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JMUO

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ABOUT US

UOJM is an international peer-reviewed journal led and published by the students of the Faculty of Medicine. We welcome submissions in a variety of areas in biomedical research and feature original research, review articles, news and commentaries, case reports and opinion pieces. Our articles are written in both English and French, and represent the only bilingual medical journal in Canada run by students.

Le JMUO est un journal revu, édité et publié par les étudiants de la Faculté de médecine. Nous encourageons les soumissions d'une variété de différents domaines en recherche biomédicale et publions des articles de recherche originale, des articles de revue, des nouvelles et commentaires, des rapports de cas et des pièces d'opinion. Nos articles sont écrits en français et en anglais et représentent le seul journal médical bilingue géré par les étudiants au Canada.

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UOJM: Preface

The University of Ottawa Journal of Medicine (UOJM) is pleased to have conducted the first edition of the UOJM National Commentaries Contest. The goal of this initiative was to foster critical thinking and creativity in resolving issues in healthcare through academic writing. Students from the Faculties of Medicine across Canada were invited to submit a commentary on a current medical issue, controversy, or social determinant of health, written in English or French. Over 80 students from 11 different universities across the nation submitted creative and original commentaries this spring. The commentaries were evaluated in duplicate using a double-blinded procedure by the UOJM editorial team. Top-ranking submissions were further evaluated by University of Ottawa Faculty of Medicine professors. Articles were judged on topic relevance, the quality of writing, supporting evidence, and call to action. This current special issue of UOJM features a selection of the best commentaries submitted.

We wish to first thank all the participants for their outstanding submissions that made the first edition of this contest a great success! We would also like to thank the contest reviewers, the faculty professors who served as final judges, and the UOJM sponsors, for their investment in UOJM's vision and mission. A special thank you to the Francophone Affairs of the Faculty of Medicine of the University of Ottawa for sponsoring the totality of the Francophone prizes.

We hope you enjoy perusing the commentaries published in this special issue of the UOJM!

UOJM Co-Editors in Chief

Zacharie Saint-Georges & Omar Dewidar

Winners of the English stream of the contest:

1st place (\$1000): Sarah Fu, University of Ottawa, Undergraduate Medical Program

Title: The Subtle and Silent Issue in Older Adult Care

2nd place (\$750): Amy Johnston, University of Ottawa, School of Epidemiology and Public Health

Title: The COVID-19 vaccine evidence gap: Decisions without data for pregnant and breastfeeding women

3rd place (\$500): Ammar Saad, University of Ottawa, School of Epidemiology and Public Health

Title: Moving Forward with Virtual Care: Lessons for the Post COVID-19 Era

JMUO: Préface

Le Journal médical de l'Université d'Ottawa (JMUO) est heureux d'avoir organisé la première édition du Concours national d'écriture d'articles commentaires du JMUO. Le but de cette initiative était d'encourager la pensée critique et la créativité dans la résolution de problématiques en soins de santé à travers l'écriture académique. Les étudiants des facultés de médecine canadiennes ont été invités à soumettre un article sur une problématique médicale, un déterminant de la santé ou une controverse d'actualité, rédigé soit en français ou en anglais. Plus de 80 étudiants provenant de 11 universités à travers le pays ont soumis des textes créatifs et originaux au cours du printemps dernier. Le processus d'évaluation comprenait l'évaluation à double insu par des membres de l'équipe éditoriale du JMUO. Les soumissions les plus mieux classées étaient ensuite évaluées, à double insu, par des professeurs de la Faculté de médecine de l'Université d'Ottawa en tant que juges finals. Les articles étaient évalués selon la pertinence du sujet et la qualité de l'écriture, des références et de l'appel à l'action. Ce numéro spécial du JMUO met en valeur une sélection des meilleurs articles soumis.

Nous souhaitons remercier tous les participants et participantes pour leurs soumissions remarquables qui ont fait de la première édition du Concours un franc succès. Nous désirons également témoigner notre gratitude envers les évaluateurs du concours, les professeurs titulaires qui ont servi de juges finals ainsi que les commanditaires du JMUO pour leur dévouement envers la vision du Journal. Nous tenons aussi à souligner spécialement les Affaires francophones de la Faculté de médecine de l'Université d'Ottawa pour avoir commandité la totalité des prix francophones.

Nous espérons que vous prendrez plaisir à la lecture des articles de ce numéro spécial du JMUO!

Co-rédacteurs en chef du JMUO

Zacharie Saint-Georges & Omar Dewidar

Gagnants du volet francophone du concours :

**1ère place (\$1000) : Mélanie Elhafid, Université de Toronto, Programme médical de Premier Cycle
Titre : Le pouvoir de la langue**

**2ème place (\$750) : Yasmine Elmi, Université d'Ottawa, Médecine moléculaire et translationnelle
Titre : Les couleurs de la médecine : Représentation inégale de la pigmentation de la peau dans les ressources en dermatologie**

**3ème place (\$500) : Léa Caya-Bissonnette, Université d'Ottawa, Neurosciences
Titre : Le vaccin à ARNm, au-delà du COVID-19**

2021 UOJM National Commentary Contest Winners (English stream)



The Subtle and Silent Issue in Older Adult Care

1st place

Sarah Fu¹

¹University of Ottawa, Ottawa, Ontario, Canada

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Keywords: *Elderly care, COVID-19, ageism*

The treatment of elders in the community and ageism in our society has been an issue often overlooked. However, since the onset of the COVID-19 pandemic, poor treatment of elders in the community and long term care homes has been brought to light. During the beginning of the pandemic, long term care homes in Canada accounted for around 80% of all COVID-19 related mortalities.¹ This situation is due to an amalgamation of factors leading towards the ultimate neglect of the elderly population, including the governance of long term care homes in Canada, the stigma against the elderly population, and the commonly misconceived clinical picture of a 'frail' senior by the medical community.

A factor contributing to the increased exploitation of long term care facilities, involving overcrowding, and poor infection control stems from Canada's history in governance, wherein long term care homes and personal nursing were excluded from the Canada Health Act, which required all provinces to ensure healthcare coverage for medically necessary hospital and physician services.² Due to this, lack of proper funding and regulation for long term care facilities has inadvertently resulted in: (1) an employment model wherein personal support workers

were overseeing multiple residents, such as up to 40 residents at a time, (2) lack of pandemic preparation, with multiple residents sharing bedrooms and lacking facilities for physical distancing and (3) low pay grades for personal support workers, who then travel between long term care homes to take on multiple jobs and increase the spread of COVID-19.^{3,4,5,6}

A second impact of COVID-19 on the elderly population is in the increased appearance of stigma towards such a population. The increased need for protection of vulnerable populations such as the elderly during the pandemic has been met with negative regard in their treatment. For instance, an evaluation of the perception on social media of older adults during COVID-19 revealed that individuals had implied that the life of older adults were 'less valuable', conveying ageist remarks.⁷ In today's society, it can be common to shift blame onto older adults, as they are often seen as the 'reason' for heavy public safety restrictions in cities, and thus an antagonizing figure and an obstacle for normal living.⁷

While COVID-19 has ultimately highlighted the gap in care for the elderly, ageism in society has been a pre-

existing notion explored in literature before the pandemic. For instance, previous literature has displayed a link between the reverse golden section hypothesis and aging populations, which demonstrate that certain elderly identities evoke negative connotations in a ratio of 2:1 negative to positive.⁸ This connotation can extend to the medical community, where there is a common picture of a 'frail' and 'unfit' older individual when seeing geriatric or ageing patients.

Elderly patients can be stereotyped as sickly, incompetent, senile, lonely and asexual.⁹ Especially since medical professionals in acute settings may be seeing a skewed image of older patients with complex health issues, the medical community is particularly prone to issues associated with ageism.¹⁰ For instance, sexual needs and mental health of the older population is often neglected.¹¹ Younger populations do not view the older population as an 'in-group', and instead, view them as a group far removed -- one who does not participate in sexual activities or whose problems are unrelated to their own. Physicians may also provide fewer medical treatments to older adults than to younger population, or physicians may falsely attribute certain medical conditions to the natural course ageing.¹² Lastly, although older adults are the largest group for the targets of drugs and medications, they are consistently excluded from clinical trials as deemed 'unfit'.¹³

Because the concept of ageism in medicine is prevalent and often goes unnoticed, ageism is also often internalized by older adults. A study examining ageism in the medical context noted that older adults "tend to accept many of the negative stereotypes about old age associated with their age group given to them by the younger population. For example, some older patients suggested that it might be their own fault for ageist behaviour from their physicians due to self-attribution of negative ageist stereotypes.¹⁰ Since this issue can take on a subtle appearance, doctors may not realize when they take on detrimental stereotypes of the older population. They may prompt older adults to feel helpless and less independent by addressing family members instead of themselves directly, even if it is done unintentionally. According to Dr. Tricia Woo, a geriatrician and associate professor at McMaster University, ageism is a reflection of society: "if you look at fashion magazines, it's always a celebration of youth, not a celebration of getting older gracefully".¹¹

It is especially important to teach concepts of ageism in medical training, when the primary population group of Canada is ageing. It has been shown that participation in geriatric programs in instruction and electives with the older population has improved perceptions of the older population.¹¹ Furthermore, medical humanities education programs such as collaborative storytelling mediums with dementia patients in pre-clerkship curriculum in the United States has been used to develop a deeper understanding of the colourful complexities and rich experiences of the geriatrics population beyond the 'frail' clinical picture taught in class.¹² Through firsthand exploration of geriatrics in undergraduate medical education, the Canadian medical system can improve its road to providing better care to our primary population -- and one that is too often underlooked.

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The COVID-19 vaccine evidence gap: Decisions without data for pregnant and breastfeeding women

2nd place

Amy Johnston¹

¹University of Ottawa, Ottawa, Ontario, Canada

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Keywords: *Maternal health, COVID-19, vaccines*

On March 11th, 2020, the World Health Organization officially declared the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) outbreak a pandemic, setting in motion an unprecedented modern-day global public health response.^{1,2} Since that time, COVID-19's impact has been wide-reaching and complex; influenced by a diverse set of biologic, clinical, psychologic, and sociodemographic factors.^{3,4} Indeed, not all members of society are at equal risk of SARS-CoV-2 infection or experiencing severe infection-related outcomes.^{3,4} For example, older adults and individuals with comorbid conditions (e.g., cardiovascular disease) are at increased risk for severe disease.⁵ Further, males are at higher risk of serious COVID-19 outcomes compared to females, underscoring the importance of including sex as a fundamental variable in the design and conduct of

COVID-19 research.⁶ Certainly, without sex-disaggregated data, it is impossible to know if, or to what extent, sex-specific approaches to the care and prevention of SARS-CoV-2 infection should be employed.⁷

Just as the findings of male-specific analyses are not necessarily generalizable to females, findings on non-pregnant females should not, by default, be considered generalizable to pregnant and lactating women.⁸ Pregnant and breastfeeding women are indeed quite different, both mechanically and physiologically, from non-pregnant individuals.^{6,8-11} This necessitates their specific consideration and study as distinct at-risk populations.¹² Pregnant women have increased cardiac output, plasma volume, kidney excretion, and delayed gastric emptying compared to non-pregnant adults, all of which can elicit

a different than average response to medications.^{10,11} Further, the immune system is modulated throughout the pregnancy period and the quality of vaccine-induced antibodies influenced heavily by associated hormonal changes.¹³ Thus, it is difficult to predict what vaccine-induced immune responses will look like in pregnant women without satisfactory data.^{14,15} Unfortunately, while the unique biology of these populations requires specific attention, pregnant and breastfeeding women remain practically non-existent as participants of COVID-19 research.^{10, 11, 16-20}

Zika, H1N1 influenza, Ebola, and other coronaviruses have shown the world how infectious diseases can be uniquely devastating to pregnant women and the fetus.^{15, 16, 21} The serious risks associated with their infection have highlighted the need to study pregnant women during efforts to tackle infectious disease outbreaks.¹⁵ While questions remain about the impact that SARS-COV-2 infection has on pregnant women and the fetus,¹⁹ a growing amount of evidence suggests that pregnant women with COVID-19 are at higher risk of experiencing disease related complications compared to their non-pregnant counterparts.^{9, 22, 23} Additional studies suggest that pregnant women with more severe COVID-19 disease are at increased risk of preterm delivery,²⁰ which is itself associated with poor fetal outcomes.²⁴

Safe and effective vaccines against COVID-19 will be instrumental in controlling the spread of SARS-COV-2 and putting an end to the pandemic.^{25, 26} Although four COVID-19 vaccines have been approved for use in Canada as of March 2021,²⁷ pregnant and breastfeeding women have been systematically excluded from all COVID-19 vaccine trials to date.^{20, 22} Indeed, decisions about enrolling pregnant and lactating women in clinical research requires prudent considerations about the risks and benefits of the intervention being studied.⁸ These discussions are frequently characterized as “ethically complicated”,¹⁵ as considerations need to be made for both of the mother and fetus^{11, 15} Often, the result is a decision to exclude all women of reproductive age out of fear for harming the fetus, which elicits considerable concern about financial and legal liability^{14, 28} Judgements of this type align with the widely accepted “precautionary principle” approach to medical ethics, i.e., reduce the risk of harm even before evidence of harm exists^{11, 29} As noted by others,^{8, 16, 22, 23}

however, when it comes to vaccine trials for COVID-19, this ‘exclude all’ approach does not align with the ethical principles (namely autonomy, beneficence, and justice) purported to be upheld by decision makers. This is especially true for pregnant and lactating women with comorbid conditions that are known to increase their risk of severe disease.¹²

To understand how best to protect pregnant women from COVID-19, we have to understand how their immune system reacts to vaccine candidates throughout the course of pregnancy. This knowledge will help experts decide on the optimal dosing and dose scheduling required in pregnant women to generate an adequate level of protection against SARS-COV-2 infection.¹⁴ Vaccination against influenza, tetanus, diphtheria and pertussis is already recommended for pregnant women²⁰ and none of the currently approved COVID-19 vaccines contain live virus, ingredients known to be harmful to pregnant women or the fetus, or pose a theoretical risk during pregnancy.^{17, 23, 27, 30} Further, previous research has demonstrated that clinical studies on novel vaccines can be safely tested in pregnant females,^{31, 32} including during a pandemic,³³ providing vital information about the efficacy, safety, and immunogenicity of vaccines in this unique population. Without clear evidence that COVID-19 vaccines pose substantial and imminent risk of harm to the fetus, mother, or breastfeeding infant, withholding vaccines from these populations not only represents a major missed opportunity to close important knowledge gaps, but denies them the potential to gain significant protective benefit.¹⁵

Since the Canadian National Advisory Committee on Immunization recommended against routinely offering COVID-19 vaccines to pregnant or lactating women late in 2020,¹² professional specialist societies^{22, 23, 30} have released official statements advising that pregnancy and lactation status alone are insufficient reasons to prevent women from accessing an approved COVID-19 vaccine.¹² Their general recommendation is that pregnant and breastfeeding women be allowed to make an autonomous decision about receiving the vaccine in consultation with their health care provider.²³ However, it is unethical to place the burden of responsibility about the appropriateness of taking a COVID-19 vaccine on these women and their healthcare providers without adequate scientific evidence to support in decision-making^{8, 22} The best way to gain this much needed evidence is within the setting of a highly structured and monitored clinical trial.⁸

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Moving Forward with Virtual Care: Lessons for the Post COVID-19 Era

3rd place

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Keywords: *Telemedicine, patient care, health disparities*

On March 11th 2020, the World Health Organization declared COVID-19 a global pandemic.^{1,2} We had realized the gravity of the situation before but, until that day, did not comprehend how our reality was about to change for the foreseeable future. Following that declaration, most countries and states implemented strict public health restrictions to contain the spread of the virus and decrease its mortality rate by enforcing physical distancing measures. Albeit effective, such measures did not come without consequences on the quality of life and wellbeing of people worldwide.³ Social isolation, loneliness, loss of employment and income, and housing instability were some of the adverse events that arose during what we call “the lockdown”.^{4,5} A friend of mine who had migrated to Canada from a war-torn zone felt the magnitude of this lockdown. “It’s like moving from one prison to another” he explained, reminiscing about a time he was forced to stay home to avoid the unforgiving jaws of man-made conflict.

One consequence, in particular, was inevitable; enforcing physical distancing measures meant limiting traditional face-

to-face interactions with health care providers. Suddenly, millions of patients around the world were subject to a degree of interruption to their health care. An interruption of this calibre would have caused catastrophic health disparities had it been left unaddressed. Fortunately, we rapidly resorted to virtual care and extended safe channels of communication with patients without jeopardizing their health or ours. Some believed virtual care was the key to our survival, but many doubted this novel technology and its ability to serve humanity. Nonetheless, using a seamless and time-sensitive transition to a virtual environment has allowed millions of patients to access an otherwise interrupted health care.

