for the recipient. It was fascinating to see how the staff weighed the severity of the recipient's condition with the likelihood that the donor organs would fail.

My time in Los Angeles was an invaluable learning experience. Accompanying the transplant team and appreciating the urgency and complexity of cardiac transplantation was highly memorable. As a clerk interested in pursuing a surgical specialty, I gained exposure to different techniques, built upon my knowledge of organ transplantation, and enhanced my appreciation of finances in healthcare management. I would highly recommend this elective, not only to my aspiring cardiac surgery colleagues, but to any student looking for a unique educational experience.

Oculoplastics, Los Angeles

In my fourth year of medical school, I completed an oculoplastics elective in Los Angeles, California. Oculoplastic surgery is a broad field in ophthalmology, encompassing both cosmetic and reconstructive surgery. I was eager to spend time in a research–heavy institution and a healthcare system in which I had no previous experience.

This was my first experience working in a private setting. I observed with keen interest the dynamic in which physicians advocated for their patients to insurance agencies. My initial understanding was that conditions compromising vision were covered by insurance agencies, while non–essential cosmetic procedures were paid out–of–pocket; however, a grey zone existed that turned out to be much larger than I had anticipated. For example, some patients needing Botox for blepharospasm, an abnormal and at times debilitating eyelid contracture were denied coverage, while others were approved for it. It seemed that the physicians' input was essential in coming to these decisions.

Having only witnessed the functioning and efficiency of the Canadian healthcare system, I was also taken aback when elective surgeries were booked a day or two after the initial consultation. Similarly, elective imaging, like MRI, was available on demand. When the expertise of another specialist was required, a quick phone call was made between staff and the patient would be seen together by both teams, on the same day. The pace and time taken

per consultation was astounding. Patients had time to ask questions, voice concerns, and discuss the various potential surgical outcomes.

Assisting in highly innovative and complex surgeries was truly the highlight of this rotation. The most interesting case I observed was a rare arteriovenous malformation causing the patient to have an increased risk of fatal haemorrhage. I found it striking how a team consisting of an oculoplastic surgeon, an interventional neuroradiologist, a plastic surgeon, and an anaesthesiologist—all met with the patient together rather than fragmenting the patient's care due to their busy schedules.

The drive for learning and innovation, the patient–centered care, and the teamwork amongst the staff I worked with was infectious and made for an incredible experience.

Pediatric Intensive Care Unit, Oahu

I was greeted at the Children's Hospital by a sea of flowered Hawaiian dress shirts. I would soon realize that this was in fact formal attire, worn by physicians underneath their white coats and essentially omnipresent among all other hospital workers. While the lure of sunshine after five months of Vancouver's downpour will not be understated, this month–long pediatric ICU elective turned out to be much more than four weeks of beach and flowers. In fact, it turned out to be one of the most valuable educational experiences of medical school.

The importance of the social history was striking in Hawaii. In addition to the Polynesian and white–American populations that I expected to work with coming to Honolulu, I was introduced to the large Micronesian, Melanesian, Japanese, Filipino, and, of course, tourist populations—each of whom carried unique medical predispositions. I helped treat patients with rheumatic heart disease, Potts disease, Kawasaki's disease, and hemophagocytic lymphohistiocytosis—all diseases that I had far less exposure to in Vancouver. I learned from my preceptors that, historically, streptococcal infections and TB were poorly treated in the Micronesian islands leading to a higher prevalence of rheumatic heart and Potts disease than in the general population. I also learned that Hawaii has one of the highest incidences of Kawasaki's disease in North America.

The pediatric trauma presentations particularly resonated with me during this rotation. One young boy sustained multiple facial fractures and soft tissue injuries after being mauled by a pit bull. I was told that this was not an infrequent occurrence in Hawaii, where many residents owned pit bulls and trained them for hunting wild boars. The unfortunate reality of a market in which the most aggressive hunting dogs were preferentially bred was a high number of dog attack injuries.

As I reflect on the diversity in patient demographic and disease presentation, as well as the beautiful setting in which all this occurred, I have no doubt that this elective would be invaluable to any Canadian medical student.

conclusion

The notion that medical schools graduate physicians who are well versed in all areas of medicine is essential. Rather than picking a specialty early on and narrowing their focus in the last two years of medical school, we recommend that students work to broaden their medical education in any way they can. As previous authors have found,[3] we believe that international electives expose students to diverse populations, challenge them to adapt to an unfamiliar health care environment, and work to strengthen their cultural sensitivity, all of which significantly enhance their medical education.

disclosures

The authors have no conflicts of interest to disclose.

references

1. McCauley B. Becoming an emergency resident: A program director's perspective. Can J Emerg Med Care. 2004 Feb;6(1):534.
2. Reilly CW, Keith A, Stothers MB, Angeliki P, Stephen JT. An orthopedic career fair: a novel recruitment event. Can J Surg. 2007 Jun;50(3):168.
3. Thompson MJ, Mark KH, Hunt DD, Pinsky LE, Brodie JJ. Educational effects of international health electives on US and Canadian medical students and residents: a literature review. Acad Med. 2003 Mar;78(3):3427.

Cultural immersion placements as a tool for cultural safety education for medical students

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abstract

As medical students, understanding and appreciating the diverse histories, identities, aspirations, cultures, and values of Aboriginal peoples is a crucial first step in the delivery of culturally–safe health care. Cultural immersion placements in Aboriginal communities represent one emerging initiative in helping medical students better understand how to deliver health care in culturally–safe ways that both services and works with Aboriginal peoples. Medical students across Canada would therefore be well served by the establishment (or expansion) of cultural immersion placements in partnership with Aboriginal communities through their own faculties of medicine.

introduction

As future healthcare professionals, understanding and appreciating the diverse histories, identities, aspirations, cultures, and values of Aboriginal peoples is a crucial first step in the delivery of culturally–safe health care that works to eliminate health disparities between Aboriginal and non–Aboriginal peoples. There is a growing consensus that culturally–safe health care can play a key role in bridging the gap between Aboriginal and non–Aboriginal health outcomes, and that the roots of effective cultural safety lie in the education of healthcare providers.[1-4]

Cultural safety is an evolving notion that encourages healthcare practitioners to analyze and challenge power imbalances, institutional discrimination, and colonization as it applies to healthcare.[1-3] Culturally-safe health care is rooted in a deep understanding and respect for cultural difference, and requires critical self–reflection on the part of the health professional to recognize and appreciate the unique histories and socio-political circumstances that have contributed to contemporary health inequities between populations.[1-3] Medical practice rooted in culturally safe approaches requires health care providers to respect and support patient beliefs and values by creating safe clinical environments in which these beliefs can be expressed and realized.[2-4]

In the context of Aboriginal health, culturally-safe care generally includes three components: understanding the history and ongoing impact of colonization; recognizing the relevant factors (including access to health services, as well as socio-economic and political factors) that determine contemporary health statuses and inequities; and understanding, appreciating, and supporting the aspirations (health-related and otherwise) of Aboriginal peoples.[2] Thus, the education of medical and health professional students on how to have empowering interactions with Aboriginal peoples on teaching students about the history of colonization and its impact on Aboriginal peoples, and encourages students to evaluate their personal preconceived attitudes, beliefs, and values. Such an education is ultimately intended to help students recognize, contemplate, and challenge the origins of their conscious or unconscious attitudes towards social and/or cultural differences, as well as how to modify the effects of these attitudes on clinical practice involving Aboriginal peoples.[3]

Cultural immersion placements in partnership with Aboriginal communities represent one strategy that is increasingly coming to the fore in helping medical students better understand how to deliver health care in culturally–safe ways that allow them to both serve and work with Aboriginal peoples.

cultural immersion: an emerging opportunity for cultural safety education

Cultural immersion is a community-based experiential approach to education based on the principle that immersion in the culture and language of a community or group can be an effective means of learning about one's self and "cultural diversity and difference."[5] It is valuable in its ability to "encourage students to critically reflect on their own and others' attitudes towards difference."[7] Early evaluations of cultural immersion placements in medical and health professional education around the globe have indicated that these placements enhance student awareness and consciousness, thereby undermining prejudice and racial bias.."[5] Indeed, cross-cultural experiences and placements in medical education are associated with positive outcomes in students' personal and professional development. These experiences also provide benefits to both the medical school and the host community.[8] Student evaluations have tended to be positive and reflect a self-reported increase in students' awareness of cultural difference.[8]

Learning "by, for, and in" Aboriginal community contexts may thus be an effective means of enhancing students' understanding and appreciation of cultural differences. Experiences within cultural immersion placements necessarily vary from community to community but might typically include participation in cultural activities (including language learning, hunting, and medicine picking) and a general introduction to Aboriginal history and cultural protocols.[11,12]

By living and studying in an Aboriginal

community, students gain a wealth of exposure to community perspectives, and through these lived experiences they may also begin to better understand and appreciate the diverse causes and implications of contemporary Aboriginal health issues and inequities. Participating in cultural activities and observing daily life in an Aboriginal community might also help shift student perspectives from viewing Aboriginal communities as geographically distant, resource-deficient locales to unique places of resilience, diversity, and strength. Such reflexivity, respect for cultural difference, and recognition of how sociological, political and historic factors have influenced the health of Aboriginal peoples is especially important in the development of culturally safe approaches to working with Aboriginal peoples.

In 2005, the Northern Ontario School of Medicine (NOSM) implemented the world's first and only mandatory Aboriginal community placement for all of its medical students.[11] The 'Integrated Community Experience' occurs for four weeks at the end of the first year of training in the school's undergraduate medical education program. The immersion opportunity is intended to enhance medical students' understanding of, and respect for, Aboriginal history, tradition, and culture by allowing them to experience life in an Aboriginal community.[12] This community-based experience is unique to NOSM in that it is primarily intended as a cultural immersion experience rather than a clinical experience.

Other medical schools across Canada are increasingly supportive of medical student education around Aboriginal health through clinical exposures at the community level. The University of Alberta's Faculty of Medicine and Dentistry has formed a partnership with the Bigstone Health Commission to establish a clinical rotation of one-to-two months length for third year medical students and residents at the Wabasca/Desmarais Healthcare Centre and at a local clinic that serves high numbers of Aboriginal patients.[14] The University of British Columbia has also established a rural Aboriginal health clinical elective for fourth year students which allows them to gain experience providing health care in Aboriginal communities.

opportunities and challenges for learners and communities

Medical students seeking opportunities to learn from and with members of Aboriginal communities should be encouraged and supported by their host medical school, and schools should have resources available to help facilitate this process.

Medical students should also be mindful of the importance of humility and respect while working with Aboriginal communities, and learn to see themselves as learners rather than cultural tourists. Medical students who are able to participate in a community placement must recognize that it is a privilege to be welcomed and supported in their learning by an Aboriginal community, and should convey respect to community members at all times.

Despite the general perception, by both medical learners and host communities, that these placements are successful, there do exist limitations and challenges to their operation.[10,11,14] Challenges for students can include logistical accommodations and the need to adapt to occasionally significant changes in resource availability.[14] There also exists the risk that communities may experience a burden by being asked to participate in activities, as well as to host and provide resources to support an annual cohort of medical learners. For these reasons, it is critical that medical schools ensure bilateral, respectful engagement and open communication with a community coordinator, thereby ensuring that the community placements are mutually beneficial and in line with community resources, desires, values, and abilities.

Medical schools across Canada are well-positioned to ensure that future physicians are well-informed about the diverse constellation of factors that influence and shape the contemporary health of Aboriginal peoples. If we contend that enhancing cultural safety begins with a strong base of knowledge, respect, and appreciation for cultural difference, then cultural immersion experiences may serve as a tremendous opportunity for enhancing our skills in cultural safety and for working in meaningful, respectful, and culturally-safe ways with Aboriginal peoples. Opportunities for such experiences in our medical education could help better position future generations of physicians to support and empower Aboriginal peoples in their aspirations and efforts to improve their own health and well-being.

disclosures

The authors have no conflicts of interest to disclose.

references

1. Royal College of Physicians and Surgeons of Canada. Indigenous health values and principles statement [Internet]. 2013 [cited 2015 Oct 12]. Available from: http://www.royalcollege.ca/portal/page/portal/rc/common/documents/policy/indigenous_health_values_principles_report_e.pdf
2. Brascoupe S. Exploring the applicability of the concept of cultural safety to Aboriginal health and community wellness. *J Aborig Health*. 2009 Nov;5(2).
3. National Aboriginal Health Organization. Fact Sheet Cultural Safety [Internet]. 2006 [cited 2015 Oct 12]. Available from: http://www.naho.ca/documents/naho/english/Culturalsafetyfactsheet
4. Baba L. Cultural safety in First Nations Inuit and Metis public health: environmental scan of cultural competency and safety in education, training and health services [Internet]. 2013 [cited 2015 Oct 12]. Available from: http://www.nccah-ccnsa.ca/Publications/Lists/Publications/Attachments/88/CIPHER_report_EN_web_updated2.pdf
5. Crampton P, Dowell A, Parkin C, Thompson C. Combating effects of racism through a cultural immersion medical education program. *Acad Med*. 2003 Jun;78(6):595-8.
6. Kai J, Spencer J, Wilkes M, Gill P. Learning to value ethnic diversity – what, why and how? *Med Educ*. 1999 Aug;33(8):616-23.
7. Kavanagh K. Summers of no return: transforming care through a nursing field school. *J Nurs Educ*. 1998 Feb;37(2):71-9.
8. Mutchnick I, Moyer C, Stern, D. Expanding the boundaries of medical education: evidence for cross–cultural exchanges. *Acad Med*. 2003 Oct;78(10):S1-5.
9. Dogra N. The development and evaluation of a program to teach cultural diversity to medical undergraduate students. *Med Educ*. 2001 Mar;35(3):232-41.
10. Dowell A, Crampton P, Parkin C. The first sunrise: an experience of cultural immersion and community health needs assessment by undergraduate medical students in New Zealand. *Med Educ*. 2001 Mar;35(3):242-9.
11. Hudson G, Maar M. Faculty analysis of distributed medical education in Northern Canadian Aboriginal communities. *Rural Remote Health*. 2014 Oct;14(4):2664.
12. Jacklin K, Strasser R, Peltier I. From the community to the classroom: the Aboriginal health curriculum at the Northern Ontario School of Medicine 2014. *Can J Rural Med*. 2014;19(4):143-50.
13. Crampton P, McLachlan J, Illing J. A systematic literature review of undergraduate clinical placements in underserved areas. *Med Educ*. 2013 Oct;47(10):969-78.
14. Betkowski B. Med students gain Aboriginal perspective on health. University of Alberta News. [Internet]. 2015 Oct 22. [cited 2015 Dec 3]. Available from: https://uofa.ualberta.ca/news-and-events/newsarticles/2015/october/med-students-gain-aboriginal-perspective-on-health

Health advocacy in action: The implementation of an early literacy initiative in Vancouver

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abstract

There is a growing awareness that physicians, in addition to attending to the medical needs of patients, should also address the patients' social, emotional, and community connections in order to improve their total well–being. A group of medical students at the University of British Columbia is undertaking an initiative called the Reading Bear Society, which aims to integrate the Health Advocate role highlighted by the Canadian Medical Education Directions for Specialists framework into their learning experience. This article discusses the context and goals for implementing the initiative.