“We are all students of life” the anonymous quote claims, and when life presented us with COVID-19, we first sought survival by all means necessary, and then used our experiences to reflect upon our limitations and strengths. Indeed, using virtual care has brought about multiple lessons on our ability to use technology in our pursuit of survival. For example, soon after the pandemic began, we

learned that the majority of our fears about virtual care were internalized and, when the need called, they became obsolete. For years we had perceived virtual care to negatively impact the quality of relationships with patients. Yet, when we were obliged to use technology to deliver care, it proved itself as an alternative for building personal safety in the patient's own physical environment and promoting health discussions otherwise left unaddressed. Similarly, we had perceived using virtual care as a process that required complex and longitudinal training for both the patient and the provider. However, the resilience of patients and providers alike allowed for a rapid implementation of this technology with timely and affordable training. Overcoming such barriers has widened our horizons on the capacity of virtual care and its ability to reach diverse cohorts of patients, who might be disadvantaged by their locations, backgrounds, and social identities. Indigenous and rural communities in Canada, for example, have long suffered from discontinuity of health care on the account of major geographical and cultural barriers they continue to experience.⁶ Pregnant and postpartum women have also suffered from limited access to timely health services.⁷ Refugees and immigrants are no different.⁸ These populations represent some of many who face avoidable and unjust health disparities and social injustice. They face what we call health inequity.^{9,10} Luckily, virtual care has presented an opportunity to "reach the unreachable" and connect patients with services that are tailored to their levels of need, as well as their cultures, backgrounds, and social identities. My immigrant friend has been seeing a physician who speaks the same language and shares the same cultural background as his. They live hundreds of kilometers apart, yet my friend joyfully shares how this experience has helped improve his wellbeing whenever the opportunity arises. "He understands, man. He knows what I'm talking about," he explains.

Now that we have learned about the might of virtual care, how can we cultivate its potential for the survival of humanity in the future? Inoculating populations against the virus has set the stage for the "post COVID-19 era" in which certain aspects of life could return to normal, including face-to-face provision of health care. We should anticipate that this return will be gradual and reversible, depending on the status of the pandemic and immunization coverage. Nonetheless, the lessons we have learned over

the past year must not go in vain and should guide us into the future of health care and for the benefit of all patients. For example, exploring and addressing the inevitable and unavoidable barriers to implementing virtual care should always be a priority to researchers and policy makers. As well, educational institutions should prioritize initiatives that allow future providers of care to build the needed competency for using virtual care when needed. Finally, and probably the most important lesson to note; virtual care is positioned to reduce the health inequities of many disadvantaged populations. This novel approach of health care delivery should, therefore, always remain an available option for patients who need it, long after the pandemic is gone.

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2021 UOJM National Commentary Contest Runner-Ups (English stream)



The Infodemic of COVID-19

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While the fight against the COVID-19 pandemic remains centered around the great strides made in fields of biotechnology and epidemiology, an epidemic of misinformation and growing skepticism of the scientific community rages beneath the surface. Almost understandably so, in an unprecedented time of change riddled with fear and a sense of loss, people turn to thoughts, emotions, and behaviours that sometimes do more to impede the return to normalcy that we all crave. Reports that were particularly prevalent during the early pandemic response, including those of individuals refusing to wear masks in public spaces or anti-lockdown rallies throughout North America, only spurred further confusion and divisive sentiments on both sides.¹ While these events may point towards a lack of clear communication and mixed messaging from authority figures in the early response, a culture of inherent skepticism, particularly on social media, continues to be pervasive. With hopes of a global re-opening riding on the current vaccine rollout, widespread acceptance of the COVID-19 vaccines remains essential to achieving herd immunity and ultimately curbing the spread

of the virus. However, marginalized and underrepresented groups in North America that have been most heavily affected by the pandemic are also often those who are most distrustful of the medical system.^{2,3}

It's no wonder that people are skeptical, given the misinformation that surrounded the start of the pandemic on a multi-national level. Countries that refused to share vital information regarding the spread and impact of domestic COVID-19 outbreaks hindered collective efforts to track the virus.⁴ New York governor Andrew Cuomo, previously hailed for his effective and decisive response to the pandemic, has recently come under scrutiny for allegedly misrepresenting the number of COVID-19 deaths in long-term care facilities.⁵ In general, mistrust in institutions, news media, and public figures in North America has grown in the last several decades, not to mention conflicting information provided by trusted leaders, for instance, between former President Donald Trump and Dr. Anthony Fauci.^{2,6}

Social media and the technology we depend on to stay connected and informed during a time of social isolation amplifies the dissemination of ideas and information, whether accurate or not. Rumors including the curative properties of raw garlic, or that 5G technology somehow predisposes the individual to COVID-19, have circulated throughout social media, some even beginning and propagated by public leaders.⁷ As the WHO declared Covid-19 to be a global pandemic back at the start of 2020, it also identified an “infodemic”, where the dissemination of misinformation on covid-19 would prove to cost lives, potentially leading to a lack of compliance to public health guidelines, or a failure for immunization campaigns to reach their targets.⁸ The creation of such doubt is especially harmful in the case of vaccine hesitancy. Such a phenomenon is not specific to COVID-19 vaccines - only several years ago, vaccine hesitancy resulted in outbreaks of measles in pockets throughout Europe and North America.⁷

That being said, these fears may not be entirely without merit. Of particular relevance is the historic ill-treatment of minority groups by the scientific community, breeding distrust and resentment even today. Notable examples include the Tuskegee syphilis study, where African American men were recruited under the guise of medical care but instead were monitored to study the progression of syphilis without being informed or treated, as well as the forced vaccination of African Americans for smallpox in the 1900s.^{9,10} It's no wonder then, given these events, that African Americans are the most hesitant racial group to receive a vaccine, with a December poll by the Kaiser Family Foundation finding that 35% of African American adults would choose not to be vaccinated.^{10,11} However, we hardly have to look past the last few decades to see a legacy of mistreatment that extends into contemporary experiences of inequity in healthcare access. Ethnic minorities experience poorer health outcomes even when they are able to access treatment, and as illustrated by the recent pandemic, are often most adversely affected when the healthcare system is placed under strain.³ Yet, minority groups have been highlighted as more distrustful of the medical community, and more likely to present with medication nonadherence, poorer self-reported health, and decreased uptake of screening and preventative measures.²

As medical professionals, we often take for granted a

patient's trust in the role of a physician as a respected and trusted figure. However, in times like these when this relationship is paramount, we see where things can go wrong when that fragile trust is tested. The general response to the pandemic continues to highlight the importance for the medical community to maintain a strong rapport with patients, especially those who have historically been mistreated. Physicians should serve as a bridge between the scientific community and patients, transforming restrictive and disconcerting jargon into plain, easily accessible language. Having the privilege of serving as a respected figure in the community involves leading by example, including working to amplify more diverse voices and ensuring culturally sensitive training and education to leaders and providers. Outside of the scientific community, partnering with well-regarded institutions in communities that have been mistreated or marginalized in the past, including religious organizations, businesses and civic groups, may help to bridge that gap. In an effort to achieve a representative cohort during clinical trials for the COVID-19 vaccine, Pfizer worked with advocates and organizations in minority communities to encourage participation from people of colour, and nearly achieved representation of the proportion of African Americans in the United States, though still falling short.¹² While many platforms including Facebook and Twitter have begun removing false information surrounding COVID-19, content moderation is notoriously difficult to enforce, given the speed at which misinformation can circulate online.¹³ Physicians should not only seek to inform, but also to counsel on how patients can go about finding reliable sources of information. All in all, physicians are in a unique position of privilege to connect with people on a trusting and intimate level, and this relationship will be paramount in battling not only the spread of the COVID-19 disease, but also, of misinformation at large.

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Loneliness Under Lockdown: Caring for Mental Health in the Time of COVID-19



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It is no surprise that struggles with mental health have become increasingly common over the past year.¹ Quarantine and social distancing aim to control the spread of COVID-19, but these public health measures also prevent people from freely interacting with each other, which can be detrimental to their psychosocial well-being.² This situation is considerably worse for those who lack established social networks and access to technological tools. Combined with the disrupted delivery of mental health services, loneliness has turned into a crisis of its own.²⁻⁴

THE UPS AND DOWNS OF TECHNOLOGY

Unlike previous pandemics, living in the digital age of video calling and instant messaging means that communities do not have to be entirely isolated. Improving network connectivity and building computer literacy can reduce digital inequalities and allow more people to keep in touch.⁵ Most students and professionals have transitioned from

in-person meetings to workdays at home with meetings on Zoom, which often expand accessibility by removing travel costs and reducing time investments.^{6, 7} Tablets and smartphones further enable patients to connect with their loved ones and healthcare workers to enhance communication in clinical settings.⁶

However, virtual conferences are far from a perfect replacement for face-to-face conversations because that sense of closeness and authenticity is still missing.⁶ In general, prolonged use of social networking sites is linked to unfavourable conditions including low self-esteem, depression, and internet addiction.^{8, 9} Negative feelings such as fear and worry can easily spread and influence numerous online users. Moreover, there exists an “infodemic”, where the rapid distribution of misinformation about COVID-19 can lead to confusion and behaviours that harm one’s mental or physical health.⁹ Thus, it is essential to monitor and filter out false reports, promoting evidence-based facts instead.

Despite its flaws, social media presents people with an opportunity to maintain relationships and access entertainment while staying at home. The amount of activity and engagement on platforms like Facebook and Twitter has clearly surged since the start of this pandemic.^{5,7} As long as individuals remain mindful of their usage, there is no time like the present to take advantage of technology to enhance existing social networks as well as reconnect with old friends and distant family members.^{3, 5}

REMOTE MENTAL HEALTH SUPPORT

Sufficient support can be difficult to obtain in the time of COVID-19 when mental health issues are on the rise and systems get overwhelmed.^{1, 4} For example, counselling services including the Kids Help Phone have seen huge spikes in phone calls and text messages from youth across Canada.¹⁰ Increased government funding and volunteer recruitment make a meaningful difference in addressing this health crisis.¹⁰ By ensuring that there is always somebody willing to listen and offer support, those who reach out no longer need to be alone when dealing with stressful moments, from anxiety attacks and depressive episodes to thoughts or plans of suicide.

Virtual peer support groups like those offered by the Canadian Mental Health Association are another resource for anyone struggling with their mental well-being.^{4, 11} These interactions give individuals the chance to share personal stories and bond over similar experiences, helping them gain insight into potential coping strategies and promote healthcare-seeking behaviours.¹² Patients with serious mental illness have also reported stronger feelings of hope and group belonging from joining these online communities.¹²

CONNECTING THE YOUNG AND ELDERLY

It has been suggested that the term “social distancing” may be misleading and should be changed to “spatial distancing”, which more accurately describes the act of maintaining physical distance from others.¹³ However, strict adherence to this rule can result in the separation of important social networks, interfering with one’s mental health.^{4, 13} When the pandemic hit, most people were unprepared to experience sudden disconnection from their communities and forced to adapt quickly. For the young

and elderly, living through these circumstances has been especially confusing and disruptive.^{2, 14}

Apart from promoting learning and education, schools support younger students by providing services, structure, and socialization, which is a key aspect of growing up and developing relationships.¹⁵ Health experts in pediatrics, infectious disease, and mental health have recommended that Ontario schools remain open with prevention and control strategies in place to prioritize their developmental health.¹⁶ Although it is too early to understand the long-term impacts of COVID-19, feelings of anger and confusion along with symptoms of post-traumatic stress are known to be common among children during and after quarantine.¹⁵

Technical and cognitive challenges, in addition to impaired hearing and vision, can make it difficult for seniors to take advantage of modern technology.¹⁴ Many of them do not consider cell phones and similar devices as convenient for communicating with others.⁵ Furthermore, nursing home residents who rely on caregivers for help with everyday tasks cannot access the internet as easily as the rest of the population. Such concerns may reflect the necessity of taking a harm reduction approach, where relatively safe in-person activities continue for the elderly in order to avoid the greater risks of isolation and maintain their psychological well-being.^{2, 13}

CONCLUSION

The ongoing pandemic limits access to various social activities, creating significant challenges to mental health. However, health goes beyond avoiding COVID-19. Finding ways to stay connected, either remotely through technology or following physical distancing guidelines, is equally important. In times of uncertainty, social networks enable community members to seek support, overcoming isolation and other hardships. For some, spending time apart may lead them to the realization that relationships, whether with close friends or casual acquaintances, are not to be taken for granted. And if there is a silver lining to be found amidst this crisis, then hopefully it inspires people to value and appreciate their social connections, more than ever before.

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A Time for Change: The Argument for National Pharmacare

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Come this year I will be celebrating a milestone birthday, 25 years old. There are many significant milestones associated with that age; however, there is one milestone that I have been taking for granted... It is the age in which my parents' employer drug plan will stop covering my medications. The realization that "free" medications were soon going to be a luxury of the past gave me a moment of pause, I asked myself, how does a country who prides itself on national healthcare still have people budgeting to buy life sustaining medications? The reality of that answer being the healthcare system we are so proud of is seemingly flawed.

Canada's history with Pharmacare began with the creation of the Medical Care Act in 1966, the foundation of our Medicare. However, the adoption of national Pharmacare stalled thanks to relatively low drug prices. From here provinces adopted ad hoc Pharmacare plans to serve

the most vulnerable populations; seniors and low-income families.¹ As the drug revolution and advancements in science hit Canada the increasing cost of medications ballooned pharmaceuticals into the second largest expense in healthcare.² However, provinces have been slow to react to this change with the percentage of prescription drugs financed by provincial governments remaining unchanged from 1990-2010.³ Moreover, healthcare, whether we like it or not, is a political issue. With political ideologies back peddling at the both provincial and federal levels; take for instance, the changes the Ford government has made to OHIP+⁴ and the recent failure of the NDP backed Pharmacare bill.⁵ Even with Trudeau's re-election promise to implement reform, the future prospect of a national Pharmacare program only further dwindles as Trudeau's Advisory Council on the Implementation of National Pharmacare (henceforth referred to as The Council) has stated there has been a lack of funds set aside for

implementation of such a program.⁶ With such a troubled history and the unchanging political landscape towards the adoption of a national system, it is fair to ask why we should even care about Pharmacare? To answer this, we must take a hard look at our current system.

As of 2021 Canada remains the only country in the world with a national Medicare program that also doesn't have a national Pharmacare program to match.⁷ A fact that is even more alarming considering the near universal support, on both sides of the political spectrum, for such a program. With 90% of Canadians supporting the idea, this national desire is only matched by strong evidence that shows the failure of our current approach.⁸ According to the comprehensive final report from The Council, 19% of Canadians, around 7.5 million people, are either uninsured or underinsured in regard to pharmaceutical coverage. Naturally, this lack of coverage has led Canada to have a 2-5 times higher non-adherence rate for pharmaceuticals in comparison to countries with a national program.⁷ This non-adherence accounts for 5% of all hospital admissions, costing our healthcare system \$4 billion dollars alone before factoring in increased long-term costs stemming from these admissions.⁹ The cost of our current Pharmacare system is unfortunately one that is measured in both dollars and potential lives.

As aforementioned, Canadian drug prices have ballooned; while globally prices have increased, Canada has been particularly affected. According to The Council, Canada pays the third highest prices for branded drugs among 34 countries mostly in Europe and North America; this disparity can be directly linked to our inability to negotiate drug prices due to, once again, our lack of a national Pharmacare plan. Instead of one cooperative plan to represent nearly 40 million Canadians, we are fixed in a system where a patchwork of plans forces a dilution of our negotiating power.⁷ Thereby, only further highlighting holes in our system. It is apparent that the current system is both ineffective in providing comprehensive care for patients and giving Canadians a fair price on their medications.

If the present shortcomings of our system were a keg of gunpowder, the COVID-19 pandemic surely represents the match. Unemployment has hit a dramatic high because of the pandemic; the country saw a 5.2% jump in unemployment, a jump reminiscent of the 1980's

depression.¹⁰ As of 2021, the employment rate has yet to recover to pre-pandemic numbers and with this comes the reality that many Canadians have lost their vital job-based coverage. Moreover, the pandemic has led to a widespread decrease in proper nutrition, decrease in exercise and an increase in alcoholism,^{11,12} all factors that could lead to an increased need for medications. The pandemic has hit Canadian Pharmacare with the proverbial double whammy, through a decrease in coverage of drugs and an increase in the need for medications.

While one may argue that focusing on Pharmacare would be impossible with the way the pandemic has decimated the Canadian economy, it is in these generational events that we see the greatest potential for change. The great depression brought about one of the greatest periods of social reform in the United States, a revolution that was mirrored on this side of the border as well. I believe that now is the best time to push for the reform of this glaring weakness in our healthcare system. I am sending this commentary to the MP's in my voting district back home in Hamilton (David Sweet) and my MP here in Ottawa (David McGuinty), members of the Conservatives and the Liberals, respectively. I do this because this is an issue that affects all of us, no matter our politics; I challenge you to do the same. Through resilience, drive, and collective efforts we can reform this program and create a true universal healthcare system for all Canadians.

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Revising the model for vaccine development: a step towards tuberculosis immunity

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Thanks to accelerated vaccine development, the first COVID-19 vaccine was approved for use by Health Canada only nine months after the disease was declared a pandemic by the World Health Organization.¹ This unprecedented feat was made possible by three critical factors: a stressed sense of urgency, substantial funding, and parallel pre-clinical and clinical trials. Such a concerted effort not only led to the development of multiple effective vaccines, but also bred innovation as mRNA technology bloomed despite its limited use in the past. This success story paves the way for the accelerated development of vaccines for other diseases, such as tuberculosis—the deadliest infectious disease of modern times before COVID-19 emerged.