Health advocacy is the practice of providing healthcare–related support and education at both the individual and the community levels to improve the holistic well–being of patients. The changing face of medicine through the twenty–first century places increasing emphasis on the need for physicians who not only treat ailments, but who also demonstrate proficiency in health advocacy. Medical students are taught that effective practitioners must address the social determinants of their patients' health, identify the needs of under–served populations, improve awareness of healthy practices, and collaborate with social and community agencies. Indeed, the role of the Health Advocate is highlighted as an essential competency of physicians in the Canadian Medical Education Directions for Specialists (CanMEDS) framework.[1] At the University of British Columbia (UBC), medical students must complete a course entitled, "Doctor, Patient, and Society" (DPAS), in which they may pursue a self–directed project option to conduct research or launch community projects. One group of students is integrating the CanMEDS Health Advocate role into their DPAS curriculum by examining the needs and issues of their local Vancouver community and by implementing a service–learning initiative in elementary and secondary schools.

Recent data from British Columbia identified that kindergarten–aged children and adolescents are most affected by socioeconomic risk factors—both poverty and affluence—which have been shown to lead to poor academic achievement, youth depression, anxiety, and substance use.[2-5] This could be in part attributable to the growing economic disparity throughout the province and the consequent breakdown of the normal social fabric, for it is the connection to family and community that sustains a healthy childhood.[3,4] Socioeconomic restrictions limit childhood learning resources and are associated with poorer developmental outcomes.[2-5] Conversely, a correlation also exists between affluence, emotional vulnerability, and risk–taking behaviour in teenagers.[6] Household and neighbourhood affluence are associated with isolation, a lack of community connectedness, and childhood anxiety disorders.[7]

With these target populations in mind, a medical student, a Vancouver nurse, and an inner–city school principal, along with the financial and academic support of community stakeholders, co–founded the Reading Bear Society (RBS), a school service program that promotes early literacy and school readiness while working to develop social and emotional intelligence in Vancouver's school communities. By pairing adolescent mentors as reading buddies with kindergarten–aged children from different neighbourhoods and socioeconomic backgrounds, the RBS provides a mutually–beneficial learning opportunity to build connections across the city and to nurture enthusiasm for reading.

Reading buddies meet for eight to ten monthly visits throughout the school year and work through a standardized workbook developed by the RBS team. Each visit has a unique theme, along with objectives based upon B.C. Curriculum Guidelines for Kindergarten Students and B.C. Curriculum Guidelines for Service Learning for Middle and High School Students.[8] Through one–on–one reading opportunities and completion of the Reading Bear workbook, the buddy pairs can build compassion and empathy for one another. This bridges the gap created by their disparate socioeconomic backgrounds and ultimately improves learning and health outcomes. Furthermore, in order to bring early literacy into their homes, the kindergarten students are each given books and a teddy bear—The Reading Bear—so that they can practice reading with their bears. Pre–visit orientations and supervision from teachers and volunteers allows for a quality–controlled process, with coaching and mentoring for both the kindergarteners and the older children.

The RBS is founded on the academic and scientific literature that demonstrates the pivotal importance of strong leadership and inter–sectorial partnerships in the development of early childhood programs.[3-5,9,10] A study published in the American Educational Research Journal found that students who engaged in peer–tutoring classrooms demonstrated improved

reading, irrespective of the type of learner.[9] It has also been shown that children who have early opportunities for social integration, friend making, and literacy at home are more academically successful, are physically and emotionally healthier, and have greater altruistic tendencies.[11,12] By providing these mentorship and learning opportunities, it is expected that both kindergarteners and adolescents will show similar improvements in the areas of emotional intelligence and academic success. This evidence–based intervention facilitates early adjustment to school for kindergarteners through confidence–building, and it also facilitates the development of self–awareness, empathy, and altruism in the older buddies. Testimonials from teachers who observed the program have shed light on the positive impacts of these relationships on the most vulnerable participating children.

Now in its second year of operation, the RBS aims to target these goals as well as to rigorously assess the effects of the buddy reading sessions through a research project. The aim of the study is to gather evidence and to determine the effectiveness of the RBS approach in enhancing the education, emotional development, and community spirit of the young minds. The research team now consists of seven UBC medical students who are currently enrolled in DPAS and who maintain the same ambition as the original co–founders: to be health advocates for vulnerable youth in the local community.

Another unique quality of the RBS is that it sets out to implement the City of Vancouver's Healthy City Strategy, a "long–term, integrated plan for healthier people, healthier places, and a healthier planet."[13] The city has developed "Building Blocks of a Healthy City for All," a document that elaborates on the Healthy City Strategy by setting goals to guide the implementation of community programs and the changes to take place in Vancouver over the next ten years.[13] There is substantial overlap between the goals of the city and the pillars upon which the RBS is built. The first of these pillars is Early Literacy, which is harmonious with the city's goals to promote learning throughout life and to offer all children a healthy start. The RBS also values Community and engages citizens from across the city to participate in Intergenerational Mentorship. By Educating the Heart–Mind, we help to build supportive networks that promote inclusion of all diverse parts of our city. Much of this is synonymous with the "Building Blocks" set forth in the city's strategy and the medical students' goals as health advocates.

RBS is founded on the academic and scientific literature that demonstrates the pivotal importance of strong leadership and inter–sectorial partnerships in the development of early childhood programs.

Endorsement from the City of Vancouver and implementation as a service–learning program under the B.C. Ministry of Education would allow the RBS to secure the sustainability of the program and to reach more students. One barrier to city– or province–wide implementation is the potential concern that the program could be perceived as a unilateral charity being distributed in the lower–income areas of the city. However, it is strongly believed that each student has something unique and valuable to offer, creating a mutually–beneficial experience for kindergarten–aged and adolescent students.

As evidenced by the current progress of the RBS, it is clear that the DPAS self–directed project option has proven an invaluable opportunity for students to explore the CanMEDS Health Advocate role. By addressing the social, emotional, and community impacts of childhood adversity through this program, medical students are inspired to believe that, as physicians, it is possible to meaningfully impact the health outcomes of their communities.

acknowledgements

We would like to thank Joanne Roussy, PhD for her continuous support in the project and for contributing to the editing of the article.

disclosures

The authors do not have any conflicts of interest to disclose.

references

1. Frank, JR. (Ed). The CanMEDS 2005 physician competency framework. Better standards. Better physicians. Better care. Ottawa: The Royal College of Physicians and Surgeons of Canada. 2005 [Cited 2014Oct12].
2. Hertzman C. The significance of early childhood adversity. *Paediatr Child Health*. 2013;18(3):127-8.
3. Guhn M, Schonert-Reichl KA, Gadermann AM, Hymel S, Hertzman C. A population study of victimization, relationships, and well-being in middle childhood. *J Happiness Stud*. 2012 Oct;14(5):1529-41.
4. Vancouver Coastal Health and the Human Early Learning Partnership. Early Development Instrument Background Document. 2013 Mar [Cited 2014Oct12].
5. Boivin M, Tremblay RE. The best ECD research in Canada, a tribute to Clyde Hertzman. Bulletin on Early Childhood Development. Centre for Excellence for Early Childhood Development. 2013 Dec;11(1):1-2.
6. Luthar SS, Latendresse SJ. Children of the affluent: challenges to wellbeing. Curr Dir Psychol Sci. 2005 Feb;14(1):4953.
7. Vine M, Vander-Stoep A, Bell J, Rhew IC, Gudmundsen G, McCauley E. Associations between household and neighborhood income and anxiety symptoms in young adolescents. *Depress Anxiety*. 2012 Sep; 29(9):82432.
8. Province of British Columbia. Curriculum Packages by Grade [Internet]. 2014 [Updated 2014; Cited 2014Dec1]. Available from: http://www.bced.gov.bc.ca/irp/gc.php?lang=en
9. Fuchs D, Fuchs L, Mathes P, Simmons D. Peer-assisted learning strategies: Making classrooms more responsive to diversity. *Am Educ Res J*. 1997;34(1):174-206.
10. McMaster K, Fuchs D, Fuchs L. Research on peer-assisted learning strategies: The promise and limitations of peer-mediated instruction. *Read Writ*. 2006;22(1):5-25.
11. D'Angiulli A, Siegal LS, Hertzman C. Schooling, socioeconomic context, and literacy development. *Educational Psychology*. 2004;24(6):867-883.
12. Trentacosta CJ, Izard CE. Kindergarten children's emotion competence as a predictor of their academic competence in first grade. *Emotion*. 2007;7(1):77-88.
13. A healthy city for all: Vancouver's Healthy City Strategy 2014-2015 [Internet]. Vancouver: City of Vancouver; 2014 [Cited 2014Oct14]. Available from: http://vancouver.ca/people-programs/healthy-city-strategy.aspx

From vision to action: An analysis of BC's mental health and substance use plan

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According to the Mental Health Commission of Canada, one out of every five Canadians will experience mental health issues.[1] In 2011, the prevalence of mental illness in Canada was estimated at 6.7 million—a prevalence three times higher than type 2 diabetes and four times greater than heart disease.[2] The direct economic burden of mental health problems on the Canadian economy is at least $50 billion per year—a staggering 2.8% of the Canadian gross domestic product.[2,3]

In British Columbia, the growing incidence of mental health issues contrasts with many positive indicators. BC residents have the healthiest behaviours in Canada with respect to cigarette smoking, alcohol consumption, and physical activity.[4] British Columbia also has significantly lower rates of hypertension, heart disease, diabetes and arthritis than most other Canadian provinces.[5] Yet, British Columbian are also more likely to report mood problems, ranking ninth out of ten provinces in self–perceived mental health status, second only to Nova Scotia.[5]

The colossal impact of mental illness on the well–being of Canadians has prompted a variety of responses from federal and provincial governments. Increasing awareness of mental health, by both government and non–governmental entities, has captured national attention and cultivated greater acceptance of mental health issues and mental illness by the public.[6] This emerging cognizance has coincided with new initiatives, such as the BC Ministry of Health's ten–year mental health plan released in 2010 as well as the creation of Canada's first–ever national Mental Health Strategy in 2012.[2,7] Together, these provincial and national strategies establish a population health framework for improving service, treatment, and support for mental illness and substance abuse in British Columbia.

When the government of BC launched Healthy Minds, Healthy People (HMHP): A Ten–Year Plan to Address Mental Health and Substance Use in British Columbia in 2010, the action plan was lauded for taking a holistic, evidence–based approach to deal with the complex, multifaceted issues of mental health.[7] The decade–long plan entails three major goals: (1) to improve the mental health and well–being of the population; (2) to improve the quality and accessibility of services for people with mental health and substance use problems; and (3) to reduce the economic costs to the public and private sectors resulting from mental health and substance use problems.[8] The HMHP also advocates for broader policy changes to improve mental health through early intervention, health promotion, stigma reduction, and public education.[7,8]

A notable strength of the HMHP is that it is designed to galvanize collective effort between the provincial government and non–governmental entities to address mental health issues in BC. The plan identified stakeholders best suited to collaborate on initiatives—from health authorities to community groups—and set ambitious milestones and target goals to achieve within ten years of its implementation. By taking a population–level approach, the HMHP recognized that vulnerable populations—such as children, the elderly, Aboriginal peoples, and people with severe or complex mental illnesses—require tailored initiatives delivered by governments, health providers, community organizations, and members of the public.[6]

Yet the HMHP has received criticism for setting idealized goals that are not adequately corroborated with progress reports or follow-up.[9] This past year marked the half–way point of the plan, and in five years, only one progress report has been published. The plan does not include a budget, nor has the BC government indicated how funds would be allocated across its projects and programs. While the HMHP outlines several overarching goals, such as a 10% increase in people reporting positive mental health by 2018, the 2012 report did not connect the current efforts with target results.[7,8] Without a public budget, annual progress reports, or criteria for evaluating the success of programs,

the BC government cannot transform its earnest vision into tangible outcomes.