AN URGENT NEED FOR A TUBERCULOSIS VACCINE

Tuberculosis (TB) is an infectious bacterial disease

with the largest infectious disease burden in the world, tolling 10 million new infections and 1.2 million deaths in 2019 alone.² Indeed, tuberculosis is one of the top 10 causes of death worldwide—but the situation remains underdiscussed as most cases are recorded in developing areas, such as South-East Asia (44%) and Africa (25%), or in underserved populations such as the Inuit in Canada.^{2,3} Approximately one-quarter of the world population is infected by the etiological agent of tuberculosis: the bacterium *Mycobacterium tuberculosis* (Mtb), known as the most successful human pathogen.²

The intracellular pathogen has co-evolved with humans to evade host immune defenses, rendering TB treatment particularly difficult. Well-followed treatment regimens generally take approximately six months to complete, but patient non-compliance and heavy antibiotic exposure have given rise to multi-drug and extensively-drug resistant

strains of Mtb^{2,4} Hope for TB treatment has largely turned towards host-directed therapies as most pharmaceutical companies no longer invest in antibiotics in virtue of the rapid onset of resistance and ensuing financial loss.^{5,6} A vaccine is desperately needed to quench the problem at its source.

There is an existing vaccine for TB known as the Bacille Calmette-Guérin (BCG) vaccine, but its inefficacy in adults has driven many countries, including Canada, to discontinue its use—partially or fully—in infants and international travelers.⁷ In turn, there were 14 new TB vaccines in the pipeline as of March 2020 dispersed across live attenuated, whole cell inactivated/fragmented, protein/adjuvant, and viral vectored platforms. Each of these 14 vaccines have been or will be subject to the sequential 10+ year pre-clinical and clinical trial timeline to test for safety and efficacy, even though TB represents an immediate public health threat.⁸

With a TB vaccine, disease development could be decelerated to lighten the global health and economic burden of TB, preserve existing antibiotics, and save millions of lives. Vaccines are of utmost importance for vulnerable populations. For instance, there is an over-representation of damaging respiratory disease in Inuit populations, rendering individuals more susceptible to TB later on.⁹ Paired with inadequate access to healthcare and other social determinants, the rate of TB in Inuit populations is 290x higher than Canadian-born non-indigenous populations.¹⁰

MIRRORING COVID-19 VACCINE DEVELOPMENT FOR TB

A primary driving force for the rapid development of COVID-19 vaccines was the immediate sense of urgency stressed by the WHO and international governments, which is critically lacking from the TB dialogue. Though the WHO has had a TB action plan since 1997, progress has been painfully slow compared to the COVID-19 response. Secondly, once the COVID-19 genome sequence was determined, massive amounts of resources were mobilized for vaccine development, including financial support, laboratory equipment, and staff.¹¹ For instance, the Canadian government alone has invested or pledged over two billion dollars related to COVID-19 vaccines and

therapeutics since the pandemic started.¹² Contrarily, the Canadian government invested less than 25 million dollars towards TB research in 2019—24% less than the minimum fair share funding target established by the United Nations.¹³ A third massive push for COVID-19 vaccine development came in the form of parallel pre-clinical and clinical trials, paired with earlier development of manufacturing facilities. This modification reduced the vaccine development timeline from 10+ years to less than one.¹¹

If these same three steps are taken towards the development of a TB vaccine, a vaccine could be theoretically approved in less than one year. At the very least, if vaccine development stages were made parallel rather than sequential for the TB vaccines currently in clinical trial phases I and II, a successful candidate could be identified much sooner. This approach could also reveal whether any of the current candidates hold promise—and, if not, these clinical trials could cease. Funding could then be transferred to support new pre-clinical studies.

An interesting new avenue for TB vaccine development is the mRNA platform as none of the vaccines in the current pipeline utilize this technology. Indeed, mRNA vaccines have shown promise for bacterial pathogens, such as group A and B Streptococcus.¹⁴ Though COVID-19 is a virus and Mtb is a bacterium, both exhibit intracellular lifestyles and characteristic surface proteins that could be potential immune targets. For instance, the membrane proteins Rv0232 and Rv1115 on Mtb are known to be antigenic in vivo,¹⁵ just like the infamous spike protein on the etiological agent of COVID-19, SARS-CoV-2. Indeed, mRNA technology is an attractive avenue for vaccine development and worthy of investment.

LESSONS TO TAKE AWAY FROM COVID-19 ACCELERATED VACCINE DEVELOPMENT

The path towards global TB immunity is clear: the same importance and resources devoted to COVID-19 accelerated vaccine development need to be applied to TB vaccine development. This effort requires: 1) a properly communicated sense of urgency, 2) financial investment in research, training, and infrastructure, and 3) a modified vaccine development timeline. This would allow for new

vaccine candidates, like mRNA-based vaccines, or existing candidates to be developed more quickly. In the future, accelerated vaccine development could equally be utilized for other infectious agents, such as *Pseudomonas aeruginosa* or methicillin-resistant *Staphylococcus aureus*, creating a world in which infectious disease and antimicrobial resistance are far less burdensome.

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Disrupting the paradigm of oncology care in Canada: the triumphs, challenges and future implications of telemedicine



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Medicine has long been one of the lingering aspects of society yet to be fully disrupted by technological advances. Unlike media, banking and commerce which have adapted to the growing demand for convenience and accessibility from the public, the practice of medicine in many ways remains much unchanged from decades prior. The 2019 novel coronavirus (COVID-19) demanded an immediate shift in the way Canadian healthcare was delivered to reduce the risk of viral transmission from in person patient encounters. Cancer poses a large and ever-increasing impact on the Canadian population and healthcare resources. Brenner et al. (2020) estimated nearly half of the Canadian population will develop cancer in their lifetime in addition to the recent increasing yearly number of new diagnoses and deaths as the population grows and ages.¹ Cancer patients were initially an ideal population for telemedicine

encounters during the pandemic. These patients often have additional comorbidities association with COVID-19 mortality and a diagnosis of cancer may further increase this risk.² As healthcare enters a second year within the new paradigm of virtual medicine, it is important to consider the impact and future of telemedicine on Canada's ever-growing oncology patients.

Telemedicine is not a novel concept and has been in use for many years. Telemedicine may take many forms and could include voice consultation, video consultation or tele-synergy/multimedia conferencing.³ Its role has been well established for communication with rural, under served or remote areas where travel to specialized centers would be prohibitive. Telemedicine in US oncology patients has been shown to improve diagnostic accuracy with easy access to multiple opinions, a reduction in costs and enhanced

care management.⁴ Little is known about widespread telemedicine or virtual care programs and practices in Canadian oncology populations. A recent systematic review suggested telemedicine is comparable to in person encounters with respect to quality of life but there is a lack of literature on oncologic outcomes.³ Telemedicine may have additional benefits including remote chemotherapy supervision and delivery, symptom management and palliative care access.⁴ While the successes and benefits of telemedicine in oncology may be readily apparent, there may be unique aspects of oncologic care that warrant special consideration.

There is limited data and experience with remote assessments for oncologic surveillance. Many guidelines require physical exam surveillance and oncologists using telemedicine have voiced concerns in this domain.⁵ Recommendations or changes in therapy may result solely from verbalized subjective symptoms. There may be much information lost by the ability to observe non-verbal behaviour or the 'end of the bed' test. Surveys of patients during the pandemic suggest that while there is enthusiasm for telemedicine options, a little over 50% of eligible patients would accept a virtual option.⁶ In addition, only 46% of oncologists have been shown to prefer managing cases virtually.⁶ Many oncology patients are elderly and familiarity with technology may be an obstacle. Patients may also feel reluctant to discuss certain aspects of their care over video conference or have nervousness using new technologies. Research has shown oncology patients and providers may demonstrate trepidation surrounding the rapid uptake of telemedicine and this may be due to a lack of education for both parties on how best to utilize these services effectively.⁴ Furthermore, up to 20% of encounters may be less than ideal due to technical considerations which may be preventable with improved education.⁷ This has resulted in many organizations creating practice guidelines surrounding oncology care during the COVID-19 pandemic.⁸

The wide-spread use of telemedicine in Canada is still in its infancy but has been provided a proverbial 'sink or swim' opportunity. The future of oncologic care in Canada is ripe for an effective uptake of virtual care to enrich the current standard. With increasing systemic treatment options, movements towards multidisciplinary care and limited

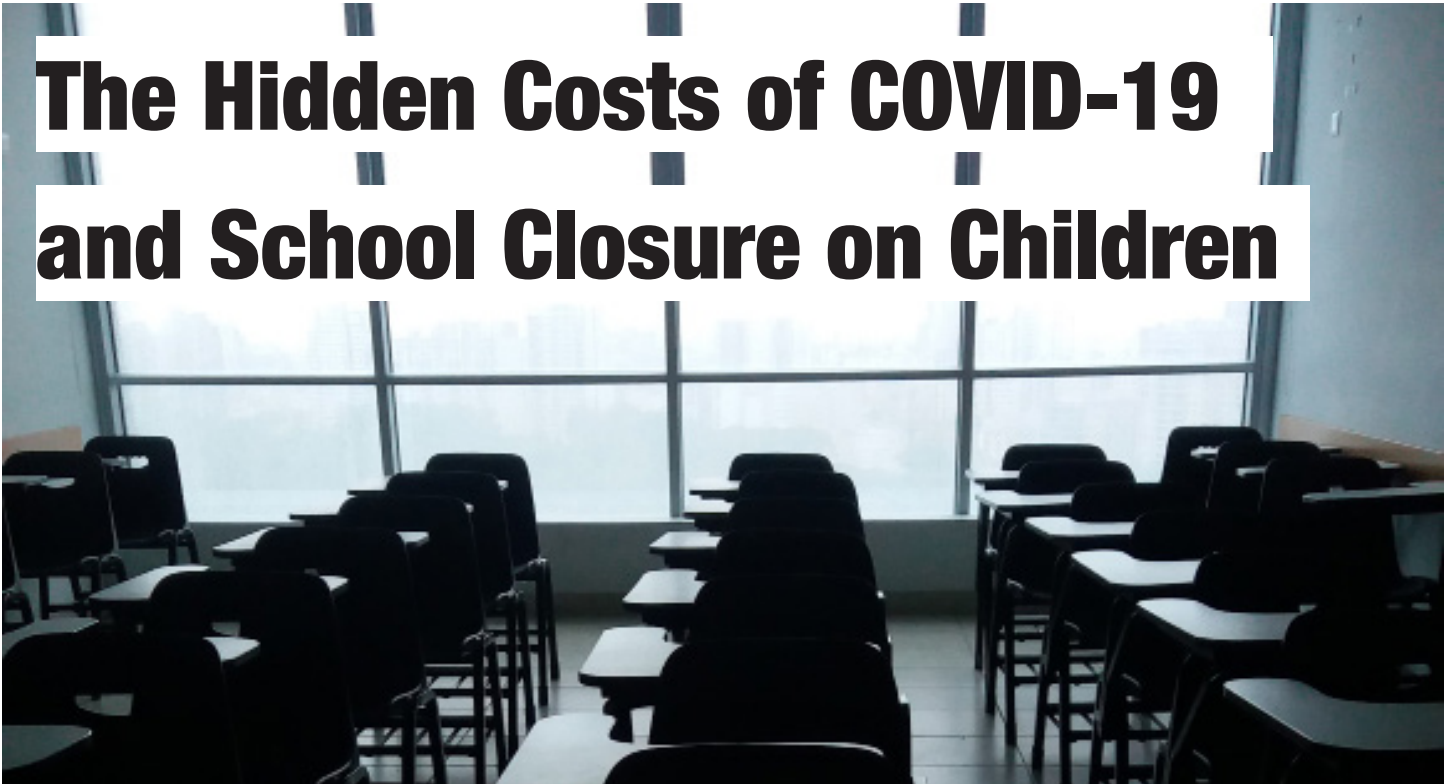
oncologic centers of excellence across a vast geography, the practice of oncology in Canada has the potential to be positively impacted. Patients may have improved access to second opinions, supportive allied healthcare and clinical trial exposure. The National Comprehensive Cancer Network strongly recommends clinical trial involvement where possible for all cancer patients and telemedicine offers the opportunity for improved patient access and multicenter collaboration. Furthermore, a robust telemedicine system may reduce overhead costs in a universal healthcare system.

It is unknown if this forced experience with virtual care will result in a positive change for Canadian oncologic healthcare delivery or simply a quick regression back to old, familiar ways. In the end, the barriers will not be healthcare consumers – patients – as they will likely adapt and embrace the benefits, improved access and convenience of virtual care. It will be up to practitioners and policy makers to take advantage of this opportunity, embrace the disruption with initial growing pains and move forward into a new era of oncologic healthcare delivery.

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The Hidden Costs of COVID-19 and School Closure on Children



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An initial public health measure enacted in response to the COVID-19 pandemic was the closure of schools.¹ This action was motivated by previous observations regarding school closure and prevention of pandemic flu transmission.^{2,3} In response to periodic school closure, many schools in Ontario have adopted a hybrid model of schooling with both in-person and remote learning. However, due to the emerging SARS-CoV-2 variants, considerable concern has been raised regarding in-person learning.^{4,5} This is an important discussion to have as additional variants and waves are likely to arise, and school closure poses a substantial burden to the well-being of children —especially those from marginalized populations.

Schools are essential to the well-being of children. From all of the socioeconomic status (SES) measures, education has been the strongest predictor of future health.⁶

Educational attainment has even been implicated in the risk of Alzheimer's disease.⁷ But schools are not only a source of education, they allow for social interventions as well. One essential social intervention is lunch programs. Many countries provide free meals which are crucial for addressing food insecurities in children living in poverty.⁸ When schools were closed, many of these programs ceased.⁹ The lack of these services in combination with economic hardship and unemployment has exacerbated food insecurities in vulnerable children.¹⁰ Furthermore, school is an important component of a child's social ecology (i.e. the social milieu in which a child is raised).¹¹ Without adequate schooling, a child is devoid of the positive impacts of both the educational and social aspects of school. This has already manifested in meaningful mental health consequences in children; wherein, increasing levels of anxiety and depression have been found in children during the lockdown.¹² School closure has further been

associated with increasing amounts of domestic violence.¹³ When schools are open, they provide a safe harbour for vulnerable children and mediate the trauma and sequela of domestic violence; their closure deteriorates the quality of life of already vulnerable children.¹⁴ Children with disabilities are additionally impacted by school closure. Such children are reliant on educational and rehabilitation programs to ensure their physical and mental health needs are cared for. Consequently, school closure creates additional mental and physical health challenges for both these children as well as their caregivers.^{15,16} Therefore, the benefits of school closure in reducing SARS-CoV-2 transmission needs to markedly outweigh the harms school closure will have on child well-being.

In determining whether to close schools, those making such decisions should consider the specific impact that SARS-CoV-2 has on the health of children and the degree of its transmission in schools. Individual school data should ideally inform such a decision, however, a generalized approach may be helpful as well. Relative to adults, a smaller percentage of reported SARS-CoV-2 infections appear to occur in individuals under 18 years of age. According to data collected by Health Canada as of January 29, 2021, 16.8% of COVID-19 cases are in those who are 19 and under. From these, 1.5% were hospitalized, 1.3% were admitted to ICU, and there have been 4 reported deaths (0.0%).¹⁷ The European Union (EU), provides additional information regarding the distribution of cases in those under 19 years of age vis-à-vis the European Surveillance System (TESSy).¹ According to the TESSy database, children aged 1-11 are under-represented among COVID-19 cases in the general population. Concerning school transmission of COVID-19, the TESSy database can be of further use. Clusters of COVID-19 cases have been reported, largely, in secondary schools, but also primary and preschools. Notwithstanding, it is currently not possible to determine if these cases were a consequence of school or community spread; more robust tracking is required. When reviewing further literature, the evidence suggests that school-based SARS-CoV-2 transmission is rare —although a major limitation of this research is a lack of asymptomatic testing.¹⁸ It is additionally important to consider the risk for teachers in working in an in-person environment. Fortunately, current literature does not suggest educational workers are at an

increased risk for being diagnosed with COVID-19.¹⁸ In general, it appears schools minimally contribute to SARS-CoV-2 transmission and even though there is correlational data suggesting school closure may prevent community spread, this research is limited by the co-occurrence of additional public health measures with school closures.¹⁸

There are many non-pharmaceutical interventions (NPI) that have been suggested and implemented to reduce the spread of SAR-CoV-2.¹⁸ Such interventions which can and have been implemented include limiting classroom size, peer-to-peer distancing and peer-to-teacher distancing, hybrid curricula, utilizing cohorts, staggered arrival times, cancellation of certain crowding activities, etc. (this list is not exhaustive). Unfortunately, there is little evidence to support the effectiveness of such initiatives in school; though the studies which do exist appear to suggest reduced transmission.¹⁸ To address this lack of data, schools should start implementing standardized and rigorous data collection processes. Screening, testing, and contact tracing need to be recorded in a standardized matter. To this end, the development of software to aid in the collection and analysis of data would be invaluable. This software could connect schools and serve as means for schools to coordinate. Schools or public health officers could use this data to understand the impact of various NPI strategies on transmission and implement iterative new strategies to deter transmission. Deep learning software could be further adopted to help make better predictive models of transmission which could assist in advising and perhaps even predicting whether an individual school should be closed. This information tracking system would be essential to help governments and physicians to act appropriately and make informed decisions in response to future outbreaks and variants.