Although the HMHP outlines a broad policy vision for mental health and substance use, it contains several important gaps in its strategic priorities. For instance, the HMHP does not address or set targets for key at–risk populations, such as women, people living in poverty, and persons with disabilities. For example, depression and anxiety affect 27.9% of women across BC, compared to 15.6% of men.[5] Despite the gender gap in mood disorders, the HMHP action plan only focuses on certain aspects of women's health, such as perinatal screening and reduced substance use during pregnancy.[8] Without tangible initiatives and goals aimed at reducing mental health disparities, the HMHP may exacerbate inequities among these at–risk populations. Thus, policy efforts must incorporate health equity approaches to mental health and substance use, to ensure that service provision is tailored to the unique health needs of marginalized populations.[2]

The HMHP also fails to propose a concrete plan for eliminating the stigma and discrimination that surrounds mental illness and poses a daunting barrier to individuals seeking help. According to the Mental Health Commission of Canada (MHCC), six out of every ten Canadians with a mental health problem do not seek help out of fear of being stigmatized.[1] The HMHP designates the reduction of stigma and discrimination as one of its four main priorities, yet has thus far only committed to supporting existing anti–stigma initiatives such as the MHCC's HEADSTRONG initiative.[7,10] In February 2015, the BC government partnered with the MHCC and the Vancouver Canucks to host a mental health awareness summitt for 1,800 youth at Rogers Arena.[10] Based on the success of this anti–stigma initiative, the BC government can expand its partnerships with mental health organizations to tackle stigma and discrimination head on.

As the landscape of mental health in BC evolves, the government must adapt its vision, policy, and action to address the needs of the BC population. Fostering mental health and alleviating mental illness requires a coordinated, multidisciplinary approach that addresses barriers to accessing timely, equitable care and support, especially for marginalized populations predisposed to mental health problems.[2] While the challenges to health care reform are complex and abundant, these changes are paramount to efforts aimed at building an equitable mental health system for all British Columbians.

When the government of BC launched Healthy Minds, Healthy People: A Ten–Year Plan to Address Mental Health and Substance Use in British Columbia (HMHP) in 2010, the action plan was lauded for taking a holistic, evidence–based approach to deal with the complex, multifaceted issues of mental health.

disclosures

The author does not have any conflicts of interest to disclose.

references

1. Mental Health Commission of Canada. Mental health matters. Annual report 2014–2015 [Internet]. Ottawa: Mental Health Commission of Canada; 2015 [cited 2015 Dec 6]. Available from: http://www.mentalhealthcommission.ca/English/system/files/private/document/mhcc_annualreport2015_en.v7-ebook.pdf
2. Mental Health Commission of Canada. Changing directions changing lives: the mental health strategy for Canada [Internet]. Ottawa: Mental Health Commission of Canada; 2012 [cited 2015 Oct 9]. Available from: http://strategy.mentalhealthcommission.ca/pdf/strategy-images-en.pdf
3. Mental Health Commission of Canada. Making the case for investing in mental health in Canada [Internet]. Ottawa: Mental Health Commission of Canada; 2013 [cited 2015 Oct 12]. Available from: http://www.mentalhealthcommission.ca/English/system/files/private/document/Investing_in_Mental_Health_FINAL_Version_ENG.pdf
4. Statistics Canada. Canadian community health survey [Internet]. Ottawa: Statistics Canada; 2009 Jun 25 [updated 2011 Jul 05; cited 2015 Oct 12]. Available from: http://www.statcan.gc.ca/daily-quotidien/090625/dq090625b-eng.htm
5. Fang R, Kmetic A, McCarney J. Summary report on health for British Columbia from regional, longitudinal and gender perspectives [Internet]. Vancouver: Provincial Health Services Authority; 2010 [cited 2015 Oct 17]. Available from: http://www.phsa.ca/population-public-health-site/Documents/BCHealth_Indicators_Report.pdf
6. Canadian Mental Health Association. Strengthening our collective impact: a strategic plan for CMHA 2012 – 2017 [Internet]. Ottawa: Canadian Mental Health Association; 2012 [cited 2015 Oct 12]. Available from: http://www.cmha.ca/wp-content/uploads/2012/09/CMHA-StrategicPlan-2012-2017_EN.pdf
7. B.C. Ministry of Health Services & Ministry of Children and Family Development. Healthy minds, healthy people: A ten-year plan to address mental health and substance use in British Columbia [Internet]. Victoria: B.C. Ministry of Health Services & Ministry of Children and Family Development; 2010 [cited 2015 Oct 11]. Available from: http://www.health.gov.bc.ca/library/publications/year/2010/healthy_minds_healthy_people.pdf
8. B.C. Ministry of Health Services & Ministry of Children and Family Development. Healthy minds, healthy people: A ten-year plan to address mental health and substance use in British Columbia. Monitoring progress: 2012 annual report [Internet]. Victoria: B.C. Ministry of Health Services & Ministry of Children and Family Development; 2012 [cited 2015 Oct 11]. Available from: http://www.health.gov.bc.ca/library/publications/year/2012/HMHP-progress-report-2012.pdf
9. Johnson G. Critics say B.C. Liberals' 10-year mental-health plan lacks concrete steps to achieve its goals. The Georgia Straight [Internet]. 2010 Nov 23 [cited 2015 Dec 9]. Available from: http://www.straight.com/article-360387/vancouver/critics-say-bc-liberals-10year-mentalhealth-plan-lacks-concrete-steps-achieve-its-goals
10. Mental Health Commission of Canada. HEADSTRONG: Be brave, reach out, speak up [Internet]. Ottawa: Mental Health Commission of Canada; 2015 [cited 2015 Dec 10]. Available from: http://www.mentalhealthcommission.ca/English/initiatives-and-projects/headstrong

The past, present, and future of HIV in Canada: An interview with the director of clinical education at the British Columbia Centre for Excellence in HIV/AIDS

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The first detected cases of Human Immunodeficiency Virus (HIV) in North America were reported as pneumocystis pneumonia on June 5th, 1981.[1] Little was known about the virus, including the target population, measurement of treatment effectiveness, and dangers of prescribed treatments.[1] However, over the past two decades, this story has changed. From 1994-1996, patients diagnosed in their twenties had a life–expectancy of only nine years, but by 2006-7, this had increased to 51 years.[2] Additionally, support systems have been developed, vulnerable populations have been identified, screening guidelines have been created, and treatment options and prevention programs have been widely expanded.[3] Despite these advances, HIV has continued to burden many nations including Canada, which had over 2,000 new cases in 2013.[4] Part of the resilience of the disease can be attributed to its disproportional prevalence in marginalized populations in Canada.[4] These populations include intravenous drug users, individuals with low socio–economic status, and ethnic minorities, such as Aboriginal peoples.[3,4] Marginalized populations are more likely to be exposed to the disease and have reduced adherence or access to optimal therapy, leading to spread of the disease and poorer prognosis.[4]

The story of HIV has changed dramatically due to the hard work and lifelong dedication of many physicians and health scientists globally. British Columbia is fortunate to be home to many of these global leaders who operate out of the British Columbia Centre for Excellence in HIV/AIDS in Vancouver.[5] The Centre was founded in 1992 when HIV began to be recognized as a significant threat to the health of many Canadians.[5] Its aims are to improve the lives of British Columbians living with HIV and to disseminate new scientific information to treat the disease and prevent it from spreading.[5] In particular, the Centre places emphasis on management of HIV for marginalized populations due to the numerous challenges unique to this high–risk group. The Centre is home to a world—renowned leader in HIV research, Dr. Silvia Guillemi, who has focussed her work entirely on HIV since 1993. Dr. Guillemi is the Director of Clinical Education at the Centre for Excellence and is currently focused on educating family physicians on ways to best manage patients with HIV. She shares her long–evolving story of HIV from the front lines.

Twenty years ago when you had a newly diagnosed HIV patient, what did you expect this diagnosis would mean for your patient?

I met my first HIV patients in the mid-1980s at the start of the real epidemic. Those were tough times, people were really dying of HIV and there was very little we could offer them. I still remember my patients from back then—many of them young men and women who were dying. Some would present very late and would have only one year left to live. Some had associated opportunistic infections of the eyes and bowels causing blindness or chronic diarrhea. At the time, this diagnosis meant patients would be unable to work or have families.

Treatment at the time was a mix of drug therapy and palliative care because we knew the life expectancy was so short. The first drug treatments were hard to tolerate and we were unable to accurately measure their effectiveness.

How does this compare to today and what were the major discoveries that have brought us to where we are now?

The picture really started to change in 1996 after the 11th International AIDS Conference in Vancouver with the unveiling of highly active antiretroviral therapy. Before this, it was not possible to identify the virus, but now there was a way to measure the viral load and assess treatment effectiveness. Soon we began to see the incredible effects of multi–drug treatments and people started to survive.

Instead of taking three pills three times per day, which left patients feeling unwell, far better tolerance can now be achieved by taking one pill once per day.

Awareness and prevention have also improved so much during the past 20 years. Some measures to reduce the spread haven't really worked, such as vaccines, condoms, and spermicides. But now there are pre– and post–exposure prophylactic drugs for individuals who may have participated in high–risk activities, such as unprotected anal sex or unsafe injections. Treating patients appropriately has led to far better outcomes.

What are the current strategies for reducing the burden of HIV in our community and in the world?

The BC Centre for Disease Control now recommends that every single person has an HIV test. A routine HIV check should be done like a regular blood pressure check or a blood sugar check. This is because HIV does not have boundaries—even those who are not in the risk category, such as heterosexual men in their 60s, can develop HIV. Many patients now come in with late diagnoses as their family physicians did not think of HIV as a possibility.

The most effective current strategy is treatment as prevention. Treatment not only benefits the individual but also the community. If someone is on treatment with an undetectable viral load, that person is not contagious. This is a novel concept: if everybody who is HIV–positive is on treatment then we can almost cure AIDS or HIV. The World Health Organization has adopted a strategy developed at the Centre for Excellence called the 90-90-90 strategy: when 90% of people are tested for HIV and 90% are treated, then 90% of these people should be undetectable. If we can achieve this, then we can eliminate HIV globally.

What are the goals of research for future HIV patients?

Most current research is either in the pharmaceutical industry for making the drugs more tolerable, or in public health agencies for increasing treatment adherence. We are also looking at lifestyle issues as many HIV patients don't exercise or eat properly or use street drugs, which can lead to complications with disease management. Addressing these areas will help patients take their medications and lead to better responses.

Over time, how has HIV impacted marginalized populations and what is being done to reduce the increased burden in these communities?

It depends on what we define as 'vulnerable populations' and I don't think I would call the MSM (men who have sex with men) group a 'vulnerable population' because many of them are well–educated and are effectively educating their peers about risks and treatments. Despite this, there are many young gay men who don't seem to have access to information on prevention. Also, patients who have mental health issues and addictions are more challenging to keep in treatment and have lower access to care. The recognition of marginalized populations in the Downtown Eastside of Vancouver has successfully reduced the burden of HIV in the population here. There have been very few new HIV cases in the Downtown Eastside and the disease in needle–users seems to have plateaued. This might be attributed to increased awareness and harm–reduction in the area, such as safe–injection sites. Also, our Centre is working with the First Nations Health Authority to increase access to care, awareness, and early testing in vulnerable First Nations populations in British Columbia. Access to care is also a significant barrier for immigrants and refugees.

The best service for vulnerable populations in Vancouver is the Dr. Peter Centre near St. Paul's Hospital. This Centre was established by Dr. Peter Jepson-Young, a family physician who passed away of HIV. Here, over 20 residents have meals and medications provided by nurses, while over 200 additional HIV–positive members have access to two meals a day and many therapeutic services.

Could HIV ever be restricted to the history books? Where will we be in 50 years?

What I am seeing is that patients will be able to take medication sooner and more consistently, leading to fewer issues around aging with HIV. They will become more productive members of society and have a better quality of life. With all our resources and knowledge in BC, I believe we can achieve something close to eradication of the disease.

Over the past 20 years, Dr. Guillemi and other researchers at the Centre for Excellence in HIV/AIDS have played a vital role in transforming our understanding of HIV. What used to be an unmanageable and devastating virus can now be effectively detected and treated for the betterment of the afflicted patient. The future for global and provincial management of HIV focuses on prevention and treatment. Improvements in these areas will be most difficult in marginalized populations due to reduced access to care and information. Consequently, the continuation of awareness programs in areas of lower socioeconomic status can improve disease prevention. Family physicians also play a large role in achieving optimal disease surveillance for the prevention of HIV by encouraging their patients to undergo HIV status checks.

HIV treatment has advanced immensely to the point that access and adherence to drug therapy are now the largest challenges. The Centre for Excellence in HIV/AIDS is working to expand access and adherence to all eligible patients, including more Aboriginal populations.[5] Health care providers must continue to emphasize the importance of adherence to therapy to reduce disease progression and transmission between individuals. The work of HIV specialists and researchers around the world has proven to be largely successful, but it is far from over.

disclosures

The author does not have any conflicts of interest.

references

1. Gottlieb M, Schanker H, Fan P, Saxon A, Weisman J. Pneumocystis pneumonia - Los Angeles [Internet]. Epidemiology Program Office, Centre for Disease Control; 1981 Jun [cited 2015 Sep 18]. Available from: http://www.cdc.gov/mmwr/preview/mmwrhtml/june_5.htm
2. Hollett K. Advances in HIV Treatment Dramatically Increase Life-Expectancy [Internet]. Vancouver: BC Centre for Excellence in HIV/AIDS; 2013 Dec [cited 2015 Oct 2]. Available from: http://www.cfenet.ubc.ca/news/releases/advances-hiv-treatment-dramatically-increase-life-expectancy
3. Wood E, Montaner JS, Bangsberg DR, Tyndall MW, Strathdee SA, O'Shaughnessy MV, et al. Expanding access to HIV antiretroviral therapy among marginalized populations in the developed world. *AIDS*. 2003 Nov;17(17): 2419-27.
4. Public Health Agency of Canada. HIV and AIDS in Canada, Surveillance report to December 31, 2013. Ottawa; 2014 Oct. 91 p. Cat. No. HP37-2/2013E-PDF.
5. BC Centre for Excellence in HIV/AIDS [Internet]. Vancouver: BC Centre for Excellence in HIV/AIDS; [updated 2016, cited 2015 Sep 19]. Available from: http://www.cfenet.ubc.ca/about-us

Problems and solutions in the health of older adults

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There is no doubt that the Canadian population is aging. As a health policy paper from Doctors of BC points out, older adults currently make up the fastest-growing age group in Canada.[1] As of July 2015, nearly one in six Canadians (16.1%) is 65 years or older, surpassing the number of children aged 0 to 14 years for the first time.[2] The number of older adults in the population will continue to grow in the coming years, and according to projections from Statistics Canada, those 65 years and older will reach around 24% of the BC population by 2031.[3]

The aging of the Canadian population is an important consideration because it presents a significant challenge to health care professionals both now and in the future. Health services are disproportionately required by older individuals. A strong positive correlation has been demonstrated between health spending per capita and age. Average health spending per capita approximately doubles in every subsequent 10-year age group in the final one-third of life[4, 5] Of the total BC government expenditures for people 65 years and older, 61.1% are for hospital costs, 21.4% are for physicians, 11.7% are for other institutions, 5.4% are for drugs, and 0.4% are for other health care professionals.[5] Older adults face unique health problems and issues. As doctors of tomorrow, medical students must learn and prepare for the current and future health needs of our aging Canadian population.