Schools are an essential resource for children and their closure, in reaction to possible futures waves and variants, needs to be carefully considered. Governments and physicians and other stakeholders need to collaborate to identify creative and effective solutions in reducing transmission of SARS-Cov-2 transmission and safeguarding school operations. We further need to implement processes of data collection regarding school transmission to help better inform future decision-making.

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Vaccine Hesitancy in the Current Landscape of the COVID-19 Pandemic



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For a procedure so commonplace in a doctor's office, so critical to the prevention of disease, and so marred by controversy, it seemed odd that in my third year of medical school, I had yet to perform a vaccination. For that reason, I was very excited for my first rotation in family medicine. One could even say I was a little overzealous to learn about vaccines. To my credit, as someone who studied healthcare economics, there is a lot to love about the social return on investment of vaccines. Two weeks into my rotation I came across my first case of vaccine hesitancy. They were parents who had immigrated to Canada and were skeptical of vaccines. They wanted to pick and choose which vaccines their child would receive. These people are called the 'vaccine hesitant' and, unlike the devout 'vaccine deniers', they are the crucial swing states in a political battle for the health of our country.¹

According to the WHO, vaccine hesitancy stems from three different sources: Confidence, Complacency, and Convenience.² Confidence refers to people's mistrust in either their government, of pharmaceutical companies or even their doctors. Complacency refers to patients who

don't see the necessity for vaccines because they either do not fear the disease it prevents or they prefer to be "free riders" piggybacking on herd immunity afforded to them. Convenience refers to accessibility and is affected by the usual suspects of social determinants of health. The WHO draws a distinction between three groups of people. Vocal vaccine deniers, non-vocal but stout vaccine refusers, and the vaccine hesitant who are most likely to listen to scientific arguments and change their mind to vaccine acceptance.¹

In the current landscape of the COVID-19 pandemic, vaccine hesitancy can have large and detrimental effects. One recent study by researchers out of Imperial College London, not surprisingly, suggests that "the mortality over a 2-year period could be up to 8 times higher in countries with high vaccine hesitancy compared to an ideal vaccination uptake if non pharmaceutical interventions (NPIs) are relaxed. Alternatively, high vaccine hesitancy could prolong the need for NPIs to remain in place".³ The COVID-19 vaccines stand apart from the routine child vaccinations for a few reasons. First, COVID-19 is

everywhere in contrast to many of the diseases prevented by other vaccines. While still terrifying, the diseases of other vaccines, are no longer hogging headlines and are not constantly reminding people why we need protection. This would presumably increase interest in COVID-19 vaccines. However, many people cite the pace of vaccine development and lack of sufficient safety testing as a cause for concern. Public Health Ontario estimates that 56% to 89% of Ontarians need to be vaccinated in order to reach herd immunity.⁵ Initially, the rate of Canadians who said they would rather take a “wait and see” approach towards a COVID-19 vaccine was as high as 38% in September, 2020. That figure was only 1% less than those who said they would not hesitate.⁴ Fortunately, the tide is shifting in Canada and, most recently, that number has fallen to 16%. This 16% of Canadians who are still unsure or opting to wait and see, and not the roughly 12% who are still refusing to get the vaccine, should be the focus of our collective efforts to increase vaccination rates.

Changing vaccine hesitance into vaccine acceptance in the Canadian population should be approached from many different perspectives. The first is outreach. How to promote vaccination to the public? People who are skeptical of the vaccines need to hear/see trusted members of their social network and leaders endorse vaccination. All Canadians should be encouraged to share their vaccination experiences with friends and family. Religious leaders and local celebrities are trusted and endeared members of our society. They too should be encouraged to publicize their own vaccinations. Many First Nations leaders are already proving this strategy to be effective.⁶ Second, a decentralized approach to vaccine distribution needs to be adopted.⁷ Large vaccination centers in hospitals and pharmacies are great for efficiently vaccinating those people who are motivated and capable. However, as our country progresses with the vaccine rollout, health officials need to find a method of reaching people who are affected by the barriers of either convenience or complacency. Vaccines need to be brought to people in other creative ways such as setting up pop-up vaccination tents in community centers, in apartment building lobbies, or outside grocery stores. For some people, even this will not be enough to convince them to be vaccinated and that is where the roll of their physician becomes paramount. The ‘vaccine hesitant’, the ‘on-the-fencers’, the ‘wait-and-see’ regard their physicians as trusted sources of information. It

is important for doctors to build on that trust with patients by being both confident and knowledgeable which is proven to be one of the most powerful tools of vaccine persuasion.⁸ However, doctors must also be empathetic and not dismissive of their concerns. Patients’ concerns are always complex and multifactorial and cannot be solved by simply reiterating the facts of vaccine efficacy and safety.⁹ Like many other balancing acts in medicine, it is a fine line to toe. This past year has been filled with overwhelming fear and confusion. These are no doubt contributing factors to hesitancy surrounding the COVID-19 vaccines. It will only be through collaborative efforts, persistence and empathy for one another that Canadians overcome both the fight against misinformation and COVID-19.

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Physician Assessment of Social Determinants of Health: A Necessary Component in Improving Care of Patients

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The importance of building a therapeutic relationship between a physician and a patient is taught early on in a medical student's training, specifically through the practice of obtaining a patient history. This process consists of gathering information in four main categories: the history of the present illness, personal social history, past medical history, and family history. Each piece of information obtained within these categories is vital in ensuring a patient receives appropriate and effective care. Specifically, a social history consists of asking about a patient's relationship status, support system, home environment, interests, exercise, nutritional habits, substance use, and sexual history. To complete a successful and full social history, one should try to address the social determinants of health. As per the Government of Canada's website, social determinants of health "refer to a specific group of social and economic factors within the broader determinants of health. These relate to an individual's place in society such as income, education or employment".¹ Consequently, a critical component of a complete social history interview should be investigating a patient's socioeconomic status. Low socioeconomic

status (LSES) has been found to play a role in incidence and susceptibility to a variety of health conditions. As such, I believe that screening for and asking questions pertaining to the socioeconomic status of a patient should be considered a vital and essential component of every patient assessment.

After some research, I came across a case about Marie, a 42 year old woman who passed away due to metastatic cervical cancer. As I first read about the case, the cause of the death seemed obvious to me. Marie had cancer and it had metastasized to the point that it was untreatable. As I read further, however, it became clear that there was a lot more to Marie's case than just her diagnosis of cancer. Marie was a single mother, who was forced to drop out of school in grade eight to help financially support her family. These financial struggles continued into her adulthood where as a single mother of two she managed multiple jobs to try and support her own family as well. While technically Marie did die from her cancer, it became obvious to me that the underlying cause of her illness and her death was much bigger than that. Marie's socioeconomic status contributed

to the reason that she was unable to be educated on when she should seek help and it was a factor that influenced her feeling of being scared to take time off work to see a physician.² Ultimately, it was an important precipitating factor of her death.

Various health issues such as diabetes, mental illness, stroke, cardiovascular disease, gastrointestinal disease, cirrhosis are shown to have increased prevalence in individuals who are from LSES backgrounds. In Canada, poverty accounts for 24% of person-years life lost.² There is also a 17% higher rate of circulatory conditions in individuals from the lowest income quintile in comparison to the average Canadian.³ Further, 49.7% of individuals living in the poorest urban neighbourhoods tend to be overdue for colorectal cancer screening, in comparison to just 34.9% of individuals living in the wealthiest urban neighbourhoods in Ontario.⁴ The COVID-19 pandemic only exacerbated problems such as these. In Ontario, neighbourhoods with high 'ethnic diversity' rates were compared to the least diverse neighbourhoods. In comparison ethnically diverse neighbourhoods had four times higher hospitalization rates, four times higher intensive care unit admission rates and two times higher death rates.⁵

Screening for pertinent social history information such as a patient's socioeconomic status serves as a primary prevention mechanism. When physicians are aware of the diseases their patients are most vulnerable to, or are aware that they are at a higher risk of missing vital screening tests, these problems are able to be tackled earlier on. For a patient such as Marie, an effective evaluation of her socioeconomic status would reveal the importance of spending the time to educate her on the necessity of a routine pap smear, or risk factors that she has for diseases such as cervical cancer.

Many patients, however, are hesitant to share information in regards to their socioeconomic status due to a fear of biases such as being less intelligent, independent, responsible or rational than patients from a higher socioeconomic background impacting their care.⁶ Correcting these biases and educating physicians on how to overcome problems such as patients not being compliant with their advice and not returning for follow-up appointments is critical in addressing this issue. By working to resolve these

problems, we will not only have physicians who are better equipped to deal with patients of LSES but also enable physicians to develop a greater skill set to treat any patient. Much like a family history of cardiovascular disease is seen as a risk factor for an individual to have cardiovascular disease themselves, a patient's socioeconomic status should be treated in the same manner. It is simply a risk factor, it is not a defining factor of who these patients are as individuals and it is not indicative of how they will act if they are treated and educated in the right manner.

As a future physician, I hope to never lose sight of the fact that a patient is much more than their illness. A patient's history, and specifically their social history, including their socioeconomic status is an essential piece of information that can serve as an additional tool to tailor their treatment in a way that best suits them and their needs. While it is important to be aware of the unique challenges a patient of LSES will encounter, it is also important to keep in mind that these are simply potential challenges and risk factors. Through education and further training, I believe that screening for and asking more questions pertaining to a patient's social determinants of health will ultimately lead to earlier diagnoses, and consequently, better outcomes for our future patients.

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The path to improving equitable access to healthcare in Canada

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If Canada were judged on its ability to provide accessible, equal and timely healthcare to all its citizens, it would receive a failing grade. Out of eleven countries studied in the 2017 Commonwealth Fund report, Canada was ranked second last for overall access to care, and last for timeliness of care.¹ Access is a multifactorial issue, but two key problems that arise are wait times, and equity. It is widely acknowledged that Canadians need to wait a long time for many health interventions, but it can often erroneously be assumed that equal access and affordability are no longer issues in a universal healthcare system. Evidence demonstrates that this is wishful thinking. As we deal with the Covid 19 pandemic, these challenges protrude in an already failing system.

In a 2020 Fraser institute report, 2020's wait times for medically necessary treatment were the longest reported since the survey's inception in 1993.² At an average delay of 22.3 weeks between referral by a general practitioner to receiving treatment, wait times are not just an inconvenience, but can have serious quality of life and even mortality consequences for patients. Another Fraser institute report on Canadian women demonstrated that increased wait times from 1993 to 2009 may have resulted in an additional 44,000 deaths.³

Room for improvement is evident, but how can this be accomplished? It has been suggested that using wait time data to focus attention on hotspots, along with public

education, could be beneficial.⁴ Public education could help reassure patients where wait times are not harmful, and could motivate change and apply pressure where they are. It would then be important to further support primary care for proper triage, and promote appropriate use of testing and procedures, for example through education and evidence-based guidelines.^{4, 5} Choosing Wisely Canada is an example of one campaign that aims to reduce unnecessary tests and treatments. They provide physicians with easy to browse recommendations on avoiding treatments that can be costly, take up time, and potentially expose patients to harm, without adding value.

Beyond wait times, a crucial component of access to healthcare is equitability. In Canada, people of lower socioeconomic status continue to be sicker and live shorter; with fewer tools and options at their disposal.⁶ It has been shown that in particular, people who identify as Indigenous face many healthcare-related barriers and experience worse health outcomes.^{7, 8} Though there are many factors that contribute to socioeconomic disparities, gaps in Canada's supposed universal healthcare system exacerbate the problem.

Many healthcare services such as psychotherapy, physiotherapy, and pharmaceuticals are rarely or incompletely covered in Canada. Patients faced with high costs of care will often forgo important treatment.⁹ Thus, patients with low socioeconomic means will struggle to access these treatments because they are prohibitively expensive. This could also mean certain conditions are left minimally treated until they are serious enough to require emergency or hospital care. Apart from the immorality, it is also illogical from an economics perspective: providing preventative care is often more cost-effective than allowing people's health to deteriorate to the point where they need urgent care.¹⁰ Introducing more coverage for cost-effective treatments and preventative medicine, including psychotherapy and pharmacare, could significantly improve the health of Canadians, particularly those that are most disadvantaged.^{11, 12}

Recently, my research has had a focus on the effects socioeconomic status and distance from treatment centres can have on access to healthcare and disease outcomes. We have found that patients of lower socioeconomic status tend to live further away from hospitals and face delays

in accessing care. For these individuals, these may be significant contributors to worse health outcomes.¹³ We expect that by improving timely access, particularly for those living further away, the gap in health outcomes between these groups could be diminished. Measures to support transport to medical care have had varying degrees of success, but telemedicine has gained a lot of attention recently for its ability to reach people.

With the Covid-19 pandemic, travel restrictions, isolation requirements, and fears of contracting the virus have added to the challenges in accessing healthcare. The so called hidden costs of the pandemic are the large backlogs of patients awaiting medical services, including surgery and cancer screening, which may continue to negatively impact Canadians for years to come.¹⁴⁻¹⁶

The pandemic has not been all bad news in terms of access to care; it has motivated the widespread adoption of telemedicine. Many physicians that have never before given virtual care have adapted and improved virtual delivery.^{17, 18} Telemedicine can offer patients the quality healthcare that they need and deserve, at a distance, for a reduced cost.¹⁹ This may be especially beneficial for individuals living in rural and remote areas. While this system is intrinsically limited in its abilities, and by no means perfect, virtual care is an important option in caring for patients who would otherwise struggle to access healthcare services. Hopefully telemedicine will remain an option for patients and physicians after the pandemic has subsided, because of the opportunity for widespread and quality healthcare that it provides to Canadians.

For all the Canadian healthcare system does well, it continues to be plagued by issues of access to timely and equitable care. In the face of looming healthcare backlogs from the Covid-19 pandemic, addressing these issues is increasingly pertinent. Expanding coverage for cost effective treatments, further support to primary and specialist care, and widespread access to telemedicine will be crucial steps in closing the gap in patient care. Ultimately, by addressing the flaws in our healthcare system, we will improve equitability, especially for those most disproportionately affected, allowing for better care for all Canadians.

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Sheltered-In-Place: Domestic Violence during COVID-19



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March 2020 marked the closure of thousands of workplaces, schools and other services to comply with government-issued lockdowns to prevent the spread of coronavirus (COVID-19) across the Canadian population. While the intent of the stay-at-home orders was to provide safety for the surrounding communities from the pandemic, many victims of domestic abuse soon found themselves confined to the root of their trauma for the sake of public health. Dubbed the “pandemic within a pandemic” by the media, 54% of responding victim services have reported an increase in the number of served domestic violence victims between mid-March and early July of 2020,^{1,2} and police-reported calls for domestic disturbances have also increased 12%, according to data compiled from 17 police services across Canada.³

Risk factors for increases in domestic violence shown after

catastrophic events and natural disasters include rapid decreases of available resources, unprecedented shifts in daily routines, unemployment and closure of community services.⁴ COVID-19 has also brought upon the additional stressor of mandatory community physical separation, which may increase tensions within the home and prevent victims of domestic violence from accessing help due to restricted contact with personal networks and victim services, or less opportunities for contact due to increased time and exposure with their abuser.^{2,5}

Mechanisms of domestic abuse can fall under physical, sexual, psychological/emotional, financial, coercive control, cyberviolence and any other forms used to harm and manipulate a former or current intimate partner.^{5,6} Victims of domestic abuse may not only be limited to the partner, but also that of other inhabitants within the

domestic cohort including children, parents, relatives, etc.⁵

Social isolation is one of the most common mechanisms abusers use to maintain control over their victim, as it limits their opportunity for contact with family, friends, and protection services.^{7,8} Abusers can use stay-at home orders to their advantage, because it provides more contact with their victim in both shared space and time.⁹ Since lockdown provides less opportunities for a victim to temporarily escape from their abuser and for peers to intervene, the likelihood for abuse increases as the victim is exposed to their abuser on a daily basis.

A study done in emergency department admissions at The Ottawa Hospital for cases of domestic violence have shown an increase of 28.57% in cases of psychological abuse and 22.86% of assaults occurring outdoors.¹⁰ This presents the troubling dilemma victims face where even during essential trips for grocery trips or exercise, they may have to remain with their abuser to comply with interactions only being with those within the household. Coercive control is described as an abuser's pattern of behaviour which includes intimidation, threats, isolation and controlling tactics.¹¹ The transition to online services and contacts could allow for a victim to get help through victim services when the perpetrator is not present; however, abusers may use technology-facilitated violence⁶ for technological surveillance and limit a victim's communication with their social supports. Abusers may also emphasize a victim's financial reliance on them if the victim is unemployed and/or if there are financial difficulties due to the pandemic; and may decrease a victim's financial autonomy or withhold their finances altogether if the victim fails to comply.^{6,7}

Reported abuse mechanisms during the pandemic include the gatekeeping of information about public health measures, the virus itself, and restricting access to essential hygiene products such as sanitizer, hand soap and masks.^{12,13} With more access to their victims than ever, the COVID-19 pandemic becomes the perfect platform for abusers to further intensify their coercive control and manipulation.

One of the prime determinants of health in society is the "absolute ability of individuals to meet their basic human needs".¹⁴ Which, when further explained using

the materialist approach to the social determinants of health, include the availability of material needs such as: safe housing, being adequately compensated and access to essential goods such as clean water and good-quality food. Without these things, the health of individuals is compromised and leaves them susceptible to illness or death; especially if there are inequities that prevent an individual from personally obtaining them,¹⁴ such as abusers withholding essential items. Maslow's Hierarchy of Needs, a five-model that presents human needs from the bottom-up as physiological, safety, love, belonging needs, esteem and self-actualization can be used to combine materialist and social-psychological needs of determinants of health.¹⁵

The ability for a victim to fulfill the needs for personal safety and physiological needs is severely compromised during the pandemic. It becomes evident that victims of domestic abuse have limited options as outside of the home appears no less safe than the inside, due to fears of contracting coronavirus and closures or decreased space in women's shelters. Heightened public tensions and personal tensions from pandemic makes victims of domestic abuse more susceptible to long-term psychological damage and trauma more than ever.

Further research is needed to understand women's experiences with IPV during this time and how abuse mechanisms can be manipulated due to COVID-19 measures is absolutely key for policy makers and outreach workers to figure out what is essential for not only safety during the pandemic, but also for sheltered-in domestic violence victims.⁷ Social workers are encouraged for the use of in-depth conversations and codewords during risk assessments and recognize the increased presence or technological monitoring of abusers when conducting risk assessments online or on the phone.^{12,16} Internet-based platforms for outreach also need to be inclusive to abused women who may have difficulty navigating help services due to language barriers, and include a way for victims to exit the page quickly in case of technological monitoring.^{6,12} Increased funding for women's shelters can allow for victims to escape abuse while maintaining public safety guidelines,¹⁷ and provide them the essential needs for rehabilitation and healing during the pandemic.

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The Disproportionate Impact of COVID-19 on Residents of Long-Term Care Homes



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The first reported case of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in Canada was identified on January 25th of 2020.¹ By March 11th, 2020 the World Health Organization had declared a pandemic, and many countries, including Canada, had implemented stay-at-home orders.² At that time in March 2020, it was hard to imagine the tremendous impact this virus would have on Canadian citizens. With over 20,000 deaths to date, and millions of jobs lost, individuals all across Canada have been affected.³ One population of individuals in particular that have been disproportionately

impacted by the COVID-19 pandemic are the residents of Long-Term Care (LTC). In Canada, during the first wave, more than 840 outbreaks were declared in LTC homes, and deaths in these homes accounted for 81% of the total deaths due to COVID-19.⁴ An article published in the *Lancet* on January 16th, 2021 highlighted that even now, well into the second wave of this tragic pandemic, the situation has not changed in that residents in LTC remain particularly vulnerable.⁵ This commentary will explore the reasons why this population has been so significantly and negatively impacted by this pandemic.

The purpose of long-term care is to provide support to those who can no longer perform activities of daily living and live independently. This loss of independence is commonly due to age-related processes such as cognitive decline, so it is not surprising that the vast majority of long-term care residents in Ontario are over the age of 65 (95%).⁶ Unfortunately, one of the most robust risk factors for COVID-19 mortality is age,⁷ and adults over 65 have accounted for 80% of the deaths since the start of the pandemic.⁸ The propensity for COVID-19 to kill older individuals can be partly explained, at the molecular level, by the concept of immunosenescence.⁹ As the immune system ages, the cells that first encounter SARS-CoV-2 in the lungs, alveolar macrophages, have a more difficult time recognizing the virus as a foreign pathogen. Due to delayed recognition, viral replication proceeds at an accelerated rate compared to what it might in a younger person.⁹ When viral load cannot be controlled, this can result in the life-threatening consequences of COVID-19, such as acute respiratory distress syndrome.⁹ Older individuals living in long term care also commonly meet the criteria for “frailty”, which has been shown to be an important prognostic factor when predicting COVID mortality.¹⁰ Frail individuals have reduced physiologic function and reserve, often suffer from comorbid health conditions, and can rapidly decline after even a minor perturbation or insult, let alone the major insult of COVID-19, on their bodies.¹¹

These susceptibilities, that are inherent to the majority of LTC residents, were compounded by vulnerabilities within the LTC system that existed before the COVID-19 pandemic struck. A report titled “Situation Critical”, published on January 21st, 2019, highlights these pre-pandemic vulnerabilities of the LTC system in Ontario, including, among other things, chronic underfunding and understaffing of LTC homes.¹² For example, although the evidence suggests that 4 hours of daily care per resident leads to the best health outcomes, levels of staffing currently sit at an average of only 2.71 hours of daily care per resident in Ontario.¹²

Once COVID-19 enters a vulnerable LTC home, where the most vulnerable residents in our society reside, it spreads quickly. Reasons for this are still being examined, but issues of understaffing seem to be a contributor. If staffing in the home is inadequate, then staff are rushed to provide

care, and improper donning and doffing is more likely to occur.¹³ Additionally, personal support workers typically only make \$14 dollars an hour, often requiring them to work in multiple LTC homes to make ends meet.¹⁴ This likely contributed to cross-transmission of COVID-19 between LTC homes in the first wave, and eventually forced the Ontario government, in April 2020, to institute a policy that prevents staff from working at multiple homes.¹⁵

Unfortunately, the chronic underfunding and understaffing of LTC wasn't the only issue that was exposed by the pandemic. In Ontario, the Long-Term Care Homes Act is the provincial legislation that sets the standards by which all LTC homes must abide by in order to be licensed and receive funding.⁶ Under this model, a home can be privately managed and operated on a for-profit basis. In Ontario, of the 626 LTC homes, 57% of them are operated this way.¹⁶ Some argue that the provision of care at these types of homes contributed to the disproportionate impact of COVID-19 on LTC residents.⁵ A retrospective cohort study of all LTC homes in Ontario found that for-profit status was associated with an almost 2-fold increase in the extent of an outbreak at a home, when compared with non-profit homes.¹⁷ The authors mention this relationship is largely due to the outdated design standards that exist more frequently in for-profit homes. Modern design favours private rooms for residents in comparison to the “ward-style” accommodations. Older homes with “ward-style” four-bed rooms made infection prevention and control (IPAC) measures more difficult to implement, and this likely contributed to increased COVID-19 spread in these homes.¹⁷

In conclusion, the impact that the COVID-19 virus has had on the residents of LTC has been absolutely tragic and heartbreaking. A vulnerable population (immunosenescence, frailty), compounded by a vulnerable system (underfunding/understaffing, for-profit LTC homes), explains why a disproportionate mortality rate has been seen amongst these individuals. Hopefully, this pandemic will serve as the impetus for our governments, at all levels, and our communities, to make changes to better protect this population in the future. In the meantime, infection control, screening, and swift vaccination must continue to be prioritized and delivered.

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Equitable Virtual Care in Canada: Addressing The Digital Divide

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Online healthcare services are rapidly transforming the landscape of healthcare in Canada. Although the digitization of healthcare delivery has been occurring gradually over the past two decades, the COVID-19 pandemic has catalyzed a “digital boom” in healthcare.¹⁻⁴ Now more than ever, healthcare practitioners and patients alike have transitioned from in-person appointments to virtual care via online platforms.³⁻⁵ Virtual care, once an optional service, is becoming an essential one.

A recent survey conducted by the Canadian Medical Association (CMA) aiming to assess Canadians’ opinions about virtual care, reported that 19% of Canadians accessed routine healthcare via phone, telehealth, virtual service, or video conference with their physician(s) prior

to the COVID-19 pandemic compared to 53% since the beginning of the pandemic.⁵ Due to necessity, virtual care evidently went from being uncommon to the status quo during the COVID-19 pandemic.

Although many healthcare practitioners and patients will convert back to in-person healthcare with reduced COVID-19-related restrictions,^{5,6} virtual care is here to stay. The 2020 Canadian Attitudes on Healthcare and Telemedicine Report indicated that 70% of Canadians believe virtual care represents the future of healthcare due to its ability to reduce time lost from work or school and promote proactive healthcare of individuals and their families, decrease wait times, and mitigate travel.⁷ The sentiment that virtual care is not only here to stay, but will continue to expand in the future, is echoed by the CMA, College

of Family Physicians of Canada, and the Royal College of Physicians and Surgeons of Canada, who created the Virtual Care Task Force (VCTF) in early 2019 to optimize the delivery and planning of virtual care in Canada.⁸

Indeed, virtual care offers benefits such as social distancing, decreased travel, increased convenience, and healthcare access for some.^{5,7,9} A pertinent factor that is often forgotten amidst the excitement and potential of virtual care, is that it requires patients to have the appropriate resources and skills to access it. Internet access, computers/laptops, smart phones, cellular data, and technological literacy are prerequisites to accessing forms of virtual healthcare. A lack of these resources creates potential for individuals to be excluded from virtual care, which will risk exacerbating the marginalization of already-vulnerable groups. We live in a digital era where technology access and technological literacy is often taken for granted, yet a digital divide exists.¹⁰⁻¹³

The “digital divide” is a well-described phenomenon first coined in the early 1990s¹⁴; it describes the gap that exists between individuals advantaged by technological access and literacy and those disadvantaged by a lack thereof.^{15,16} The digital divide can be due to personal and/or socioeconomic barriers, including low income,¹⁷ housing insecurity,¹⁸ low technological and health literacy,^{19,20} and disability²¹; and structural/environmental barriers, namely a lack of device/hardware access and sufficient broadband internet access,²² and geographical isolation.¹⁰⁻¹³ As consistently reported in the literature, those who suffer the adverse consequences of the digital divide are prominently low-income, rural and remote, disabled, racial/ethnic-minorities, immigrants, and elderly populations.^{10-14,18-22}

As stated in the inaugural report from the VCTF, “although virtual care has the potential to increase access to medical and healthcare, it also has the potential to exacerbate inequalities in access to care”.⁸ As healthcare undergoes this revolutionary digital shift, we must meticulously examine and address complex personal, socioeconomic, and structural barriers that contribute to the digital divide and have the potential to procure inequitable access to virtual care for some patients.^{23,24} Despite the many benefits of virtual care, failing to bridge the digital divide and ensure equitable virtual care access may potentially

increase disparities in healthcare access and health-related outcomes in vulnerable populations.

The abrupt onset of the COVID-19 pandemic, and subsequent rapid shift to virtual care, which included messages urging patients to not attend in-person medical services, likely disproportionately affected the healthcare of patients and populations disadvantaged by the digital divide.²⁵⁻²⁹ Now that virtual care is a key pillar in the delivery of healthcare, we must call upon and engage key stakeholders, from federal and provincial policy-makers to health organizations and patients to understand and address virtual care barriers. Given the lack of research on virtual care as a whole, rigorous data collection and research should be conducted to understand why patients are using or are not using virtual services; how and why virtual care benefits some patients but not others; and how virtual care influences healthcare access and health-related outcomes of respective patient populations.

Data and research should guide policy changes and evidence-based interventions aimed at mitigating barriers impeding patient access to virtual care. Experts have recommended increasing access to broadband internet in rural and remote communities; increasing access to technology via free and safe public access locations or subsidized technology access programs; supporting programs aimed improving digital literacy in elderly individuals and people with lower educational attainment; creating culturally and linguistically inclusive digital health platforms; and making platform accommodations for people with disabilities.^{8,26,30,31} Intuitively, these proposed recommendations seem promising, but, as emphasized, research is warranted to assess their efficacy.

As healthcare providers we must first and foremost be aware that a digital divide exists and understand how this phenomenon impacts the patients we treat. We have a pivotal role to play in the continued expansion and rollout of virtual care. We must conduct research and analyses to ensure the expansion of virtual care is evidence-based and equitable; advocate for equitable access to virtual care; and, whether it be online or in-person, provide patient-centered care to meet the needs and capabilities of each respective patient. Let us not allow the interplay between the digital divide and virtual care to exacerbate healthcare

inequities and health disparities. Instead, let us bridge the digital divide, optimize virtual care for all individuals, and enhance healthcare from coast to coast.

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Considerations on the Impact of COVID-19 Pandemic on Medical Education

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As of March 9th 2021, the Coronavirus disease (COVID-19) pandemic has affected more than 117 million people and taken 2.6 million lives.² To control the spread of the virus, widespread public health restrictions have been introduced. This has meant that many schools, colleges, and universities have transitioned to an online curriculum. This pandemic has rapidly changed the way that students learn and brought expedited the development of online learning. In the field of medicine, classes that were once taught in lecture halls are now being taught online.

CHANGES TO THE MEDICAL CURRICULUM STRUCTURE

Learning in medical school has traditionally been divided into pre-clerkship and clerkship years. In North America, pre-clerkship usually refers to the first two years where

medical students learn the “textbook” information of medicine. This consists of learning anatomy, physiology, pathology, histology, and radiology. In contrast, clerkship years involve the last two years of a four-year degree. These latter years involve in-person clinics where medical students shadow physicians in the hospital or community settings. Given these differences in curriculum structure, the pandemic likely has a differential influence both groups’ learning outcomes.

With the recent pandemic lockdowns worldwide, many medical schools have reported on the online student experience. In a study from the Alfaisal University College of Medicine of over 1200 people, students generally favoured the new online curriculum.⁴ Before the pandemic, 42% of respondents had limited experience with online learning. After students experienced online teaching,

71% reported confidence in the online learning model.⁴ However, some students voiced concerns about having to study from home to be a challenge if there were more distractions within their immediate environment.³

From a technological perspective, the immense power of computers has allowed for increased capabilities for online learning. The ability of computers to handle the demands of streaming online video lectures would not have been feasible in the years prior. As well, innovations in software have allowed students and educators to create an effective interactive atmosphere online. Widespread social acceptance of many online technologies such as Zoom conferences, Microsoft Teams meetings, and Google classroom have dramatically increased the uptake by students of these platforms.

SHIFTS IN TEACHING METHODS

In recent years, many medical schools have shifted towards case-based learning models. In this method of teaching, students prepare to discuss a clinical case in advance and are guided by content experts.⁶ Evidence from a study conducted at the University of California found that upwards of 80% of lecturers and students approved of the case-based learning models.⁶ Though the case-based discussions have traditionally taken place in-person, the online software available still permits physicians to guide during small group discussions through video calls.

The online teaching methods have created an atmosphere where students engage in self-directed learning. Students have the added benefit of having flexibility in tailoring their schedules to meet their needs. In a study of 60 medical students conducted at the Unaizah College of Medicine, many students believed that the online curriculum is an effective method of teaching pre-clinical medicine.³ These students reported that the online delivery has improved their time management, and allowing time to absorb the material.³ Some students reported increased mental well-being from being able to spend more time with family.³

Online medical education has also offered the opportunity to accommodate some people with learning challenges. In particular, people who may have hearing impairments can benefit from on-screen captions that convert audible speech into readable text. People with visual impairments,

who may have difficulties seeing in large lecture hall, now can visualize the material directly on their screens.

CURRENT CHALLENGES OF THE ONLINE CURRICULUM

Though the online format has many advantages, there are some disadvantages to the online curriculum. Thus, medical schools have continued to offer clerkship in-person, albeit with additional safety precautions in a limited capacity. Evidence from studies indicates that medical students generally perceive clerkship to be unsuitable for online delivery.³ Students have stated that the online delivery would not permit them to attend clinics and improve their patient communication skills.³ Though technology may help convey information during pre-clerkship years, the current evidence favours the traditional in-person methods of teaching clerkship. In a study examining the delivery of a rheumatology education module, the most effective teaching method was using “in-person patient encounters”, which scored 4.77 out of 5 points.⁵ The next best method was discussing a clinical cases in a supervised manner (4.21 out of 5), followed by problem-based learning (4.11 out of 5).⁵ In conclusion, the evidence suggests that learning clinically related material, especially during the clerkship years, is most effective done in-person, but other case-based methods may also be effective.

FUTURE DIRECTIONS OF ONLINE LEARNING CURRICULUM

In the future, using technologies such as virtual reality and 3D printing in medical education may become more prevalent. Research at the Faculty of Medicine at the University of Jordan provides evidence that virtual reality could provide novel methods to learn medicine. Among 60 students, they found that virtual reality software could be used to effectively teach students cardiac anatomy with a high degree of self-reported satisfaction.⁷ Another recent study evaluated the use of 3D printing to teach anaesthesiology residents. This study found that 3D-printed thoracic spines could be used effectively to improve knowledge about how to perform epidurals in a cost-effective manner.¹

SUMMARY

Overall, major shifts have taken place for in the experience of medical education online since the COVID-19 pandemic.

Despite the challenges of online learning, there have been many benefits to modernizing the online curriculum. In general, many medical students had favourable experiences with the online environment. Students reported having more time to learn the material or engage in wellness-promoting activities. Additionally, computer software have allowed for small group discussions to continue. The future of medical education is promising, and many more advances are possible once other technologies become more accessible.