Dr. Kenneth Madden, MD, MSc, FRCPC was interviewed on the increasingly important topic of health in the elderly, including the unique health challenges that older adults face and potential interventions to overcome them.[6] Dr. Madden is an Associate Professor of Geriatric Medicine at the University of British Columbia and the Editor-in-Chief of the Canadian Geriatrics Journal.[7] He is Division Head of Geriatric Medicine at Vancouver General Hospital and holds peer-reviewed grants from the Canadian Institutes of Health Research, the Heart and Stroke Foundation of Canada, and the Canadian Diabetes Association.[7*]

With your experience and expertise, what do you believe are the three greatest problems that undermine the health of elderly individuals?

Most people erroneously think that specific disease processes (such as heart failure) or mobility issues are the biggest predictors of poor health in older adults. But surprisingly, numerous quantitative sociology studies have shown that the complexity of an older adult's social network is the biggest predictor of mortality, morbidity, and the ability to live independently.[8] The second biggest factor would be cognitive dysfunction, likely through the indirect effects it has on the first issue. The third biggest issue affecting older adults is frailty, defined as the inability to maintain one's level of function due to co-morbid illness and loss of muscle due to age-related sarcopenia.

The complexity of an older adult's social network is the biggest predictor of mortality, morbidity, and the ability to live independently.

What kinds of interventions or solutions are there available for social isolation?

Social isolation is a complex multifactorial problem. Multidisciplinary interventions to improve mobility and level of function can help maintain independence and allow older adults to maintain their social network. Community supports can try to replace lost social supports, although this is an imperfect solution. Hopefully, the use of newer information technology resources, such as home monitoring

and social networking services, can help improve these community interventions.

What kinds of interventions or solutions are there available for cognitive dysfunction?

This is the biggest unsolved problem in the care of older adults. Non-pharmacological interventions, such as exercise and education, seem to prevent Alzheimer's disease in observational studies, but intervention trials have shown mixed results. We have several agents to help with cognition (i.e. acetylcholinesterase inhibitors and N-methyl-D-aspartate receptor antagonists), but these primarily address symptoms, not the underlying neurodegenerative processes at work. Since the number of older adults with dementia is increasing at a rapid pace, a coordinated international research effort to find better dementia treatments is vital to the future health care of older adults. Although this has not yet occurred at a government level, the major drug companies have all entered into an agreement to share data into possible treatments for Alzheimer's disease.

What interventions or solutions are there for frailty?

There have been many examinations of pharmacological agents, mostly involving anabolic hormones (such as testosterone or growth hormone), that have either shown no efficacy in frailty or have developed issues with complications. The main treatments for frailty currently consist of strength training and dietary modifications, such as increased protein intake.

Dr. Madden revealed three significant issues that undermine the health of older adults, which include social isolation, cognitive dysfunction, and frailty.

As a Geriatric Medicine specialist, how do you approach these problems in your patients?

The core of treating older adults is the comprehensive geriatric assessment. This involves addressing how medical, neurological, neurocognitive, psychiatric, and rehabilitation issues overlap. The geriatric assessment, in combination with an assessment by a multidisciplinary (occupational therapy, physical therapy, nutrition, nursing) team, allows us to address complex frail older adults with multidisciplinary problems.

As a clinician-scientist, what problems in the health of the elderly have you conducted research about?

My laboratory has examined the effect of exercise interventions in older adults with Type 2 diabetes, the ability of different forms of exercise to impact arterial stiffness in subjects at high cardiometabolic risk, and the impact of sedentary behaviours on cardiometabolic risk factors.[7] We have also examined the impact of age and diabetes on postprandial cardiovascular responses and the cardiovascular responses to orthostatic stress.[7*]

Author commentary

As present and future health care professionals, we are tasked with the mission and responsibility to respond to the health needs of our communities. As the prevalence of older adults continues to rise in Canada, it is important for medical students, physicians, and other health care professionals to be better informed on the topic in order to effectively care for the health of older adults in our communities.

The comprehensive geriatric assessment and multidisciplinary team approach enables health care professionals to identify and address the complex health issues of older adults. Dr. Madden revealed three significant issues that undermine the health of older adults, which include social isolation, cognitive dysfunction, and frailty. It is very encouraging to know that the problem of social isolation is being tackled by multidisciplinary interventions in the community and may improve with newer technological advances. Moreover, it is reassuring to learn that there is ongoing research being conducted to address cognitive dysfunction. It will be important for the health care professions to continue working together to explore and address the health challenges facing older adults in order to meet the needs of our aging Canadian population.

*This statement was adapted from OMICS International.

disclosures

The authors do not have any conflicts of interest to disclose.

references

1. Doctors of BC Council on Health Economics and Policy. Doctors Today and Tomorrow: Planning British Columbia's Physician Workforce [Internet]. Vancouver (BC): Doctors of BC; 2011 July [cited 2015 Oct 16]. Available from: https://www.doctorsofbc.ca/sites/default/files/physicianworkforce_paper_web.pdf
2. Statistics Canada. Canada's population estimates: Age and sex, July 1, 2015 [Internet]. Canada; 2015 Sep 29 [cited 2015 Oct 16]. Available from: http://www.statcan.gc.ca/daily-quotidien/150929/dq150929b-eng.pdf
3. Statistics Canada. (2006). Estimates of Population, Canada, the Provinces and Territories (Persons). In CANSIM Table no.051-0001 (Ed.).
4. Ramlo A, Berlin R. Sustainable: British Columbia's health care system and our aging population. Vancouver (BC): The Urban Futures Institute; 2010. Report No.: 78.
5. Canadian Institute for Health Information. National Health Expenditure Database, 1975 to 2015 [Internet]. Canada; 2015 Oct [cited 2015 Dec 7]. Available from: https://www.cihi.ca/en/spending-and-health-workforce/spending/national-health-expenditure-trends
6. Ip, Alvin (MD Undergraduate Program, Faculty of Medicine, University of British Columbia, Vancouver, BC). Interview with: Dr. Kenneth Madden (Division of Geriatric Medicine, Faculty of Medicine, University of British Columbia, Vancouver, BC). 2015 Oct 14.
7. OMICS International. Ken Madden [Internet]. United States; 2015 Dec [cited 2016 Jan 14]. Available from: http://www.omicsgroup.org/reviewer-profile/Ken_Madden/
8. Berkman L, Syme S. Social networks, host resistance, and mortality: a nine-year follow-up study of Alameda County residents. *Am J Epidemiol.* 1979 Feb;109(2):186-204.

Not so universal health care: The neglect of immigrant and refugee health in Canada

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In the midst of an ongoing and highly publicized Syrian refugee crisis, the health and wellbeing of refugees has been a topic of intense discussion across Canada and other developed countries, with many citizens collectively pressuring Canada to accept more refugees. In 2014, Canada resettled approximately 149,000 refugees, and the outgoing Conservative government had previously pledged to resettle another 10,000 Syrian and Iraqi refugees over the next four years if re-elected.[1,2] However, this quota was recently increased significantly, as the newly elected Liberal government has committed to bringing in approximately 25,000 Syrian and Iraqi refugees "immediately".[3] Although it is promising that Canada is actively improving its commitment to welcoming refugees, it is important to remember that the struggles of refugees do not end upon arrival to a new country. As such, whether Canada is doing enough to ensure that its new residents and future citizens, namely refugees and immigrants, are equally as safe, healthy, and strong as those of its native–born population is an important consideration.

After fleeing immediate health threats (e.g. civil war) in their native countries, refugees face a new set of social and structural threats to their health after migrating to their new home. While refugees are a heterogeneous group, they share a susceptibility to several major health problems and inequities, stemming from various experiences along their resettlement trajectories. In addition to arriving from regions with low health care resources, many refugees will lose material possessions, wealth, and status, and may be separated from their families in the process of fleeing their native country.[4] It is not surprising that upon arrival to a new home country, refugees report considerably worse physical and mental health problems when compared to the native–born population.[5] Upon resettlement, these vulnerable groups must navigate the Canadian healthcare system, which presents several economic, sociocultural, and geographic barriers to receiving equitable healthcare, and consequently achieving good health status.[6] Refugees are not the only vulnerable group that experiences these structural barriers. Upon arrival to Canada, immigrants tend to be healthier than the native–born population, largely due to screening procedures (known as the "healthy immigrant effect").[7,8] However, an established body of literature shows that, on average, immigrants see deteriorating health outcomes shortly after their arrival to a new country, a finding which likely reflects systemic barriers to receiving adequate healthcare.[9]

In addition to tackling various administrative hurdles...many immigrants and refugees must overcome major language and cultural hurdles to navigate the public health care system.

Universal healthcare has long been touted as one of Canada's greatest public policy achievements, so it might be surprising to learn that not all of Canada's refugees or immigrants receive publicly–funded health insurance.[10] Newly settled immigrants and refugees face numerous barriers to accessing the public health care system. In addition to tackling various administrative hurdles (e.g., finding and completing the proper documentation such

as Interim Federal Health Program (IFHP) papers for refugees), many immigrants and refugees must overcome major language and cultural hurdles to navigate the public health care system.[11] Those who are granted health insurance must wait for at least three months—and sometimes as long as two years—to receive medical coverage.[10] Refugees who are waiting to qualify as insured persons can apply to the IFHP, which provides emergency coverage.[12] However in 2012, the Canadian government made drastic cuts to the IFHP, which caused all non–government resettled refugees (e.g., privately sponsored refugees) to lose prescription medication and supplemental (e.g., counselling) coverage, along with emergency dental and vision care. In response, refugee health advocates, including the Canadian Doctors for Refugee Care, filed and won a lawsuit against the Harper Government.[13] The case will soon go before the Federal Court of Appeal.[13]

Fortunately, these cuts are being countered with other efforts to improve the health of these vulnerable populations. Several changes have been proposed by health and policy experts, on a variety of levels, from system–wide to physician–patient interaction, some of which are beginning to take shape. Most importantly, Prime Minister Justin Trudeau has pledged to reverse the cuts that the previous government made to the IFHP, and thereby expand the range of essential medical services available to refugees.[3] Furthermore, health practitioners and policy scholars have suggested additional improvements to the IFHP, including administrative changes to decrease the time it takes for the IFHP to reimburse physicians for refugee visits, clearer guidelines for what is covered under the IFHP, and improved physician education on IFHP protocols.[12] Aside from amendments to the IFHP, other initiatives have been proposed, including eliminating the three–month waiting period in applicable provinces, setting less stringent community health clinic enrolment criteria, and implementing evidence-based guidelines for the treatment of a range of health problems specific to immigrants and refugees.[10, 14]

In the meantime, groups of physicians across Canada have also taken initiative in securing the funds needed to treat uninsured refugees and immigrants. One example is the Canadian Centre for Refugee and Immigrant Health Care in Toronto, which operates solely on public donations and is run by a volunteer team of health care providers.[15] Secondly, the use of professional interpreters is a promising solution to help overcome the culture and language barriers often cited by newcomers as deterrents to engagement in the health care system.[6] Interpreters can act as liaisons between patients and health practitioners, whereby they may act as patient advocates and enable the transmission of cultural concepts between both parties.[16] In preparation for welcoming 3,500 new refugees to British Columbia, the Provincial Health Services Authority is training and assigning 30 interpreters who will connect these families with the health care system to ensure their needs are fully met.[17]

Canada has come to be known for its generosity, inclusiveness, and multiculturalism. With a newly elected government that values immigrant and refugee health and safety, equitable health for these minority groups might be within reach. As Canada welcomes 25,000 Syrian and Iraqi refugees in the coming months, it is crucial for health practitioners and policy makers to bridge the gap that exists between the health care services offered to newcomers and their needs. While Canada still has work to do to achieve this goal, recent and upcoming policy changes point to a healthier future for Canada's immigrants and refugees.

disclosures

The author does not have any conflicts of interest to disclose.