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**Gagnants du Concours national
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Le pouvoir de la langue



1ère place

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Récemment, pendant un stage à l'hôpital, j'ai traité une patiente âgée (Mme C) qui avait eu un accident vasculaire cérébrale (AVC). Elle parlait dans une langue anglaise si brisée qu'il était difficile de la comprendre et de faire un diagnostic approprié. Mme C m'a informé que son voisin était à l'extérieur lorsqu'elle avait eu son AVC, et il a appelé les Services Médicaux d'Urgence (SMU) car elle ne pouvait pas se lever par elle-même, mais surtout parce qu'elle était sûre que les SMU n'auraient pas compris son accent Français épais au téléphone. Étant moi-même bilingue, je lui ai immédiatement demandé si c'était préférable de continuer la consultation en français. Sans aucune hésitation, elle a répondu avec enthousiasme « Oui, oui, ça me ferait si contente ». Vers la fin de la consultation, Mme C a pris mes deux mains entre les siens et m'a profondément remercié d'avoir fait l'effort supplémentaire d'effectuer

son évaluation en Français. Elle m'a informé que c'était la première fois depuis qu'elle avait immigré au Canada, il y a plus de trois décades, qu'elle recevait des soins de santé en Français et qu'elle espérait que ce ne serait pas la dernière. Cette expérience avec Mme C m'a poussé à me demander combien d'autres patients ont enduré ou endureront une situation pareille? Quel est l'ampleur du problème? Comment remédier à cette situation? Quel est l'impact sur la qualité des soins reçus quand le Docteur et le patient ne parlent pas la même langue? Pour répondre à toutes ces questions, j'ai effectué une étude bibliographique approfondie dont les résultats les plus saillants sont mis en relief dans ce qui suit.

Il est convenu au niveau mondial que les prestations des soins de santé dans la langue maternelle du patient renforcent la confiance entre les patients et les médecins,

avec souvent une plus grande satisfaction des patients.¹ Une caractéristique fondamentale du Canada est son statut de bilinguisme officiel. Environ 22,8 % des Canadiens parlent Français comme langue maternelle dont plus d'un million de personnes vivant en tant que minorité vulnérable à l'extérieur du Québec.² Dans certaines régions où le nombre de francophones est plus important, y compris Moncton, Ottawa et Winnipeg, il existe des centres tertiaires offrant officiellement des services à ses patients dans leur langue maternelle. Mais dans d'autres endroits, les soins de santé en Français sont limités, voire absents.³

Les minorités francophones et personnes ayant une maîtrise limitée de l'anglais éprouvent des difficultés d'accès aux services de santé. Ceci se manifeste en termes de difficulté à trouver un médecin de famille,⁴ moins de visites de soins préventifs recommandées pour les nourrissons,⁵ un taux inférieur de participation aux programmes de dépistage du cancer,^{6, 7, 8} une utilisation moindre des services de santé mentale,⁹ et un accès réduit aux informations sur la santé¹⁰ puisque les ressources téléphoniques, imprimées ou sur l'internet ne sont souvent disponibles qu'en anglais. En outre, les droits des patients ayant une maîtrise limitée de l'anglais au consentement éclairé et à la confidentialité ne sont souvent pas protégés.^{11, 16} Les patients ayant une maîtrise limitée de l'anglais sont aussi plus assujettis aux erreurs professionnelles médicales et aux complications liées aux médicaments et événements indésirables.^{11, 12, 15, 16}

Ces genres de défis pourraient se manifester beaucoup plus chez les personnes âgées qui perdent la compétence en langue seconde en raison du processus de vieillissement, même en l'absence d'autres facteurs tels que la démence.¹³ 44% d'un échantillon de praticiens de soins primaires canadiens ont signalé des difficultés fréquentes à communiquer avec des patients ne maîtrisant pas l'anglais, ainsi que des difficultés à accéder à des interprètes.¹¹

DISCUSSION ET RECOMMANDATIONS

La recherche sur les barrières linguistiques est limitée par les données disponibles. En fait, de nombreuses lacunes en matière de recherche subsistent: la plupart des études sont descriptives, et peu ont évalué l'efficacité des

interventions. Il est aussi difficile de déterminer l'ampleur de l'impact de la barrière linguistique car d'autres facteurs sont impliqués (culture, race, ethnicité, etc.). A cet égard, il est nécessaire de déplacer l'accent passé de la recherche canadienne sur les différences culturelles et ethniques vers un accent sur les différences de traitement selon la maîtrise de la langue tout en évitant le cadrage historique de l'accès linguistique comme une question de sensibilité culturelle plutôt que de sécurité des patients. En plus, il faut traduire les preuves disponibles en actions de santé à travers la sensibilisation des professionnels de la santé et les facultés de médecine. On devrait explorer l'utilisation de la technologie pour promouvoir les services en français et les outils disponibles, ainsi que pour offrir un service d'interprétation centralisé sur la santé qui est facilement accessible.

Les facultés de médecine devraient offrir des cours de langue médicale en plus d'enseigner les principes de l'offre active et des façons pratiques d'utiliser les principes de l'offre active pendant leurs formations médicales. En outre, on devrait encourager les étudiants en médecine et le corps médical en général à traiter les patients dans leur propre langue maternelle si possible, et à promouvoir les langues qu'ils parlent. On devrait aussi encourager les initiatives universitaires telles que les Clubs Français qui ont pour but de fournir des possibilités d'apprentissage sur la terminologie médicale française. Le corps médical devrait avoir une forme d'identification afin que les patients sachent dans quelles langues ils préfèrent recevoir les soins médicaux. On pourrait aussi inclure des affiches dans les cliniques qui rappellent les patients de se renseigner sur les langues parlées par le fournisseur de soins de santé.

Le message clé de cet article est que, selon la langue utilisée lors du traitement d'un patient, les résultats des soins de santé peuvent différer considérablement. Rappelons-nous que ça prend dix secondes seulement pour demander à un patient s'il parle une langue autre que l'anglais dans laquelle il est plus à l'aise de communiquer; mais cette question pourrait complètement changer le cours de cette interaction avec le patient tout en augmentant les chances de prestation de soins de santé de haute qualité.

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Les couleurs de la médecine: Représentation inégale de la pigmentation de la peau

2^{ème} place

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Les patients à la peau foncée peuvent présenter des variantes morphologiques et des maladies moins apparentes nécessitant une prise en charge et des thérapies uniques.¹ Cependant, les ressources pédagogiques actuelles en dermatologie ne permettent pas aux médecins d'acquérir la base de connaissances nécessaire pour diagnostiquer et traiter les maladies de la peau chez les patients ethniques. Cela constitue un obstacle important au traitement équitable des patients et à la formation des médecins. Des informations visuelles et textuelles plus cohérentes décrivant les maladies de la peau chez les personnes de couleur devraient être largement intégrées dans les ressources pédagogiques.

Le contenu dans les manuels, les journaux et les publications de recherche concernant la peau foncée est

à la fois limité et incohérent. Une étude des manuels de médecine générale a montré que parmi les 4146 images du manuel intitulé "Atlas of Human Anatomy", seules 4,5% des images représentaient la peau foncée.² Cette diversité minimale illustre la représentation disproportionnée des personnes de couleur dans les manuels de médecine. Cette représentation inégale se traduit directement par une augmentation des disparités en matière de soins de santé en raison de l'absence de représentation des personnes de couleur.

De nombreuses études ont montré que la sous-représentation des personnes de couleur dans l'enseignement médical, notamment dans les diapositives de cours, le matériel de conférence préclinique, les études de cas et les manuels, entrave l'équité raciale dans la

pratique de la médecine.^{2,3} Le programme d'enseignement médical actuel en Amérique du Nord offre peu de matériel et de recherches sur la dermatologie pour les différentes couleurs de peau.² Des ressources éducatives équitables et diversifiées doivent être mises en œuvre dans le programme d'études et dans toutes les ressources médicales impliquées dans le diagnostic des maladies. Cette omission peut constituer des préjugés dans le traitement médical. Des études récentes ont démontré que les préjugés inconscients d'un médecin influencent ses décisions cliniques.⁴ Dans l'ensemble, cette omission reste la principale raison du diagnostic erroné de plusieurs maladies, telles que les morsures d'araignée, les cancers et la maladie de Lyme, entre autres.⁵

La représentation réduite de la pigmentation colorée dans les manuels et les revues est une source de préoccupation importante, surtout à la lumière des événements récents concernant la pandémie de COVID-19. Des études ont montré que les éruptions cutanées sur la peau et les orteils sont une caractéristique du COVID-19.⁶ Ainsi, au milieu d'une pandémie qui a déjà un impact disproportionné sur les communautés de couleur,⁷ le manque de ressources nécessaires pour diagnostiquer ce symptôme particulier ne fait qu'accroître cette disparité.

Un appel à l'action pour rectifier ce problème est nécessaire. Avant tout, il est crucial de mettre en place une norme encourageant les auteurs à évaluer de manière critique leurs recherches médicales pour y déceler des biais implicites. Une simple considération peut être l'inclusion de photographies variées dans la littérature scientifique afin de mieux refléter la société.

Une autre action consiste à produire une ressource qui servira à éduquer les praticiens, ainsi que les patients, sur les descriptions des symptômes de la pigmentation foncée. Malone Mukwende, un étudiant en médecine basé à Londres, était parmi l'un des premiers à publier un manuel d'images et de descriptions des signes et symptômes cliniques des peaux noires et brunes. Il a lancé un site web dont l'objectif est de continuer à enrichir le contenu de ce manuel.⁸ Il est nécessaire d'encourager et de financer des projets qui favorisent une éducation diversifiée parmi les praticiens afin d'offrir de meilleurs soins aux personnes concernées.

Avec l'augmentation de la littérature scientifique nécessaire au diagnostic et l'abondance des ressources sur Internet, on observe un certain changement par rapport à cette initiative. En d'autres termes, ce qu'il faut pour aller de l'avant, c'est une incitation ou un rappel pour aspirer à une norme de soins plus élevée. Une pétition pour que les prochaines éditions des manuels d'anatomie suivent l'initiative de M. Mukwende, en incluant la diversité dans leur contenu, serait un excellent pas dans la bonne direction.

Il est important de déployer ces pratiques à tous les domaines de la médecine, tels que l'oncologie, où il est notable que les personnes de couleur ont plus de chances d'être mal diagnostiquées pour un cancer de la peau.⁹

Alors que le domaine médical continue de progresser avec l'adoption de l'intelligence artificielle comme outil de diagnostic, il est crucial de s'attaquer aux disparités raciales sous-jacentes dans le domaine médical. L'intelligence artificielle repose sur des données fiables. Dans la situation actuelle de disparités qui favorise une pigmentation spécifique de la peau, on peut craindre que l'intelligence artificielle n'exacerbe encore le problème. Les progrès de l'intelligence artificielle peuvent creuser davantage le fossé racial, si aucun effort conscient n'est fait pour remédier au manque de données incluant les personnes appartenant à des groupes ethniques défavorisés.

La reconnaissance de la couleur de la peau des individus pour le diagnostic dermatologique est une excellente étape pour minimiser l'écart dans les inégalités en matière de soins de santé. Ainsi, une approche singulière peut masquer d'importantes complexités dans la configuration de la couleur de la peau.

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Le vaccin à ARNm, au-delà du COVID-19

3ème place

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La pandémie mondiale causée par la COVID-19 a occasionné beaucoup de turbulences dans la dernière année et, chose certaine, beaucoup d'énergie et de financement ont été attribués au développement de vaccins pour inoculer la population mondiale. Cet effort collectif en quête de vaccin avancera-t-elle par inadvertance la recherche sur le cancer?

C'est en 1796 que le premier vaccin a été administré par le médecin Edward Jenner à un enfant dans le but de lutter contre la variole, un virus infectieux ayant causé la mort de centaines de milliers de personnes à travers le temps.¹ La découverte du médecin découlait de l'observation que les fermiers ayant contracté la vaccine, une forme de variole bénigne chez l'humain et affectant les vaches, semblait les protéger de la variole. C'est alors que Edward Jenner préleva du pus d'une vache infectée par la vaccine

et l'inocula à l'enfant.² L'expérience étant un succès, le vaccin fit alors son entrée dans le monde, et chemina jusqu'à devenir l'une des meilleures protections contre les virus infectieux.

Nous voilà plus de 200 ans après cette découverte et l'utilisation des vaccins fait maintenant partie intégrale de nos vies. Bien que les vaccins soient souvent associés à la lutte contre les maladies virales, son utilisation ne s'en arrête pas là. En effet, en 2006, l'Agence américaine des produits alimentaires et médicamenteux a approuvé le tout premier vaccin utilisé dans la lutte contre le cancer.^{3,4} Le cancer, qui est la première cause de décès au Canada,⁵ est une maladie causée par des mutations dans les gènes de cellules de tissu quelconque. Ces mutations modifient la croissance et le cycle de division cellulaire, rendant les cellules mutantes incontrôlables. Le premier vaccin contre

le cancer agissait en ciblant et neutralisant l'infection au virus du papillome humain qui est responsable de 90% des cancers du col de l'utérus.^{6,7} Depuis tout récemment, les avancées scientifiques ont porté une attention plus particulière aux vaccins utilisant l'ARN messenger (ARNm). Ces vaccins, maintenant bien connus du public en raison de leurs utilisations contre la COVID-19,⁸ ont d'abord été dans l'œil de mire des chercheurs sur le cancer.⁹

Les vaccins par ARNm sont une nouvelle classe de vaccins ayant fait leurs débuts dans les laboratoires de recherche dès 1990.^{10,11} En général, ces vaccins contiennent des brins d'ARNm fournissant l'information nécessaire aux cellules pour bâtir une protéine qui activera le système immunitaire, permettant ainsi de combattre les corps néfastes ou étrangers, comme ceux provenant d'un virus ou d'un cancer. Somme toute, ce n'est qu'en 2005, grâce aux avancées des Drs. Katalin Kariko et Drew Weissman, que les vaccins à ARNm sont devenus assez stables pour qu'ils soient délivrés en toute sécurité.¹² Depuis, la recherche a explosé et, à l'heure actuelle, plusieurs vaccins d'ARNm sont au stade de l'essai clinique pour le traitement du cancer.

Le mélanome, un cancer de la peau, est causé par une mutation des mélanocytes, un type de cellule produisant des pigments de la peau.¹³ Ce cancer suscite un intérêt particulier dans la recherche sur les vaccins d'ARNm. Un candidat potentiel est présentement développé par Moderna (Moderna, Inc., Cambridge, MA).¹⁴ L'approche est individualisée, de telle sorte que l'ARNm est développé pour chaque patient et agit contre leur propre tumeur. Afin de créer ce vaccin personnalisé, l'ADN des cellules cancéreuses du patient est séquencé et analysé. Les chercheurs développent ensuite une séquence ARNm contenant de l'information sur les épitopes des antigènes des cellules cancéreuses.¹⁵ Les antigènes sont de grosses protéines à la surface des pathogènes qui génèrent la production d'anticorps chez le sujet affecté, soit une réponse immunitaire. Les épitopes, quant à eux, sont la « clef » que les anticorps utilisent pour s'attacher aux antigènes. Une fois l'ARNm introduit, il est traduit dans les cellules du patient. Les épitopes sont alors bâtis et présentés à la surface des Cellules Présentatrices d'Antigènes, des cellules immunitaires. Ceci permet alors aux cellules-T cytotoxiques, un type de cellules lymphocytaires faisant partie de la famille des globules blancs, à cibler et tuer les

cellules cancéreuses possédant ce néo-antigène. Encore plus important, les cellules-T de mémoire sont également générées, permettant un mécanisme de défense en cas de récurrence du cancer.¹⁵ Ce type de traitement est donc particulièrement intéressant, puisqu'il permet d'éradiquer une fois pour toutes la tumeur cancéreuse. D'autres types de cancer, comme celui du poumon, des ovaires, de la prostate et même certains cancers sanguins et du cerveau, sont présentement ciblés par des essais cliniques du vaccin utilisant la technique à ARNm,¹⁶ ajoutant à l'intérêt de ce type de traitement.

Dans la dernière année, la recherche sur les vaccins à ARNm a été grandement accélérée, notamment en raison de la COVID-19.^{17, 18, 19, 20} En effet, les premiers vaccins contre ce virus étaient des vaccins à ARNm. Ces vaccins protègent de la COVID-19 en introduisant chez le sujet l'ARNm de la protéine Spike, une protéine retrouvée à la surface du virus.⁸ L'ARNm permet aux cellules du sujet de bâtir ces protéines, qui seront ensuite reconnues comme protéines étrangères et attaquées par le système immunitaire sans toutefois rendre le sujet malade. Ainsi, lors d'une infection future au COVID-19, les cellules immunitaires seront capables d'identifier rapidement cette protéine étrangère et détruire le virus.⁸ L'intensification des financements sur la recherche de vaccins à ARNm occasionnée par la pandémie mondiale a donné un élan inégalé aux grandes entreprises pionnières dans le domaine. Ces compagnies se tournent maintenant vers la course aux vaccins contre le cancer.²¹

Le traitement par vaccins à ARNm est très prometteur, et deviendra bientôt un outil indispensable dans la lutte contre le cancer. Ainsi, on souligne plus que jamais l'importance de ramifier l'expertise scientifique et le financement pour la recherche des vaccins à ARNm.