references

1. The World Bank. Refugee population by country or territory asylum 2015 [2015 Oct 12]. Available from: http://data.worldbank.org/indicator/SM.POP.REFG/countries?display=default.
2. Conservative campaign promise would bring in 10,000 Iraqi and Syrian refugees: The Globe and Mail; 2015 [2015 Oct 12]. Available from: http://www.theglobeandmail.com/news/politics/conservative-campaign-promise-would-bring-in-10000-iraqi-and-syrian-refugees/article25902909/.
3. Paperny AM. Trudeau wins; here's what he promised and what he'll face as a Prime Minister: Global News; 2015 [2015 Oct 28]. Available from: http://globalnews.ca/news/2286815/trudeau-wins-heres-what-hes-promised-and-what-hes-set-to-face/.
4. Dillman E, Pablo R, Wilson A. Patterns of Health Problems Observed Among Newly Arrived Refugees to Canada. In: Masi R, Mensah L, McLeod KA, editors. Health and Cultures. 11. Oakville: Mosaic Press; 1993. p. 247-60.
5. Longitudinal Survey of Immigrants to Canada: A Portrait of Early Settlement Experiences [Internet]. Statistics Canada. 2005.
6. Asanin J, Wilson K. "I spent nine years looking for a doctor": Exploring access to health care among immigrants in Mississauga, Ontario, Canada. *Soc Sci Med.* 2008 Mar;66(6):1271-83.
7. Gushulak B. Healthier on arrival? Further insight into the "healthy immigrant effect". *Can Med Assoc J.* 2007 May;176(10):1439-40.
8. Newbold B. Health status and health care of immigrants in Canada: a longitudinal analysis. J Health Serv Res Po. 2005 Apr;10(2):77-83A.
9. Newbold B. Health status and Canada's immigrant population. *Soc Sci Med.* 2003 Nov;57(10):1981-95.
10. Caulford P, Vali Y. Providing health care to medically uninsured immigrants and refugees. *Can Med Assoc J.* 2006 Apr;174(9):1253-4.
11. Kuile S, Rousseau C, Munoz M, Nadeau L, Ouimet MJ. The universality of the Canadian health care system in question: Barriers to services for immigrants and refugees. *Int J Migr Health Soc Care.* 2007 Jul;3(1):15-27.
12. Miedema B, Hamilton R, Easley J. Climbing the walls: Structural barriers to accessing primary care for refugee newcomers in Canada. *Can Fam Physician.* 2008 Mar;54(3):335-6.
13. Gulli C. Courting trouble: Why are we denying some refugees health coverage? : Maclean's; 2015 [2015 Oct 9]. Available from: http://www.macleans.ca/news/world/courting-trouble-why-are-we-denying-some-refugees-health-coverage/.
14. Pottie K, Greenaway C, Feightner J, Welch V, Swinkels H, Rashid M, et al. Evidence-based clinical guidelines for immigrants and refugees. *Can Med Assoc J.* 2011 Sep;183(12):E824-E925.
15. Federal appeal on refugee healthcare cuts postponed [Internet]. CTV News; 2015 [2015 Dec 3]. Available from: http://www.ctvnews.ca/health/federal-appeal-on-refugee-health-care-cuts-postponed-1.2627181.
16. Kirmayer LJ, Narasiah L, Munoz M, Rashid M, Ryder AG, Guzder J, et al. Common mental health problems in immigrants and refugees: General approach in primary care. *Can Med Assoc J.* 2011 Sep;183(12):E959-E67.
17. More interpreters to meet needs of new refugees [press release]. Provincial Health Services Authority (BC Ministry of Health). 2015 Dec 2.

A picture of trans Canadians' health and access to healthcare

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Both historically and in the present day, trans people in Canada and around the world (see Table 1 for key trans terminology) face high levels of unjustified discrimination, harassment, and health disparity. Compared to the overall population, trans people are at increased risk of infectious diseases, substance abuse, and attempted suicide, as well as other mental health problems.[1-5] Globally, the odds of HIV infection in trans women are 49 times that of the overall population, and one in five trans women worldwide have HIV.[4] In Canada, trans people are underrepresented in health research, surveillance, and monitoring, and as such, national level statistics on the health of trans Canadians are lacking. Research on trans people in the province of Ontario documents several health disparities, especially in the domain of mental health. For example, over half of all trans women in Ontario have levels of depressive symptoms consistent with clinical depression, and 46% of trans Ontarians report having seriously considered or even attempted suicide in the last year.[3,5]

Trans people also face significant barriers to employment and income security, and are often targets of specifically–directed violence. Among trans Ontarians, one in five are currently unemployed or on disability: 13% have been fired for being trans and 18% believe they were turned down for a job due to their trans status.[6] While some trans people in Ontario report high salaries, the median personal income is only $15,000 per year,[6] which is far below the provincial median of $29,520.[7] In regards to safety, 20% of trans Ontarians have been physically or sexually assaulted for being trans, and another 34% have been verbally threatened or harassed.[6] While social factors such as employment, income, violence, and harassment are not direct health outcomes, they indirectly influence people's health by affecting stress, behaviour, and material circumstances.[8]

Multiple institutional and social factors contribute to poor health outcomes among trans people;[9,10] however, access to healthcare is of particular relevance to healthcare systems and providers. In Canada, despite universal health insurance for hospital and physician services, trans people experience a number of barriers to obtaining access to healthcare. Previous and potential future experiences of discrimination prevent trans people from obtaining healthcare when they need it. In Ontario, 21% of trans people report having avoided emergency care due to the perception that their trans status would negatively affect the encounter, and 52% of trans people presenting to the emergency department report negative experiences associated with their visit.[11] In addition, over 10% of trans Ontarians report using hormones obtained from non–medical sources such as a friend or relative, and a small minority report attempting or completing self–performed surgeries.[12] This suggests that low access to transitional services may facilitate precarious healthcare practices. Lastly, further research in Ontario demonstrates that trans people lack access to proper HIV care, support, and prevention information, as available HIV services are largely designed for and targeted at cisgendered individuals.[13] These examples illustrate that there is significant room within the healthcare system to improve trans people's access to healthcare.

In recent years, healthcare communities in Canada have become increasingly aware of previous and current discrimination and injustices in the healthcare experiences of trans Canadians, including access to healthcare. In a video outlining their vision for the future of trans healthcare in British Columbia, the Provincial Health Services Authority states that they envision a future where communities, healthcare professionals, and families can work together to create equitable healthcare; where mistakes made in the past can be recognized so that the healthcare system is able to move forward; and where the healthcare system helps trans people with their self–determined journey.[14] In 2013, Vancouver Coastal Health conducted

a needs assessment survey to better inform future trans healthcare delivery in British Columbia.[15] Since then, a provincially–coordinated trans health services program called Trans Care BC has been implemented. Key focus areas for this provincial model include: (1) development of community and peer support services for trans people, (2) improved access to primary care providers who are experienced, culturally aware, and motivated to work with trans individuals, (3) healthcare provider education to create trans inclusive policies and practices, and to educate providers on World Professional Association for Transgender Health Standards of Care, and (4) improved access to publically–funded gender–affirming surgical options which are currently marked by long wait times and, in the province of B.C., are only performed in the city of Vancouver.[14]

Being trans should not be associated with poor health outcomes, such as HIV infections, clinical depression, and attempted suicide, but in Canada and other countries around the world, these associations are observed.[1-5] Multiple social and system level factors contribute to the health disparity of trans people, and access to healthcare is among these factors.[10] Media publications have described the present time as a critical tipping point for trans equality in the United States[16]—could a similar statement be made in Canada? In terms of access to healthcare, do initiatives such as Trans Care BC indicate that barriers to access are slowly being lifted? Only time will tell, but in order to assess the efficacy of these initiatives, trans health issues require more attention in research and population health surveillance and monitoring. Trans health disparities are unjust, and the importance of inclusive healthcare systems that are trans friendly and able to meet the unique healthcare needs of trans people must become and remain a priority.

Table 1: Trans terminology[17,18]

Term	Description
Trans	Used as shorthand to mean transgender or transsexual.
Transgender	A non–exhaustive, umbrella term that encompasses a diverse group of people whose gender identity and/or expression diverts from prevailing societal expectations based on the sex they were assigned at birth. Not all transgender people opt to alter their bodies hormonally or surgically, and not all gender non–conforming people identify as transgender.
Transsexual	An older term that originated in the medical and psychological communities. Still preferred by some people who have permanently changed or seek to change their bodies through medical intervention (included but not limited to hormones and/or surgeries).
Trans woman	People who were assigned the male sex at birth but identify and live as a woman may use this term to describe themselves. Others may also use MTF, an abbreviation for male–to–female, or simply prefer to be called women without any modifier.
Trans man	People who were assigned the female sex at birth but identify and live as a man may use this term to describe themselves. Others may also use FTM, an abbreviation for female–to–male, or simply prefer to be called men without any modifier.
Cisgender	People who are not transgender.

disclosures

The author does not have any conflicts of interest to disclose.

references

1. Grant JM, Mottet LA, Tanis J, Harrison J, Herman JL, Keisling M. Injustice at Every Turn: A Report of the National Transgender Discrimination Survey. Washington, DC; 2011.
2. Poteat T, Reisner SL, Radix A. HIV epidemics among transgender women. *Curr Opin HIV AIDS*. 2014;9(2):168-73.
3. Bauer GR, Scheim AI, Pyne J, Travers R, Hammond R. Intervenable factors associated with suicide risk in transgender persons: A respondent driven sampling study in Ontario, Canada. *BMC Public Health*. 2015;15(1):525.
4. World Health Organization. Policy Brief: Transgender People and HIV. Geneva, Switzerland; 2015.
5. Rotondi NK, Bauer GR, Travers R, Travers A, Scanlon K, Kaay M. Depression in male-to-female transgender Ontarians: Results from the trans PULSE project. *Can J Community*. 2011;30(2):113.
6. Bauer GR, Scheim AI, for the Trans PULSE Project Team. Transgender People in Ontario, Canada: Statistics from the Trans PULSE Project to Inform Human Rights Policy. London, ON; 2015.
7. Statistics Canada. Individuals by total income level, by province and territory (Ontario) [Internet]. 2015 [cited 2016 Jan 13]. Available from: http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil105g-eng.htm
8. Solar O, Irwin A. A Conceptual Framework for Action on the Social Determinants of Health. Social Determinants of Health Discussion Paper 2 (Policy and Practice). WHO Library. Geneva, Switzerland; 2010.
9. Scout N. Social Determinants of Transgender Health. Recorded presentation at the APHA 134th Annual Meeting and Exposition. Boston, MA; 2006.
10. McGibbon E, Etowa J, McPherson C. Health-care access as a social determinant of health. *Can Nurse*. 2008;104(7):22-7.
11. Bauer GR, Scheim AI, Deutsch MB, Massarella C. Reported emergency department avoidance, use, and experiences of transgender persons in Ontario, Canada: Results from a respondent-driven sampling survey. *Ann Emerg Med*. American College of Emergency Physicians; 2014;63(6):713-20.e1.
12. Rotondi NK, Bauer GR, Scanlon K, Kaay M, Travers R, Travers A. Nonprescribed hormone use and self-performed surgeries: "Do-It-Yourself" transitions in transgender communities in Ontario, Canada. *Am J Public Health*. 2013;103(10):1830-6.
13. Logie CH, James LL, Tharao W, Loutfy MR. "We don't exist": A qualitative study of marginalization experienced by HIV-positive lesbian, bisexual, queer and transgender women in Toronto, Canada. *J Int AIDS Soc*. 2012;15(2):1-11.
14. Provincial Heath Services Authority. Transgender/Trans* Health Steering Committee [Internet]. 2015 [cited 2015 Dec 8]. Available from: http://www.phsa.ca/about/special-projects/transgender
15. Vancouver Coastal Health. The Provincial Transgender Health Program (THP): Feedback from Transgender Community Members. Vancouver; 2013.
16. Steinmetz K, Gray E. America's Transition (cover story). Time. Chicago; 2014 Jun;183(22):38-46.
17. GLAAD. GLAAD Media Reference Guide - Transgender Issues [Internet]. 2015 [cited 2015 Oct 9]. Available from: http://www.glaad.org/reference/transgender
18. Bauer GR, Hammond R, Travers R, Kaay M, Hohenadel KM, Boyce M. "I don't think this is theoretical; this is our lives": How erasure impacts health care for transgender people. *J Assoc Nurses AIDS Care*. Elsevier Ltd; 2009;20(5):348-61.

How are Canada's doctors being trained to address the needs of marginalized populations across the spectrum of medical education?

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Despite frequently being lauded as one of the premier healthcare systems in the modern world, the Canadian healthcare system continues to face several challenges with regard to disparities in access and outcome among the various social cohorts in the country. In particular, a stratification of society based on factors such as income, education, race, or LGBTQ status, to name a few, continues to demonstrate poorer overall health outcomes and health status among Canada's marginalized populations.[1,2] Given that the Association of Faculties of Medicine of Canada (AFMC) has recently undertaken a comprehensive review of the entire Canadian medical education system—including undergraduate medical education (UGME), postgraduate medical education (PGME), and continuing professional development (CPD) for licensed physicians—an examination of what is being done to address the needs of marginalized populations at the various levels of medical training appears timely.

In 2010, the AFMC published a set of ten key recommendations aimed at fostering change within the UGME system to achieve better congruency between society's healthcare needs and the training of future physicians.[3] Many of these recommendations are directly relevant to the topic of marginalized populations, including the goal of addressing individual and community needs through increased social responsibility and accountability, an increased focus on diversifying learning contexts, and the promotion of medical leadership among students. Although these recommendations were intended to serve as unifying guiding principles, the AFMC noted in its report that each of the 17 Canadian Faculties of Medicine would undoubtedly implement each recommendation in their own unique way, and it is interesting to examine how this is being accomplished in various faculties across the country.