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**Finalistes du Concours national
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Grossesse et accouchement en temps de pandémie de la COVID-19

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La grossesse et la naissance d'un enfant sont des événements spéciaux et merveilleux. C'est aussi des périodes comportant leurs lots de difficultés et d'adaptations, particulièrement pour les mères. En passant par les nouvelles responsabilités, l'allaitement, la nouvelle image de soi et la santé mentale périnatale et post-partum.

La dépression et l'anxiété affectent une femme enceinte sur 7 durant la période périnatale. Ces conditions sont entre autres associées à un risque augmenté de naissances prématurées et de dépression post-partum, en plus de pouvoir affecter le lien d'attachement mère-enfant.¹ Il est donc primordial de prévenir et traiter la dépression et l'anxiété chez cette population. Durant la dernière décennie, le dépistage de symptômes dépressifs maternels par les professionnels de la santé a été recommandé par plusieurs associations.² Malheureusement, environ 50% des femmes avec symptômes dépressifs sont non diagnostiquées en période périnatale et post-partum ce qui en fait ainsi la complication obstétricale la plus sous-diagnostiquée et sous-traitée.³ Cela veut donc dire que l'assiduité de ce dépistage n'est encore pas optimale. Il est nécessaire d'avoir plus de discussions entre professionnels de la

santé et avec les femmes afin de créer des opportunités d'en parler et de recevoir de l'aide.

La pandémie de la COVID-19 a permis plusieurs avancées technologiques et médicales, mais elle a aussi eu un impact important sur la santé mentale des femmes enceintes et post-partum. Il a été démontré que les niveaux de dépression et d'anxiété en temps de pandémie chez cette population sont plus élevés que la période pré-pandémie.⁴ En effet, en comparaison avec la population pré-pandémie, les taux d'anxiété et de dépression lors de la pandémie sont respectivement de 37% et 57%, ce qui représente une augmentation significative.⁵

Certaines des inquiétudes principales des mères sont reliées aux menaces de la COVID-19 pour la vie du bébé et de la mère, ainsi que la crainte de ne pas obtenir les soins prénataux adéquats. Également, l'isolement social, les conflits relationnels et les difficultés financières sont d'autres facteurs inquiétants reliés à la pandémie et qui affectent la santé mentale de ces femmes.⁵

La pandémie a réduit l'accès au dépistage ainsi qu'au

diagnostic de dépression et d'anxiété, en plus de diminuer les interventions psychologiques et pharmacologiques accessibles pour le traitement. Cela a donc pour effet d'aggraver la santé mentale chez cette population.⁶ Ainsi, il existe un urgent besoin d'améliorer et d'adapter l'évaluation et le traitement de la santé mentale maternelle afin de réduire l'impact des effets à court et long terme de la dépression et de l'anxiété.

Différents facteurs ont été démontrés comme étant protecteurs pour la santé mentale de ces femmes. Il est donc important de miser sur ces derniers lors des discussions en période périnatale et post-partum. L'exercice physique et la saine alimentation ont évidemment plusieurs bénéfices, et ont démontré une réduction des taux d'anxiété et de dépression.⁵ Jusqu'à 64% des femmes enceintes ont déclaré avoir diminué leur niveau d'activité physique avec les mesures d'isolement sociale.⁶ Il est donc primordial de renforcer l'importance de l'exercice physique quotidiennement, particulièrement durant cette période d'isolement social, et d'innover dans la promotion et l'accès aux différents moyens de faire de l'exercice physique.

Le support social est un autre élément protecteur contre la dépression et l'anxiété liées à la grossesse et à l'accouchement, surtout chez les femmes ayant une appréhension de l'impact de la COVID-19. Également, la vision que la femme porte sur la pandémie ou tout autre événement stressant influence négativement sa réponse émotionnelle et comportementale.⁴

Les périodes périnatales et post-partum étant des moments de vulnérabilité accrue pour la détresse psychologique des femmes, il est donc primordial d'intervenir afin de réduire les taux de dépression et d'anxiété. Particulièrement en temps de pandémie liée à la COVID-19, où l'isolement social et les événements stressants sont plus que présents. La souffrance psychologique chez cette population augmente disproportionnellement par rapport aux taux de diagnostics et de traitements. Il est temps de mettre encore plus d'emphase sur les facteurs protecteurs tels que l'exercice physique, la saine alimentation, le support social et l'importance de la reconnaissance de la vision de la femme sur la pandémie, afin d'améliorer la santé mentale et les impacts négatifs potentiels. Au niveau

des facteurs aggravateurs, il est nécessaire de favoriser la réduction sécuritaire de l'isolement social, de l'impact du stress financier et des relations interpersonnelles conflictuelles. De plus, revoir l'accès aux ressources, les méthodes de dépistage et mieux identifier les besoins des femmes en temps de pandémie permettrait de répondre aux besoins et aux attentes de cette population de manière plus adéquate.

Maintenant est le temps de sensibiliser la population générale au sujet de cette complication obstétricale importante. En parler, et adapter nos ressources aux femmes permettraient de diminuer nos taux élevés de dépression et d'anxiété. Il faut ainsi reconnaître et adresser les craintes des femmes enceintes et post-partum afin de diminuer le stress et la pression qui reposent sur leurs épaules. Une femme ne devrait jamais avoir honte de consulter et de demander de l'aide afin d'améliorer sa santé mentale. Après tout, la grossesse et l'accouchement comportent leurs difficultés, mais la beauté de ce processus réside aussi dans la résilience et l'adaptation de ces femmes. Il suffit de réduire le stigma existant face à cette problématique, et de rendre les ressources accessibles et adaptées à leurs besoins afin de faciliter leur cheminement dans ce nouveau parcours.

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Les mains liées, mais pas les trompes

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La ligature des trompes de Fallope est une intervention qui consiste à empêcher l'ovule de descendre vers l'utérus et d'être fécondé. Ce processus de stérilisation efficace à 99,9% n'affecte pas le cycle hormonal ou l'ovulation et peut s'effectuer en laparoscopie ou, depuis peu, en approche transcervicale par hystérocopie. Les trompes seront préférablement attachées avec un clip de Filshie en chirurgie d'un jour par laparoscopie ou lors d'une césarienne sous anesthésie générale ou locale. Au bureau, l'approche transcervicale misera sur l'insertion sans anesthésie d'un dispositif de nickel dans la trompe qui se cicatrisera, cette méthode nécessite toutefois une contraception d'appoint pendant trois mois.^{1, 2, 3, 4, 5} Le portrait de cette contraception définitive n'est pas très reluisant au Canada, les femmes sont invisibles.

Les études attestant les complications, les contre-indications et les résultats de la ligature des trompes remontent aux années 80 au Canada et ont principalement été effectuées au Québec et en Ontario. Depuis ce temps, le taux d'intervention qui s'élevait à 81 000 ligatures annuellement en 1986 est passé à 1 300 en 2012, sans faire l'objet de nouvelles études.^{4, 6} Pourquoi cette baisse ?

Au Canada, il est difficile pour une femme en âge de

procréer de se faire ligaturer les trompes. Plusieurs médecins demandent tout d'abord le consentement du conjoint, une pratique qui n'est pourtant pas appuyée par le Collège des médecins. Selon l'article 4 du Code civil, le consentement par une tierce personne est nécessaire « si, et seulement si [la patiente] est inapte à consentir ». Être une femme ne rend pas inapte à consentir pas plus que le fait d'avoir un conjoint.^{7, 8} Pour ce qui est de la femme célibataire, elle doit avoir plus de 30 ans afin d'être éligible à la stérilisation et ce pour diminuer « le risque de regret » alors que l'autonomie totale de prise de décision médicale s'acquiert à 16 ans au Canada.^{3, 9} En effet, en 1999, le taux de regret de la ligature des trompes au Québec était de 7% et s'expliquait principalement par le jeune âge des femmes stérilisées et par leur changement de contexte matrimonial tout comme les hommes avaient 6,1% de regret d'avoir procédé à une vasectomie. Chez les 15-30 ans, on notait un taux d'inversion de procédure de 4,2% suite à la stérilisation qui diminuait à 0,2% chez les 36-49 ans^{10, 11} D'un autre côté, 50% des grossesses au Canada sont non planifiées et la moitié d'entre elles auront une interruption volontaire de grossesse [12 à 17]. Est-il vrai de dire que 25% des grossesses sont donc regrettées ? Le « risque de regret », qui est un critère d'admissibilité évalué par un psychologue, un travailleur social ou un psychiatre,

est une valeur très subjective.³ Ce regret est enclin à être plus élevé chez les femmes qui ne désirent pas réellement la stérilisation et pour lesquelles le counseling sur les divers moyens de contraception permet de diriger le choix, 75% de ces femmes basaient leur décision sur le désir de leur conjoint.¹⁰ Aux États-Unis, on a remarqué en 2015 que la ligature des trompes survenait principalement par manque d'éducation, mais également par pression des pairs et du médecin traitant.¹⁸ S'ensuivait un haut taux de dépression et d'anxiété dans un cadre où la société associe « l'accomplissement identitaire d'une femme » à « devenir une mère ». ¹⁹ L'anxiété de la grossesse est elle aussi bien présente chez plusieurs femmes qui souhaitent la stérilisation, mais qui sont ainsi vue comme « égoïstes ». ^{20, 21} Les autres arguments du refus de procéder à la ligature des trompes sont le risque de complications et le coût pour le système de santé. Pourtant, le taux de complications viscérales majeures s'élève à 0,1% et la mort à 0,004%, des taux semblables pour toutes procédures par laparoscopie à cause de l'anesthésie générale. ^{4, 6, 22} En ce qui a trait au coût de la stérilisation, elle est aux environs de 1 300\$ et la réanastomose à 3 500\$, alors que le traitement d'une grossesse ectopique coûte en moyenne 13 000\$ au système de santé et un accouchement 4 000\$. ^{6, 23}

Alors que les femmes blanches se voient refuser la possibilité de ligaturer leurs trompes, les femmes Autochtones du Canada se font stériliser sans leur consentement. ²⁴ « Le consentement aux soins non requis par l'état de santé doit être donné par écrit. », pour ces femmes il n'y a ni consentement écrit ni consentement oral, même pas de la part de leur mari. ^{7, 24} C'est un génocide qui a engendré plus de 1 200 stérilisations dans les années 70 au Canada, mais qui se poursuit encore aujourd'hui. ²⁵ Dans les 5 dernières années, des allégations ont été déposées en Alberta, au Manitoba, dans le Sud de la Saskatchewan et en Ontario concernant 90 victimes. ^{24, 25} Au Québec, avec la mort de Joyce Echaquan, des questions ont également été soulevées et certaines femmes ont dénoncé le racisme du système de santé comme Mélanie Vollant après plus de 30 ans, une Autochtone ayant subi de la pression par le personnel soignant pour se faire stériliser. ²⁶ La santé de ces femmes relève du gouvernement fédéral, mais elles vivent dans la crainte du système, elles sont profilées, impuissantes et surtout ignorées. ^{25, 27}

Le problème majeur concernant la ligature des trompes est donc celui du consentement. D'un côté, l'opinion n'est pas prise au sérieux et de l'autre elle n'est pas considérée, le consentement dans les deux partis est brimé. C'est un problème de ne pas vouloir ligaturer les trompes d'une femme, mais jamais on ne ligaturerait une jeune femme blanche peu importe son statut social sans son consentement. Il faut parler de cette problématique actuelle et ne pas se voiler la face en pensant que « ça ne se passe que dans les autres pays ». Entendre, considérer, comprendre, c'est un pas de plus vers le changement, vers la sécurité, l'écoute et la préservation de l'intégrité des femmes, de nos grands-mères, de nos mères, de nos sœurs.

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Une langue différente, une expérience différente de la santé



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Il est estimé qu'environ 8 millions des Canadiens, soit 23% de la population canadienne, s'identifient comme francophones.¹ De ces 8 millions, près d'un million vivent en situation minoritaire, dispersés dans des régions majoritairement anglophones tels que l'Ontario, les maritimes, les provinces de l'ouest et les régions du nord canadien.¹ En tant que minorités linguistiques, les Franco-canadiens ne sont pas étrangers aux inégalités qui assaillent le tissu social au Canada. Bien qu'il existe peu de recherche récente à ce sujet, il est bien connu que les communautés francophones dans un contexte minoritaire ont tendance à être moins scolarisées, moins nombreuses sur le marché du travail, ont un revenu moyen moins élevé

que la population anglophone et se concentrent souvent à des endroits marqués par une économie instable.² Étant donné le faible statut socioéconomique des Canadiens français en situation minoritaire, il n'est pas surprenant de constater que ces individus rapportent une perception individuelle de leur santé plus basse que les anglophones majoritaires.³

La situation est exacerbée davantage par le manque d'un corps médical francophone. D'ailleurs, 50 à 55% des Franco-canadiens minoritaires déclarent avoir un accès limité, voir même inexistant à des services de santé en français.⁴ De plus, cette disparité affecte certains services

de santé de façon disproportionnelle. Par exemple, 29% des Franco-canadiens en contexte minoritaire déclarent avoir accès à des services de planification familiale en français tandis que seulement 6% d'entre eux déclarent avoir accès à des services d'orthophonie en français, un service dans lequel le langage de provision joue un rôle primordial.⁴ Certains diraient qu'un manque d'accessibilité aux soins de santé spécialisés ne se limite pas aux communautés francophones en contexte minoritaire. Il est vrai qu'il existe une pénurie généralisée de spécialistes de santé au niveau national entravé par des ressources financières limitées, une spécialisation accrue des soins et une difficulté à recruter ces spécialistes dans certaines régions.⁵ Cependant les communautés francophones minoritaires se voient affectées de façon plus prononcée par cette pénurie, avec des taux d'accès à des services de santé dans la langue de leur choix 3 à 6 fois plus bas que leurs contreparties anglophones.⁴ Ces données présentent une situation préoccupante étant donnée l'importance qui est attribuée à l'intercommunication patient-médecin et ses effets sur les résultats cliniques des patients.^{6,7}

Certaines actions ont été prises pour pallier les difficultés vécues par les Franco-canadiens minoritaires, mais il demeure plusieurs obstacles à surmonter. À l'échelle fédérale, la loi sur les langues officielles de 1988 a permis d'assurer la provision des services au niveau des institutions fédérales dans les deux langues officielles, le français et l'anglais.⁸ Bien que la loi sur les langues officielles a été une étape importante pour assurer le support des communautés francophones minoritaires, celle-ci s'applique seulement aux institutions fédérales et n'a aucun effet direct sur les institutions provinciales des soins de santé.⁸

Des efforts remarquables ont aussi été observés au niveau des provinces. En 2001, la persévérance des communautés franco-ontariennes dans l'est de l'Ontario ont mené à une victoire marquante dans la Cour d'appel de l'Ontario contre la Commission de restructuration des services de santé de l'Ontario qui cherchait la fermeture de l'Hôpital Montfort, le seul hôpital francophone au Canada à l'ouest du Québec.⁹ Grâce à cette persévérance, Montfort continue à offrir des services en Français aujourd'hui. Cependant, Montfort demeure le seul hôpital francophone en Ontario, soit un hôpital pour environ 550 000 Franco-

ontariens ou 52 lits par 100 000 habitants francophones, un taux beaucoup plus bas que la moyenne nationale de 200 lits par 100 000 habitants.^{1,10,11}

Sur le front éducationnel, la faculté de médecine de l'Université d'Ottawa offre la possibilité de poursuivre une éducation médicale en français ou en anglais depuis son inauguration en 1945.¹² C'est grâce à cette dévotion envers l'éducation dans les deux langues officielles qu'elle a l'honneur d'être la seule université bilingue au Canada. Malheureusement, la Faculté de Médecine de l'Université d'Ottawa demeure la seule faculté basée à l'extérieur du Québec offrant une éducation médicale en français, laissant peu d'opportunités aux francophones en situation minoritaire.¹³

Finalement, les travaux de recherche référés dans ce texte ont servi comme outils essentiels pour subvenir aux besoins des francophones puisqu'ils ont permis d'obtenir un meilleur aperçu sur l'état de santé des Franco-canadiens minoritaires et leur expérience avec le système de santé. Cependant, ces travaux sont quelque peu désuets et des nouveaux projets de recherche sont nécessaires afin d'obtenir un point de vue actualisé sur la santé des Franco-canadiens et explorer des problématiques actuelles, tels que la santé des Franco-canadiens racisés et l'impact du Covid-19 sur la santé de Franco-canadiens minoritaires.