Illustrative examples demonstrating how the AFMC's specific objectives are being met through creative and innovative training opportunities in Canadian medical schools are plentiful. In terms of increasing social accountability by addressing individual and community needs, medical students at Memorial University, for instance, have spearheaded the Gateway Program aimed at offering assistance to newly arrived refugees in the St. John's area by offering pre-medical screening, a program that has been highly successful and currently has a voluntary participation rate of 96% among students.[4] Following the pre-screening that is conducted, including histories and physical exams, students are able to pass this information on to family doctors in the community, effectively streamlining the integration of newly arrived refugees within the local healthcare system and promoting awareness of issues relevant to refugee health among students.[4] In the previous academic year, the program offered healthcare services to 95 newly settled refugees in the local area.[5] The program continues to expand, with students from the Faculty of Medicine having collaborated with the Association for New Canadians to host a "Cooking Together" program and local health fair for newly arrived refugees

...each of the 17 Canadian Faculties of Medicine would undoubtedly implement each recommendation in their own unique way, and it is interesting to examine how this is being accomplished in various faculties across the country.

during the previous year as well.[5]

With a view towards diversifying learning contexts, the University of Manitoba has incorporated a Rural Week into its first year medicine curriculum whereby 110 students are assigned to approximately 45 sites across the province to work closely with a Family Medicine preceptor and other members of the healthcare team.[4] Through this initiative, students become fully immersed in the continuing care of patients, while also being exposed to diverse patient populations and healthcare needs in settings removed from the traditional urban hospital or community clinic, all at the earliest stages of their training.[4] At the point of its inception in 2003, Rural Week was an optional experience, which 70% of the class electively chose. In the following year, Rural Week was incorporated into the core first year medical curriculum due to the program being so well-received.[6] In the years that have followed, the overwhelmingly positive evaluations received by the students, preceptors, and local communities continue to serve as a testament to the unique value of the program in its ability to strive towards better serving the needs of rural and underserved populations.[6]

With regards to the AFMC objective of promoting medical leadership, Queen's University School of Medicine has taken a proactive approach toward the issue of addressing the healthcare needs of marginalized populations by offering unique community service opportunities through the School's Service-Learning program, a voluntary component of Queen's UGME curriculum. One such program offered through the Global Health Office, MedExplore, provides medical students with the opportunity to become involved in educational and mentoring opportunities with populations who are underrepresented in the field of medicine.[7] Citing research that suggests individuals from marginalized backgrounds are more adept at understanding the needs of underserved communities, as well as being more likely to pursue a career servicing communities that face significant healthcare discrepancies, the program aims to help young individuals from rural, First Nations, or low socioeconomic backgrounds connect with medical student peers.[8] In addition to promoting an interest in healthcare careers among young marginalized populations, the program also facilitates the development of a deeper understanding of the healthcare issues faced by such populations among current medical students, due to the close relationships that form through the mentorship program.[8]

Following an extensive review process, in 2012 the AFMC also released a set of ten recommendations for improvement specifically targeting PGME, many of which paralleled the recommendations in the 2010 report on UGME.[9] Perhaps most relevant to the discussion of marginalized populations, the 2012 report noted that many rural, refugee, elderly, and First Nations populations all face significant barriers when it comes to accessing healthcare, and a renewed focus on ensuring that services in Canada are available in the correct locations and proportions to provide for those that need them most will be paramount moving forward.[9] In light of this, many faculties have begun to adopt a more distributed training model at the PGME level, including the University of British Columbia, the University of Saskatchewan, and McMaster University, among others, who have all increased the number of residency spaces in various rural and remote locations throughout their respective provinces in recent years. At the time of the writing of this article, the AFMC is currently conducting a review of the CPD system in Canada as well, and it will be interesting to observe what specific strategic recommendations are ultimately derived from this review.

Canada is a vast country, both in geographic range and in the complexity of its social constitution, and the efficient delivery of healthcare can certainly be challenging against such a backdrop. Although the Canadian healthcare system is admired internationally for the significant positives it achieves, there remain many disparities in access and delivery among the country's marginalized populations that require improvement. Through objectives aimed at addressing community needs through social accountability, increasing diverse learning experiences, and fostering leadership at all levels of the medical education continuum, it is hoped that progress will continue to be made towards achieving these ends.

disclosures

The author does not have any conflicts of interest to disclose.

references

1. Mulé NJ, Ross LE, Deeprose B, Jackson BE, Daley A, Travers A, et al. Promoting LGBT health and wellbeing through inclusive policy development. Int J Equity Health. 2009;8(1):1-11.
2. Minister of Health. The Chief Public Health Officer's Report on the State of Public Health in Canada [Internet]. Ottawa; Minister of Health; 2014 [cited 2015 Oct 10]. 110 p. 7. Available from: http://publichealth.gc.ca/CPHOReport
3. The Association of Faculties of Medicine of Canada. The Future of Medical Education in Canada (FMEC): A Collective Vision for MD Education [Internet]. Ottawa; Association of Faculties of Medicine of Canada; 2010 [cited 2015 Oct 10]. 54 p. 1. Available from: https://www.afmc.ca/future-of-medical-education-in-canada/medical-doctor-project/pdf/collective_vision.pdf
4. The Association of Faculties of Medicine of Canada. The Future of Medical Education in Canada (FMEC): A Collective Vision for MD Education 2010-2015 [Internet]. Ottawa; Association of Faculties of Medicine of Canada; 2015 [cited 2015 Oct 10]. 90 p. 3. Available from: https://www.afmc.ca/pdf/FMECMDEnglishReport.pdf
5. MUN Med Gateway. MUN Med Gateway Annual Report 2014 [Internet]. St. John's; MUN MED Gateway; 2014 [cited 2015 Dec 6]. 24 p. 7. Available from: https://www.med.mun.ca/getattachment/2e4e2d69-a125-4cca-9e9e-266a6984fa5a/Gateway-Annual-Report-2013-2014-FINAL.aspx
6. Manitoba's Office of Rural and Northern Health. Rural Week [Internet]. Winnipeg; Manitoba's Office of Rural and Northern Health; 2015 [updated 2015 Feb 21; cited 2015 Dec 6]. Available from: http://www.ornh.mb.ca/rural_week
7. Queen's University. Service-Learning at Queen's UGME [Internet]. Kingston; Faculty of Health Sciences, Queen's University; 2015 [updated 2015 May 7; cited 2015 Dec 6]. Available from: https://meds.queensu.ca/announcements?id=774
8. MedExplore. MedExplore [Internet]. Kingston: Global Health Office, Queen's University; 2015 [updated 2015 Nov 21; cited 2015 Dec 6]. Available from: http://www.medexplore.ca
9. (he Association of Faculties of Medicine of Canada. The Future of Medical Education in Canada (FMEC): A Collective Vision for Postgraduate Medical Education in Canada [Internet]. Ottawa; Association of Faculties of Medicine of Canada; 2012 [cited 2015 Oct 10]. 48 p. 2. Available from: https://www.afmc.ca/future-of-medical-education-in-canada/postgraduate-project/phase2/pdf/FMEC_PG_Final-Report_EN.pdf

A clinical review of the diagnosis, treatment, and prevention of opioid-related harms

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Citation info: UBCMJ. 2016: 7.2 (44-47)
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abstract

In North America, and Canada in particular, the harms associated with the increased use of prescription and illicit opioids constitute a serious public health concern. Further to this, the recent emergence and increased availability of fentanyl in illicit drug markets has contributed substantially to an increasing number of opioid-related overdoses and deaths. Awareness of the clinical presentation, management options, and preventative measures for opioid overdose are universally important if clinicians are to help combat this growing epidemic. Here, we provide a brief review of the scope of the opioid problem and discuss how to make the diagnosis and provide evidence-based care for an individual presenting with an opioid overdose. We also review several important harm-reduction strategies that can be utilized to prevent future opioid-related harms with a focus on those utilized in Vancouver, B.C.

introduction

In North America, the harms associated with the increased use of prescription and illicit opioids constitute a serious public health concern.[1,2] In 2006, more than 256 million opioid prescriptions were dispensed from pharmacies in the United States (U.S.), a quantity almost twice that of a decade prior.[1] Similarly, Canada has seen a two-fold increase in prescription opioid use between 2000 and 2010,[1] making it the world's second-largest consumer per capita of prescription opioids.[3] A Canadian survey in 2013 found that 14.9% of individuals between the ages of 15 and 64 years were prescription opioid users.[4] It is estimated that 2.3% of Canadian adults partake in prescription opioid abuse. Among youth between the ages of 15 and 18 years, rates are even higher, at 5.8%[4] Though Canadian estimates are lacking, data from the U.S. National Survey on Drug Use and Health in 2013 have also revealed that approximately 681,000 individuals over the age of 12 years disclosed heroin use in the past year alone, a number that has been steadily increasing since 2007.[5] Furthermore, almost twice as many respondents in 2013 reported having tried heroin for the first time compared with findings from 2006 (169,000 versus 90,000, respectively).[5]

As a result of these growing trends, opioid use disorder has become a serious public health concern.[1,2] A Toronto-based study of patients admitted for opioid detoxification found that 37% received their opioids from physician prescription only, while 26% were from a combination of prescription and "street" sources, and only 21% sourced their opioids purely from the "street".[6] Without treatment, the risk of premature death amongst illicit opioid users is significant, with estimates ranging from 13 to 63 times higher than that of the general population.[7-9] From a Canadian healthcare perspective, coroner's reports in Ontario show a 242% increase in overall opioid-related deaths between 1991 and 2010.[4]

14.9% of individuals between the ages of 15 and 64 years were prescription opioid users.[4] It is estimated that 2.3% of Canadian adults partake in prescription opioid abuse. Among youth between the ages of 15 and 18 years, rates are even higher, at 5.8%

In recent years, fentanyl, a short-acting synthetic opioid analgesic, has increasingly contributed to premature mortality trends in Canada. Fentanyl, which is 50 to 100 times more potent than morphine, has traditionally been used for procedural sedation in the inpatient setting; it is also employed in the management of acute and chronic pain, for which its infrequent dosing and transdermal formulation carries appeal.[10,11] However, its increased emergence and availability in the illicit drug market through diversion, local production, or illegal importation has resulted in a serious public health and safety concern.[11-13] In British Columbia (B.C.), there has been a 7-fold increase in fentanyl-related deaths over the past four years, accounting for 25% of the

province's overall drug-related deaths.[12]

Given the increasing opioid epidemic, both locally and nationally, and its potentially devastating harms including overdose and mortality, we briefly review the diagnosis and treatment of an individual presenting with an opioid overdose and provide an overview of some strategies to prevent future opioid-related harms.

opioid overdose

Opioids

Opiates, which are naturally occurring and extracted from the poppy plant Papaver somniferum (e.g., morphine, codeine, thebaine), belong to a larger class of compounds called opioids. Opioids can be naturally occurring, semi-synthetic, or synthetic, and they act at the bodies of opioid receptors. Mu, kappa, and delta—the major opioid receptor subtypes—are found throughout both the central and peripheral nervous systems. When activated, these receptors contribute to a range of physiologic responses. The clinical manifestations of opioid use vary based on the dose, receptor targeted, and neurotransmitter(s) involved, but typically include analgesia, euphoria, and/or respiratory depression.

Assessment

In any suspected opioid overdose, the physical examination is used not only in helping to confirm the diagnosis, but also in identifying other conditions requiring treatment. A decreased respiratory rate (RR) (<12 breaths per minute [bpm]), or apnea, a depressed mental status, and constricted pupils—miosis—are the classic signs of opioid toxicity, though the absence of any of these does not rule out the diagnosis (see Figure 1).[14] Furthermore, it is important to exclude other potentially reversible causes for an individual's clinical presentation (i.e., stroke, sepsis, metabolic disturbance) and consider the possibility of co-ingestions. Though not always possible, identifying the specific opioid used (i.e., a short-acting versus long-acting opioid), its formulation, and the dose taken, as well as obtaining information on the patient's previous substance use history and intention for self-harm, can all prove useful in helping to anticipate the expected course of treatment and the need for a psychiatric evaluation.

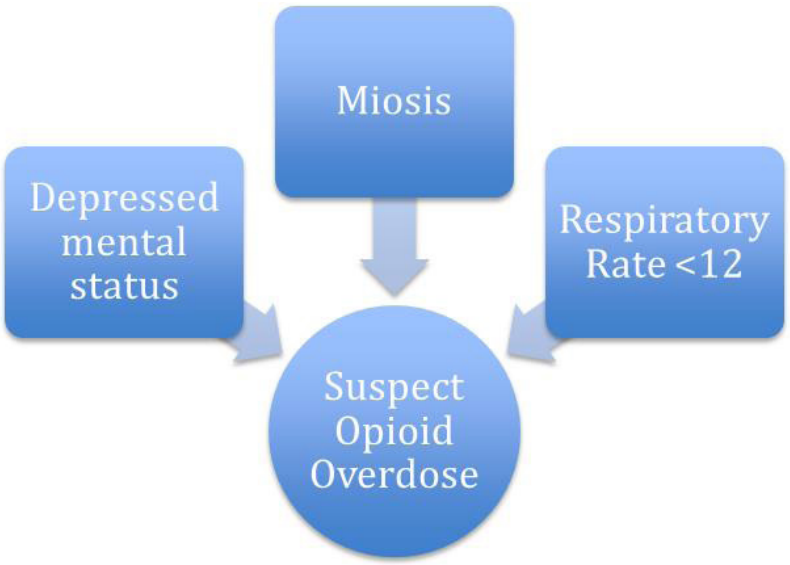

Figure 1: The classic signs of opioid toxicity.

Beyond a basic hematologic and electrolyte profile to assess for an anion gap, initial investigations should also include a serum glucose and creatinine kinase to exclude hypoglycemia and rhabdomyolysis, respectively.[15,16] To investigate for co-ingestions, an acetaminophen, salicylate and alcohol level can be requested in addition to an electrocardiogram.[15,16] A chest x-ray can be done to look for concurrent lung pathology and, specifically, pulmonary edema.[15-17] Though a urine drug screen (UDS) can be helpful, opioid toxicity is a clinical diagnosis, and acute management should not be delayed while awaiting or interpreting the results of a UDS.[18] Since both false positive and false negative results can occur, the overall clinical picture must be taken into consideration to obtain a diagnosis.

Management

Medical stabilization is always the priority for the management of any opioid overdose, and respiratory support, including mechanical ventilation, may be required temporarily. Routine monitoring of vitals is essential. In the event of respiratory compromise, naloxone (Narcan™), a short-acting opioid receptor antagonist, is a useful antidote and can be administered parenterally at an initial dose of 0.04 mg, and repeated at escalating doses every few minutes to a maximum dose of 15 mg, until adequate ventilation is achieved (i.e., RR>12 bpm).[14] It is important to remember that the duration of action of naloxone is only 30 to 120 minutes. Therefore, repeated administrations or the initiation of a naloxone infusion may be required to overcome the toxicity associated with ingestion of a long-acting opioid or to combat the prolonged intoxication that can occur in overdose with short acting opioids due to alterations in normal pharmacokinetic properties.[14,19] The variable and possibly transient response

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to naloxone makes close monitoring of vital signs and level of consciousness of utmost importance in the management of a suspected opioid overdose.

Naloxone administration can result in precipitated withdrawal. This manifests as diaphoresis, piloerection, GI upset, tachycardia, restlessness, irritability, anxiety, yawning, tremor, lacrimation, rhinorrhea, and/or body aches.[14] Precipitated withdrawal is unpleasant and should be avoided if possible; however, these effects are usually short-lived and should be treated conservatively until immediate risks of overdose are addressed.[14]

prevention of future harms

Harm Reduction

Patient education about ways to use opioids safely is crucial and includes advising individuals not to use opioids alone, encouraging individuals to initially test a small sample of one's opioid supply to help determine its potency, and promoting the use of supervised injection facilities such as Insite, a supervised injection facility located in Vancouver's downtown eastside neighbourhood. At Insite, individuals can access sterile equipment and inject pre-obtained illicit drugs.[20] This program, which is operated by its local health authority, Vancouver Coastal Health, has been shown to be cost-effective, and its opening was associated with a 35% reduction in overdose deaths.[19,20] Challenged by many governments and regulatory bodies, safe injection facilities like Insite have been a focus of controversy.[21] However, overwhelming positive scientific evidence for the benefits of safe injection facilities has continued to win-out against ideological arguments opposing the use of supervised injection sites.[22]

Needle exchange programs provide a life-saving, harm-reducing public health service.[23] Beyond the provision of sterile needles to individuals who inject drugs, many of these programs offer additional services including counselling and testing for HIV and other infectious diseases, referral and entry to addiction treatment programs, and the opportunity for overdose education and prevention.[23] Through these activities, needle exchange programs have been shown to decrease the transmission of HIV and hepatitis C virus while also being cost effective.[24-26]

Needle exchange programs provide a life-saving, harm-reducing public health service.

Health care providers should inform patients about B.C.'s Take Home Naloxone program, which provides naloxone rescue kits and drug administration training to opioid–dependent individuals or their loved ones. The aim of this program is to reduce the risk for unintentional deaths from opioid overdose.[27] Lastly, although evidence for their efficacy is limited,[28] educational campaigns for disseminating information regarding local trends in drug-related harms to the general public have been utilized. Recently, for example, the "Know your source?" campaign was a joint collaboration between health care providers and law enforcement that focused on the increasing prevalence of fentanyl being sold in illicit drug markets, and the risks associated with this.[29]

Opioid Replacement Therapy

Individuals with an opioid use disorder should routinely be offered opioid replacement therapy. Options for this in Canada currently include opioid agonist therapy with either methadone (a full opioid agonist) or buprenorphine (a partial opioid agonist). In Canada, buprenorphine is prescribed in combination with naloxone under the trade name Suboxone. Methadone is significantly more effective at treatment retention and suppression of heroin use than non-pharmacologic approaches.[30] Buprenorphine/naloxone and methadone are equally effective at decreasing opioid use when equivalent doses are compared.[31] Furthermore, as a result of its favourable safety profile, Vancouver Coastal Health's recently updated opioid guidelines now recommend buprenorphine/naloxone as the first-line agent for opioid replacement therapy.[32,33] Withdrawal management alone (i.e., detox without transition to longer-term treatment) is not recommended, since this approach has been associated with elevated rates of HIV infection and death.[34,35]

In instances where an individual does not want to engage in treatment with pharmacotherapy, medical detoxification with subsequent referral to a community or residential treatment facility, self-help groups, a drug and alcohol counsellor, or other psychosocial interventions are potential treatment options. Unfortunately, at this time non-pharmacologic approaches are understudied and lack robust data from systematic reviews and meta-analyses. For those patients not committed to completely abstaining from opioids, continued motivational interviewing and harm reduction strategies can be maintained in the interim to improve safety and minimize risks associated with ongoing use.

Physician Education

Physician education on appropriate opioid prescribing practices is of grave importance. This topic does not receive adequate time and resources in our current medical curricula in British Columbia. A recent publication of recommendations from the British Columbia Node of the Canadian Research Initiative on Substance Misuse highlights the urgency with which policy makers, regulatory bodies, and clinicians need to act together to reduce fatal opioid overdose.[36] One of their specific recommendations pertains to the importance of regular Pharmanet surveillance to prevent overlapping opioid prescriptions and to monitor for multiple prescribers. Other harm reduction approaches include the utilization of opioid use agreements/contracts, utilizing the option for daily witnessed ingestion and/or dispensing of opioids, not co-prescribing opioids and sedatives, and regularly re-evaluating the indication for any opioid prescription while also considering if a suitable non-

opioid alternative exists. The Michael G. DeGroote National Pain Centre at McMaster University provides excellent resources for tools such as opioid use agreements/contracts and other point of care tools that can be incorporated into electronic medical records (EMR) platforms for increased safety in opioid prescribing.[37]

conclusion

In conclusion, Canada's increasing prevalence of opioid use and disorder combined with the rapid emergence of fentanyl in the illicit drug market has resulted in a national opioid overdose crisis. Knowing the clinical findings and acute management of opioid overdose is necessary for all physicians, irrespective of one's scope of practice. Although lives can be saved by applying the basic diagnostic and management skills reviewed in this article, the future of opioid overdose prevention lies in safe opioid prescribing, compassionate and evidence-based treatment of opioid use disorder, and the continued expansion and improved accessibility of harm reduction services.

disclosures

The authors do not have any conflicts of interest to disclose.

references

1. King NB, Fraser V, Boikos C, Richardson R, Harper S. Determinants of increased opioid-related mortality in the United States and Canada, 1990-2013: a systematic review. *Am J Public Health*. 2014;104(8):e32-42.
2. Fullerton CA, Kim M, Thomas CP, Lyman DR, Montejano LB, Dougherty RH, et al. Medication-assisted treatment with methadone: assessing the evidence. *Psychiatry Serv*. 2014;65(2):146-57.
3. International Narcotics Control Board. Narcotics drugs: Estimated world requirements for 2013; Statistics for 2011. New York: United Nations. 2013.
4. Canadian Centre on Substance Abuse. *Prescription Opioids*. 2015.
5. Substance Abuse and Mental Health Services Administration. Results from the 2013 *National Survey on Drug Use and Health: Summary of National Findings*. Rockville, MD. 2014.
6. Sproule B, Brands, B, Li, S, Catz-Biro, L Changing patterns of opioid addiction. *Canadian Family Physician*. 2009;55(1):68-9.
7. Hulse GK, English DR, Milne E, Holman CD. The quantification of mortality resulting from the regular use of illicit opiates. *Addiction*. 1999;94(2):221-9.
8. Grönbladh L, Ohlund LS, Gunne LM. Mortality in heroin addiction: impact of methadone treatment. *Acta Psychiatr Scand*. 1990;82(3):223-7.
9. English DR, Holman CD, Milne E, Winter MG, Hulse GK, Codde J, et al. The quantification of drug caused morbidity and mortality in Australia 1995. *Canberra: Australian Government Publishing Service*; 1995. p. 262
10. Barnett M. Alternative opioids to morphine in palliative care: a review of current practice and evidence. *Postgrad Med J*. 2001;77(908):371-8.
11. Drug Enforcement Administration. DEA issues nationwide alert on fentanyl as threat to health and public safety. Washington, DC. 2015.
12. Canadian Centre on Substance Abuse. Canadian community epidemiology network on drug abuse bulletin: deaths involving fentanyl in Canada, 2009-2014. Canadian Community Epidemiology Network on Drug Use; 2015.
13. Royal Canadian Mounted Police (RCMP). Growing use of illicit fentanyl cause for concern in Alberta. Edmonton, Alberta: 2015.
14. Boyer EW. Management of opioid analgesic overdose. N Engl J Med. 2012;367(2):146-55.
15. Plasencia A, Furbee, RB. Opioids. In: Wolfson A, Hendey, GW, Ling, LJ, Rosen, CL, Schaider, JJ, Sharieff, GQ, editors. *Harwood-Nuss' clinical practice of emergency medicine*. 5th ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2009. p. 1393-1398.
16. Doyon S. Opioids. In: Tintinalli J, Kelen, GD, Stapcynski, JS, Ma, JS, Yealy, DM, Meckler, GD, et al. editors. *Emergency medicine*: a comprehensive study guide. 7th ed. New York, NY: McGraw-Hill; 2004. p. 1230-1234.
17. Sporer KA, Dorn E. Heroin-related noncardiogenic pulmonary edema : a case series. *Chest*. 2001;120(5):1628-32.
18. Boyer EW, Shannon MW. Which drug tests in medical emergencies? *Clin Chem*. 2003;49(3):353-4.
19. Lyttle MD, Verma S, Isaac R. Transdermal fentanyl in deliberate overdose in pediatrics. *Pediatr Emerg Care*. 2012;28(5):463-4.
20. Vancouver Coastal Health. Insite - supervised injection site [Internet]. Vancouver Coastal Health. [date unknown; cited 2015 Dec 3] Available from: http://supervisedinjection.vch.ca/en/.
21. Kerr T, Small, W, Moore, D, Wood, E. A micro-environmental intervention to reduce the harms associated with drug-related overdose: evidence from the evaluation of Vancouver's safer injection facility. *Int J Drug Policy*. 2007;18(1):37-45.
22. Kerr T, Montaner, J. Evidence trumps ideology over public health benefits of Insite. The Vancouver Sun. [Internet]. 2013 Jul 24. [cited 2015 Dec 3]. Available from: http://www.vancouversun.com/health/Evidence+trumps+ideology+over+public+health+benefits+Insite/8704065/story.html
23. Rich J, Adashi, EY. Ideological anachronism involving needle and syringe exchange programs: lessons from the indiana HIV outbreak. *JAMA*. 2015;314(1):23-4.
24. Gold M, Gafni A, Nelligan P, Millson P. Needle exchange programs: an economic evaluation of a local experience. *CMAJ*. 1997;157(3):255-62.
25. Takács IG, Demetrovics Z. The efficacy of needle exchange programs in the prevention of HIV and hepatitis infection among injecting drug users. *Psychiatr Hung*. 2009;24(4):264-81.
26. Neaigus A, Zhao M, Gyarmathy VA, Cisek L, Friedman SR, Baxter RC. Greater drug injecting risk for HIV, HBV, and HCV infection in a city where syringe exchange and pharmacy syringe distribution are illegal. *J Urban Health*. 2008;85(3):309-22.
27. BC Harm Reduction Strategies and Services. Toward the heart. [Internet]. Vancouver: Harm Reduction Program. [date unknown; cited 2015 Dec 3] Available from: http://towardtheheart.com/naloxone/.
28. Kerr T, Small W, Hyshka E, Maher L, Shannon K. 'It's more about the heroin: injection drug users' response to an overdose warning campaign in a Canadian setting. *Addiction*. 2013;108(7):1270-6.
29. Know Your Source. [Internet] [date unknown; cited October 19, 2015]. Available from: http://knowyoursource.ca.
30. Mattick RP, Breen C, Kimber J, Davoli M. Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. *Cochrane Database of Systematic Reviews* [Internet]. 2009 [cited 2015]; (3). Available from: http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD002209.pub2/full
31. Maremmani I, Gerra G. Buprenorphine-based regimens and methadone for the medical management of opioid dependence: selecting the appropriate drug for treatment. *Am J Addict*. 2010;19(6):557-68.
32. Vancouver Coastal Health & Providence Health Care Opioid Use Disorder: Treatment Guideline Committee. A guideline for the clinical management of opioid addiction. 2015.
33. Marteau D, McDonald R, Patel K. The relative risk of fatal poisoning by methadone or buprenorphine within the wider population of England and Wales. *BMJ Open*. 2015;5(5):e007629.
34. MacArthur GJ, Minozzi S, Martin N, Vickerman P, Deren S, Bruneau J, et al. Opiate substitution treatment and HIV transmission in people who inject drugs: systematic review and meta-analysis. *BMJ*. 2012;345:e5945.
35. Strang J, McCambridge J, Best D, Beswick T, Bearn J, Rees S, et al. Loss of tolerance and overdose mortality after inpatient opiate detoxification: follow up study. *BMJ*. 2003;326(7396):959-60.
36. British Columbia's Node of the Canadian Research Initiative on Substance Misuse. Together, we can do this: Strategies to address British Columbia's prescription opioid crisis. 2015.
37. Michael G. DeGroote National Pain Centre. Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain: Practice Toolkit.

Global variations in Western medicine

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abstract

Each year, hundreds of health care students from across Canada embark on travel abroad with the goal of improving health and education for people in developing countries. Despite the altruistic goals of such endeavours, students and practitioners alike may find themselves confused when exposed to variations of western medicine. This article uses two examples to explore such variants. The first example looks at catheterization of postpartum women to prevent fistula formation, while the second example examines the practice of antibiotic prophylaxis in HIV+ patients. When practicing abroad, clinicians may believe these variations to be incorrect due to different current practices based on their training in their home countries. However, recognizing regional differences in medical practice, understanding the reasons for these differences, and realizing that these differences are not necessarily "incorrect," may help guide clinicians when practicing medicine abroad.

The Global Health Initiative at the University of British Columbia (UBC) is a student–driven project aimed at enhancing global health education and providing training to students from various faculties through a series of monthly skill–building workshops.[1] The program also runs international projects for students. Several of these projects involve a mix of research and clinical experiences, with many students publishing their findings upon project completion. This past summer, four medical students from UBC engaged in a research project and clinical shadowing experience in the rural area of Nakaseke District, Uganda. Most importantly, the project provided us with a new perspective on the status of health care within a global context.

We were all fairly well–traveled and well–aware of the differences among cultures, particularly the importance of cross–cultural acceptance without prejudice. But despite completing pre–departure modules on cultural competency and global ethics prior to arriving in Uganda, we were unprepared for the cultural differences that existed between ourselves and the local Ugandans. With our limited clinical experience and knowledge from one year of medical training, we were guided by Western physicians and our occasional Google connection. Together, we began to spot differences in treatment and began to question local practices. Yet, did the recognition of these differences in approach necessarily mean that the local practices of medicine in Uganda were unreasonable?

One of our first experiences in noting differences in care came during teaching rounds in a maternity ward where we met a newly postpartum woman with a Foley catheter. Recalling our lectures on infectious disease prevention, we saw what appeared to be a catheter with no obvious indications.[2]* We were thus excited by the prospect of preventing a urinary infection in this patient and proceeded to inform the physician. We asked the attending physician how long this woman needed to be catheterized post–partum and he replied, "Fourteen days." Having learned in school the importance of removing catheters from all patients in order to prevent urinary tract infections, we found it difficult to fathom the notion of continuous catheterization in this situation. After inquiring with the local attending physician and conducting our own research, we learned that this is common practice in Uganda when labour is prolonged or obstructed to prevent the serious complications of vesicovaginal fistula (VVF) and rectovaginal fistula (RVF) formation.[3,4] In these circumstances, as the fetus compresses tissues and reduces local blood supply, the mother becomes prone to developing necrotic muscle tissue within her uterus. Thus, prolonged labour can increase the risk of fistula development, which, although rare in the developed world, is common in Uganda and can cause lifelong uncontrolled, continuous vaginal leaking of urine and/or feces. Prolonged catheterization for 7-14 days reduces pelvic pressure, thereby limiting the formation of new fistula while promoting the repair of existing formations.[3,4,5] Therefore, despite the risk of infection from catheterization, this procedure is chosen to prevent shame, stigmatization, economic distress, and perhaps larger social consequences than would otherwise follow from the formation of VVF or RVF.

Another contradiction between our medical understanding and observation in practice occurred during our involvement in the outpatient HIV clinics of Nakaseke. In our first year, we learned about HIV and opportunistic infections, and how to manage patients presenting below certain CD4 cell count cut–off points. For example, in Canada, if a new HIV+ patient presents with a CD4 count below 200, the patient would be initially managed on prophylactic cotrimoxazole/trimethoprim (CTX) and combination antiretroviral therapy to protect against certain infections until their

* Indications for catheterization include a) urinary retention, b) obstruction to the urinary tract, c) close monitoring of the urine output of critically–ill patients, d) urinary incontinence that poses a risk to the patient because of a stage 3 or greater ulcer to the sacral area, and e) comfort care for terminally–ill patients.[2]

CD4 rises above 200.[6] After three months of CD4 counts above 200, the standard practice is to discontinue the CTX while continuing the combination antiretroviral therapy.[6] However, in Uganda, we saw multiple patients with CD4 counts above 500 and even 1000 for far over 3 months, all of whom were still on prophylactic CTX. From the local physicians, we discovered that Ugandan guidelines on HIV management differ from Canadian guidelines. In Uganda, all patients with positive diagnoses and symptoms of HIV receive CTX, regardless of CD4 counts.[7] Their practice guidelines are based on research, which shows that CTX reduces mortality and hospitalizations, while possibly stabilizing viral load and slowing CD4 cell count decline in HIV patients.[7,8]

An estimated 1.5 million people are currently infected with HIV in Uganda,[9] which is approximately the same number of people on daily CTX prophylaxis, making antibiotic resistance a significant concern. Existing evidence, however, suggests that in vitro susceptibility and resistance testing does not reflect the prophylactic ability of this antimicrobial agent; in other words, concerns of CTX resistance should not prevent its use as a prophylactic agent.[8,10] This practice of continuous CTX has been validated for continuous use up to 72 weeks in a large study and verifies that the Ugandan guidelines are appropriate.[7,11] In addition to this evidence, Ugandan physician, Dr. Alex Kayongo, explained to us that "a 14-28 day prescription of CTX brings patients back to clinic for follow–up. If they are not given CTX, they will not come back until they show symptoms of late stage AIDS–defining illnesses." We wondered if practices were different at the national referral center located in the more urban Mulago. According to Dr. Kayongo, "The way [he] practice[s] medicine in Mulago is different from how [he] would practice medicine in the village. There are many social considerations that must be taken into consideration in the village..." For example, he alluded to the fact that in Mulago, people live closer to health care facilities and can easily get follow–up care. However, in the village, distance is a huge barrier for patients, who often travel hours to days on foot to get to their nearest health facility.

A phenomenon called "ethnocentrism" has been recognized by social scientists, whereby an individual believes that his or her culture is greater than others.[12] Recognizing this phenomenon is important in order to remain neutral and objective when analyzing various cultures. When researchers' subjectivity and ignorance are entered into the equation, ancient civilizations are essentially described as "primitive" or "savage." The same concept of ethnocentrism can be applied to global health. As we witnessed the new mother with the catheter, our instincts screamed for it to be removed; after all, it is tempting to equate "different" practice with "improper" practice. It is in these situations that various cultural factors and broader contexts need to be considered.

The opposite of ethnocentrism is cultural relativism, which is the notion that each culture should be understood in terms of its own values and beliefs and that no culture is superior to any other culture.[12] To apply this principle from a critical perspective when studying medical practices around the world, foreign clinicians can learn from local clinicians and patients, while seeking to understand why differences in medical practices, clinical outcomes, and perceptions exist.

Recognition of different practices in medicine is the first step to understanding them. After that, how should foreign clinicians proceed? Foreign clinicians might consult with local clinicians to try to ascertain the medical reasoning behind such differences and might ask local patients about their beliefs and values when it comes to certain practices. Lastly, perhaps an investigation of these variations in medical practices could warrant observation of local clinicians at work, before the foreign clinician partakes.

It has been said that medicine is both a science and an art. This is especially true in the setting of global health where science can only take the clinician and trainee so far before cultural competency and awareness of social context fill the artistic aspect of medicine. We need to leave behind our western concept of health, our prejudice and assumptions, and embrace the broader perspective. To practice medicine in the true spirit of global health, we need to keep our own cultural beliefs in check.

disclosures

The authors do not have any conflicts of interest to disclose.

references

1. UBC Global Health. Global Health Initiative [Internet]. Vancouver: University of British Columbia Global Health, Faculty of Medicine; 2015 [cited 10 December 2015]. Available from: http://globalhealth.med.ubc.ca/service/student-groups/global-health-initiative/
2. Bernard MS, Hunter KF, Moore KN. A review of strategies to decrease the duration of indwelling urethral catheters and potentially reduce the incidence of catheter-associated urinary tract infections. Urol Nurs. 2012 Jan-Feb;32(1):29-37.
3. Mehta M, Bangser M, Barber N, Lindsay J, Gujrat M. Sharing the burden: Ugandan women speak about obstetric fistula. Dar es Salaam, Tanzania: Women's Dignity Project and EngenderHealth; 2007 [cited 2015 Oct 7]. 58 p. Available from: https://www.engenderhealth.org/files/pubs/localized/uganda/sharing-the-burden-ugandan-women-speak-about-obstetric-fistula.pdf
4. Nardos R, Browning A, Member B. Duration of bladder catheterization after surgery for obstetric fistula. Int J Gynecol Obst. 2008 Oct;103(1):30-2.
5. Barone MA, Widmer M, Arrowsmith S, Ruminjo J, Seuc A, Landry E, et al. Breakdown of simple female genital fistula repair after 7 day versus 14 day postoperative bladder catheterisation: A randomised, controlled, open-label, non-inferiority trial. Lancet. 2015 Jul;386(9988):56-62.
6. BC Centre for Excellence in HIV/AIDS. Therapeutic guidelines [Internet]. Vancouver (CA): BC Centre for Excellence in HIV/AIDS; 2010 [cited 2015 7 Oct]. Available from: http://www.cfenet.ubc.ca/therapeutic-guidelines
7. Uganda Ministry of Health. National antiretroviral treatment and care guidelines for adults, adolescents, and children. 2nd ed. Kampala (UP): Uganda Ministry of Health; 2008. 72 p.
8. Mermin J, Lule J, Ekwaru J, Malamba S, Downing R, Ransom R, et al. Effect of cotrimoxazole prophylaxis on morbidity, mortality, CD4-cell count, and viral load in HIV infection in rural Uganda. Lancet. 2004 Oct;364(9443):1428-34.
9. UNAIDS. Uganda [Internet]. Geneva: UNAIDS; 2015 [cited 2015 Oct 10]. Available from: http://www.unaids.org/en/regionscountries/countries/uganda
10. Mermin J, Lule J, Ekwaru JP, Downing R, Hughes P, Bunnell R, et al. Cotrimoxazole prophylaxis by HIV–infected persons in Uganda reduces morbidity and mortality among HIV-uninfected family members. AIDS. 2005 Jul;19(10):1035-42.
11. Walker A, Ford D, Gilks C, Munderi P, Ssali F, Reid A, et al. Daily cotrimoxazole prophylaxis in severely immunosuppressed HIV infected adults in Africa started on combination antiretroviral therapy: An observational analysis of the DART cohort. Lancet. 2010 Apr;375(9722):1278-86.
12. Scupin R, DeCorse CR. Anthropology: A global perspective. 8th ed. Pearson Education; 2016.

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Articles are submitted online via our online submissions system, OJS (http://ojs.library.ubc.ca/index.php/ubcmj). For detailed submission instructions, please refer to the complete online version of the UBCMJ Guide to Authors which can be found at www.ubcmj.com.

author eligibility

Authors must acknowledge and declare any sources of funding or potential conflicting interest, such as receiving funds or fees by, or holding stocks and benefiting financially from, an organization that may profit or lose through publication of the submitted paper. Declaring a competing interest will not necessarily preclude publication but will be conducive to the UBCMJ's goal of transparency. Such information will be held in confidence while the paper is under review and will not influence the editorial decision. If the article is accepted for publication, the editors will discuss with the authors the manner in which such information is to be communicated to the reader. UBCMJ expects that authors of accepted articles do not to have any undisclosed financial ties to or interest in the makers of products discussed in the article.

In the interest of full transparency, no current members of the UBCMJ staff will be permitted to publish in the journal, except for those officially invited in a staff writer capacity to author a news piece or editorial. This policy is intended to limit the potential for conflicts of interest. All former members of the UBCMJ staff are exempted from this policy, as they will not have involvement in the workings of the journal at the time of their submission.

author originality

Authors must declare that all works submitted to the UBCMJ contain original, unpublished content and have been referenced according to the appropriate academic style. Written content which displays excessive similarity to previously published works, including works written by the submitting authors, will not be published by the UBCMJ. This policy is consistent with the UBC policy on plagiarism. Figures or images may be re-published in the journal, with permission from the original authors, for illustrative purposes. The UBCMJ editorial staff reserves the right to request revisions, to deny publication or to require retraction of submitted or published work that contains clear violations of this policy.

specific submission criteria

academic research

Research articles report student-driven research projects and succinctly describe findings in a manner appropriate for a general medical audience. The articles should place findings in the context of current literature in their respective disciplines. UBCMJ currently accepts both full length articles and research letters.

Written permission must be obtained from persons

acknowledged in the article and all co-authors and contributors must sign a disclosure agreement that accompanies the submission.

All submissions to this section must contain a written copy of patient consent. The submitted manuscript must also note accordance with the Declaration of Helsinki, as well as list the research ethics board approval number in the materials and methods section.

reviews

Reviews provide an overview of a body of scientific work or a medical trend. Reviews may outline a current medical issue or give insight into the principles of practice of a clinical field. Authors may choose to review the etiology, diagnosis, treatment, or epidemiology of a specific disease. Articles may also provide a survey of literature dealing with philosophy or social sciences.

case and elective reports

Case Reports describe patient encounters in a clinical or public health setting. The case should provide a relevant teaching point for medical students, either by describing a unique condition OR by presenting new insights into the diagnosis, presentation or management of a more common condition.

Elective Reports provide a specific description of the scope of practice of a medical specialty and/or training program, and recall the student's impressions and reflections during and upon completion of the elective.

All submissions to this section must contain a written copy of patient consent.

global health

Global Health articles should correspond to one of the following formats:

- Editorials are well-researched submissions that outline a current or historical global health issue.
- Commentaries should reflect upon a personal experience in order to discuss a contemporary global health-related issue.
- Dispatches are brief articles that offer a unique perspective on a global health experience.

news and letters

This section will accept three types of submissions:

- News articles should cover current events in the field of medicine or significant medical advances.
- Feature articles highlight the careers of medical professionals who have contributed significantly to their field or provide advice for medical students interested to pursue a career in the field.
- Letters to the Editor are meant for readers to express their opinion in response to any articles published in past issues of the UBCMJ.

commentaries

Commentaries are intended to provide a platform for intellectual dialogue on topics relevant to the study and practice of medicine. Submissions should correspond to one of the following categories:

- Subjective pieces relevant to medical studies, life as a future physician, or the current social context of medicine.
- Clinical perspectives on an interesting research study or area of focus.
- Book Reports briefly discuss the significance of non-fiction or fiction works to the practice and study of medicine.

correspondence

For any questions related to your submission, please contact the appropriate Section Editors.

- Academic Research (academic@ubcmj.com)
- Case and Elective Reports (reports@ubcmj.com)
- Reviews (reviews@ubcmj.com)
- News and Letters (news@ubcmj.com)
- Global Health (global.health@ubcmj.com)
- Commentaries (commentaries@ubcmj.com)

The UBCMJ could not have been possible without the support and guidance of the following: Linda Herbert, Cindi Valensky, Brian Kladko, and Dr. Janette McMillan.

The UBC Medical Journal uses an open access publishing policy in line with our mandate to publish in a socially responsible way. We endorse open access publishing as the preferred model for scholarly communication and encourage the adoption of open access principles by universities and research agencies.

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THE UNIVERSITY OF BRITISH COLUMBIA

ISSN 1920-7425 (Print)
ISSN 1920-7417 (Online)