En bref, plusieurs rapports de recherche démontrent que les Franco-canadiens en contexte minoritaire vivent une expérience inégale de la santé qui contraste considérablement celle des anglophones majoritaires, voire même celle de la population générale. Bien qu'il ait eu plusieurs actions entreprises pour subvenir aux besoins des Franco-canadiens minoritaires par diverses parties prenantes au niveau fédéral, provincial, éducationnel et analytique, ces actions laissent beaucoup à désirer. Entre autres, un projet de loi qui assurera la provision des soins de santé dans les deux langues officielles est nécessaire. Ensuite, le besoin de plus d'hôpitaux et centres de santé francophones dans les régions francophones minoritaires doit être aussi comblé. Quant à l'éducation des professionnels de la santé, les institutions éducationnelles devraient suivre l'exemple de l'Université d'Ottawa et offrir des programmes bilingues. Finalement, il faut faire appel à une actualisation des connaissances à

ce sujet et à l'exploration des nouvelles problématiques qui reflétaient le climat social d'aujourd'hui à travers la recherche. Ainsi, une approche holistique impliquant divers niveaux du gouvernement, les institutions éducationnelles, les professionnels de la santé et les chercheurs est nécessaire afin d'assurer un futur sain pour les Franco-canadiens. Mais il ne faut surtout pas oublier l'importance de l'engagement des membres de la communauté canadienne puisque, après tout, c'est à nous de décider ce qu'on valorise le plus en tant que société bilingue.

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Sous-représentation des minorités ethniques dans le registre de cellules souches au Canada

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Dans le contexte de certaines maladies, citant les lymphomes, les leucémies, les myélomes et les maladies auto-immunes, une greffe de cellules souches hématopoïétiques se prouve en étant un traitement essentiel et efficace pour le rétablissement. La greffe de moelle osseuse permet de restaurer la production de cellules sanguines et immunitaires chez de nombreux patients, améliorant leur chance de survie et leur qualité de vie à long terme.

Statistiquement, les patients ont une chance sur quatre d'avoir un donneur compatible au sein de leur famille directe. Pour la majorité des patients, les critères de parenté sont décourageants. De ce fait, 70% des patients dépendent des donneurs non apparentés, qui se sont inscrits par altruisme et volonté, au registre national pour faire un don de cellules souches.¹ Les marqueurs génétiques jouent un rôle important, car les patients sont plus susceptibles de trouver un donneur AHL-compatible* parmi leur propre groupe ethnique. Au Canada, le registre de moelle osseuse et de cellules souches collabore avec 75 registres dans 53

pays pour faciliter le jumelage.² Malgré des efforts étendus, une inégalité existe pour les patients de groupe ethnique non-caucasien, particulièrement les patients de race noire. À l'heure actuelle, les patients caucasiens ont 75 % de chance de trouver un donneur compatible tandis que pour les patients d'ethnicité noire, les chances ne sont que de 20 %.³ Par conséquent, cela pose un problème d'équité pour les personnes sous-représentées dans le registre.

Les données récentes de la Société canadienne du sang démontrent que les donneurs d'ethnicité noire ne représentent que 2% du registre de cellules souches.² Dans l'ensemble, ces patients ont une chance significativement plus basse de trouver un donneur compatible qui sauvera leur vie. Les études démontrent que les patients qui subissent une greffe de moelle osseuse plus tard dans l'évolution de leur maladie font face à un risque plus accru de complications et de mortalité.⁴ Ces conséquences sont une réflexion directe du manque de diversité dans notre registre national. Le but ultime est d'assurer une chance égale de survie pour tous les patients atteints d'un cancer

ou d'une maladie du sang, indépendamment de leur origine ethnique.

La littérature démontre que la peur de procédure invasive et le manque d'informations du public au sujet du processus de cueillette de cellules souches représentent des obstacles pour l'engagement.⁵ L'éducation par rapport aux deux méthodes de don, par l'entremise plus commune du sang périphérique ou plus rare, la moelle osseuse permet de rassurer les donateurs potentiels et augmente la probabilité qu'ils s'inscrivent et complètent un don.⁶ De plus, la fermeture des frontières qui s'avère de la pandémie COVID-19 pose un impact significatif sur le transport des cellules souches provenant d'autres pays. De nos jours, nous n'avons pas autant recours aux donateurs d'autres pays. Il est important, plus que jamais, que notre registre reflète la diversité canadienne puisque nous dépendons davantage des donateurs locaux.

L'amélioration de la représentation d'une diversité ethnique au sein du registre canadien est essentielle pour réduire les disparités existantes pour les patients de minorité sociale. D'où vient le motif pour le club universitaire pancanadien, Stem Cell Club qui encourage les Canadiens de groupe ethnique sous-représentés à s'inscrire comme donateurs potentiels de cellules souches. Le club fondé à l'Université de la Colombie-Britannique (UBC) par hématologue Dr. Warren Fingrut se retrouve maintenant dans 27 campus à travers le Canada. Malheureusement, il n'est pas actuellement un groupe d'intérêt officiel de la Société d'Esculape à l'Université d'Ottawa. Par contre, il est toujours possible de s'engager auprès du groupe sur les médias sociaux. Afin d'assurer l'accès aux traitements pour nos futurs patients, il est impératif que tous les étudiants en santé jouent un rôle pour sensibiliser la population à l'importance de réaliser un don de cellules souches.

Les personnes intéressées à s'inscrire en tant que donateurs potentiels sont invitées à le faire en ligne, via <http://blood.ca/black-donors-save-lives>. Un kit de prélèvement gratuit leur est envoyé par la poste pour qu'ils fassent le prélèvement tel qu'indiquer sur la boîte et le renvoient afin qu'ils puissent être inscrits parmi plus de 460,000 Canadiens sur le registre des cellules souches de la Société canadienne du sang.

*AHL = antigènes de leucocytes humains (HLA = human leukocyte antigen)

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La lourdeur d'une plume

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Depuis plus d'un an, la pandémie engendrée par la COVID-19 bouleverse le quotidien par sa diffusion expéditive et la polarisation qu'elle suscite. L'engorgement des services de santé, la suspension d'activités académiques, et le fardeau financier élevé sont concédés par les mesures prescrites visant à endiguer sa propagation. Le retentissement de la pandémie se fait surtout sentir au niveau de la santé mentale en raison de la peur et de l'incertitude inspirées par la nouvelle réalité peinte et de la distanciation sociale ordonnée, entre autres. Elle soulève ainsi la question de bien-être pour les populations qui sont particulièrement vulnérables à cette isolation sociale, telles que les personnes connues pour la dépression ou un trouble alimentaire. D'ailleurs, les personnes souffrant d'anorexie mentale, qui illustre à prime abord une réalité écrasante, se heurtent maintenant contre un obstacle qui rend leur rétablissement un problème davantage convoluté. D'abord, les barrières érigées contre ces patients entravent leur prise en charge efficace et ce, sans le gabarit d'une crise sanitaire. Ensuite,

le durcissement des directives de distanciation sociale, quoique puissants agents de contrôle de transmission, nourrit leur trouble alimentaire. Lutter contre sa stigmatisation et assurer l'accès facile à ses ressources de support sont, plus que jamais, d'une importance inouïe.

D'une part, les haies que doivent franchir les patients souffrant d'anorexie mentale sont hautes. Malgré l'essor de la positivité et de l'inclusion corporelle, la désapprobation des pôles de poids, autant chez la femme que chez l'homme, continue à marginaliser la population qui les compose. Le descriptif « anorexique » est encore jeté quasi banalement en tant que railleries qu'une personne considérée mince doit endurer, sans mentionner le paradoxe hardi soulevé par cette expérience et l'équivalence de la beauté à la minceur, une publicité exploitée par presque toutes les industries et que la mode savoure depuis des décennies. De ce fait, il est facile de croire qu'une personne anorexique a, par définition, les os qui proéminent et un indice de masse corporelle de 15, lorsqu'en vérité, ceci

est le portrait de cas extrêmes. De surcroît, ne négligeons pas la stigmatisation de la santé mentale en générale et la honte, autant malheureuse qu'elle soit, qui s'y rattache plus souvent que nous voudrions l'admettre. Quoique la prise en charge médicale est couverte par les régimes d'assurance-maladie à travers le Canada, le traitement ambulatoire à long terme, qui pourrait inclure une équipe multidisciplinaire (p.ex., nutritionniste, psychologue, etc.) ne peut pas être inclus. Il va de soi que la précarité socio-économique complique la chose, d'autant plus que l'accès aux soins de santé mentale pour les populations immigrantes.^{1,2} En plus des obstacles sérieux que doivent enjamber ces patients pour simplement demander de l'aide, le diagnostic n'est pas toujours formulé. À vrai dire, il est manqué dans la moitié des cas.³ Le patient peut avoir pris le poids nécessaire pour être accordé son congé de l'hôpital, mais ses pensées le suppliant de ne pas manger ne se sont pas nécessairement tues. Le problème est difficile à traiter, persistant et souvent perméable à plusieurs, sinon toutes, facettes de leur vie. Les barrières qui l'alimentent brouille sa prise en charge, d'où la nécessité urgente de reconnaître l'implication certes physique de l'anorexie mentale, mais psychologique et sociale également. Ainsi pourrions-nous assurer une éducation juste sur sa réalité auprès des professionnels de la santé mais aussi, auprès de la population générale, pour mieux épauler la personne souffrant de cette maladie que nous connaissons presque inévitablement.

D'autre part, la nouvelle isolation forcée peut compliquer la relation avec la nourriture. Les habitudes alimentaires et d'exercices changent, et ce, pour toute personne lors d'une crise mondiale d'exception. Une étude australienne indique que 27.6% de ses participants inconnus pour un trouble alimentaire restreignent davantage leur consommation depuis l'arrivée de la COVID-19.⁴ Le cadeau du temps, un des points positifs qui contrecarre le négatif imposant de la pandémie, permet cependant de renforcer les tendances souvent obsessionnelles de contrôle d'apport calorique, de mesures du corps et de comportements d'exercice (p.ex., se peser et monter les escaliers plusieurs fois par jour).⁵ Une étude allemande rapporte par l'entremise d'un sondage distribué auprès de patients connus pour une anorexie mentale en congé d'hôpital que 41.5% des participants acquiescent que leurs symptômes se sont empirés depuis le début de la pandémie et que 51.5% rapporte une qualité de vie

amoindrie.⁵ L'isolation promulguée, quant à elle, contribue aux comorbidités de dépression et d'idées suicidaires qui peuvent découler de l'anorexie mentale.³ Cette même étude explique que 71.7% de ses participants remarquent une tristesse amplifiée et 34%, une aggravation d'idées suicidaires.⁵ La COVID-19 a restreint l'accès aux services de santé incluant ceux dédiés aux troubles alimentaires, en plus d'avoir perturbé la routine, qui peut être un facteur important dans le rétablissement.⁶ Elle accorde donc une responsabilité élargie aux soignants à la maison.⁷ Tout bien considéré, il va de soi que l'isolation incitée par la pandémie complique le rétablissement de l'anorexie mentale.

Dans le cadre de mon cours sur les troubles alimentaires, j'ai appris que près de 1% des femmes entre 15 et 24 ans souffrent d'anorexie mentale dans les cultures occidentales et même, que cette estimation est probablement basse.³ Bien que ce 1% puisse sembler maigre, il représente néanmoins presque 400 000 Canadiennes qui vivront avec le trouble psychiatrique le plus léthal.^{8,9} C'est pourquoi je ne peux m'empêcher de me demander pourquoi qu'en tant qu'étudiante en médecine, je n'ai eu qu'une heure de formation en classe sur les troubles alimentaires, surtout que les étudiants en médecine sont eux-mêmes considérés un groupe à risque.¹⁰ La raison importe peu; l'affaire demeure sérieuse et épineuse malgré tout. Avec du recul, je reconnais l'ignorance que j'ai moi-même longtemps affichée à cet égard. J'ose espérer que les professionnels de la santé actuels, mais surtout, futurs, puissent reconnaître la complexité et la lourdeur que puisse cacher un poids plume.

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Déploiement du vaccin : Impact socio-économique sur l'obtention de l'immunité contre la COVID-19



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La pandémie de COVID-19 est sans aucun doute la plus grande crise sanitaire des temps modernes. Avec presque 933,785 infections et 22,676 morts au Canada,¹ il est de la plus haute importance de distribuer rapidement des vaccins approuvés aux populations les plus touchées. Tragiquement, ces populations sont principalement des Canadiens racialisés et à faible revenu. Cependant, Ottawa n'a actuellement aucun plan pour aider ces personnes à surmonter les obstacles à l'accès aux soins de santé, y compris l'accès au vaccin COVID-19. Des subventions pour le transport, la perte de salaire, ainsi que plus d'information sur le vaccin (engagement du publique) sont nécessaires pour la vaccination des familles à faible revenu au Canada.

Pendant cette pandémie, les gens le plus touchées par

le virus au Canada sont des familles à faible revenu et des personnes racialisées. Par exemple en Ontario entre Janvier 2020 et Juin 2020, les quartiers connaissant des niveaux élevés de pauvreté affichent deux fois plus de taux d'infection au COVID-19 que les communautés à revenu élevé. De plus, les personnes infectées provenant de quartiers à faible revenu ont connu plus de complications graves à la suite de l'infection.² Les raisons sous-jacentes potentielles à cela pourraient être dues à une exposition accrue au virus, ainsi qu'à un risque plus élevé de conditions préexistantes dans ces populations.³ Malheureusement, ces divisions entre les classes qui se traduisent par de moins bons résultats de santé dans les communautés à faible revenu existaient bien avant la pandémie de COVID-19. Les barrières financières qui entraînent une mauvaise qualité des aliments, des environnements de

logement insalubres et une augmentation des niveaux de stress global contribuent actuellement aux comorbidités signalées de pauvreté (hypertension, diabète, maladies cardiovasculaires, et maladies respiratoires chroniques).³ Ces conditions mentionnées ci-dessus placent cependant les personnes ayant une faible statistique socio-économique à un risque élevé de complications graves du COVID-19.

On comprend alors pourquoi le gouvernement canadien et le gouvernement de l'Ontario voudraient donner la priorité à ces individus lors du déploiement du vaccin en cours au cours des derniers mois. Les sans-abris, les quartiers à faible revenu fortement touchés et les personnes souffrant de comorbidités à très haut risque sont déjà vaccinés partout en Ontario. Cependant, accéder à un vaccin COVID-19 revient toujours à accéder à un produit de soins de santé, ce qui s'avère difficile lorsque le revenu n'est pas facilement méprisable. Par exemple, toutes les personnes souhaitant recevoir le vaccin COVID-19 doivent avoir accès à Internet ou à un téléphone, fournir leur propre transport, ainsi que potentiellement perdre un salaire en s'absentant du travail pour se rendre à leur rendez-vous. De plus, de nombreuses personnes à faible statut socio-économique ont besoin d'une formation supplémentaire sur les propriétés du vaccin afin de pouvoir faire des dessins en connaissance de cause. Pour de nombreuses personnes vivant en Ontario, ces obstacles peuvent constituer d'importants obstacles à l'immunité contre la COVID-19. Il est donc de la responsabilité du gouvernement de l'Ontario de mettre en place des protections pour permettre aux Ontariens à faible statut socio-économique de surmonter les problèmes d'accès à la santé et de se faire vacciner contre la COVID-19. Pour s'assurer que ces défis d'accès aux soins de santé contribuent de façon minimale à la campagne de vaccination de tous les Canadiens, un appel à l'action est nécessaire de la communauté au gouvernement de l'Ontario. Nous devons fournir des prestations d'éducation, précises et compréhensibles, ainsi qu'une compensation pour la perte de salaire pour permettre à tout le monde, quelle que soit sa classe, de s'inoculer.

La première étape de toute décision éclairée est de devenir connaissable sur le sujet en question. Comprendre les effets secondaires, la fonction, les avantages et les conséquences de la réception du vaccin. Dans le cas du

statut socio-économique et de l'éducation, une éducation plus compréhensible sur les types de vaccins disponibles est nécessaire sans jargon médical ni terminologie scientifique. L'accès à l'éducation est encore un autre obstacle que rencontrent les personnes à faible revenu, par conséquent, toutes les informations ciblées doivent être compréhensibles pour les non-experts et les personnes ayant des degrés divers d'éducation. De plus, des efforts devraient être faits pour réfuter et expliquer les idées fausses courantes sur le vaccin à ceux qui pourraient ne pas avoir accès à des cours précis. Cette formation est essentielle à tous les Canadiens et devrait non seulement être disponible en ligne, mais aussi être fournie sous forme de courrier domestique, de dépliants et affichée dans des lieux publics pour ceux qui n'ont pas accès à un Internet fiable.

En menant une campagne d'éducation approfondie, les sous-stations sont tenues de supprimer le fardeau financier du processus de prise de décision de l'inoculation du COVID-19. Par exemple, montrer la preuve d'un rendez-vous de vaccination COVID-19 aux arrêts de bus devrait permettre une foire de bus gratuite pendant 5 heures autour du rendez-vous. De même, les employeurs devraient être subordonnés à accorder à leurs travailleurs 3 heures de congé payé pour recevoir leur vaccin. Cela était actuellement offert en Saskatchewan à compter du 18 mars 2021,⁴ mais l'Ontario demeure indécise.

Dans l'ensemble, les gouvernements fédéral et provinciaux ont reconnu que la population à faible revenu présentait un risque élevé de contracter et souffrait de complications graves de la COVID-19. Alors que ces gouvernements ont commencé à mettre les vaccins à la disposition de ces populations, il reste encore beaucoup à faire pour permettre une prise de décision éclairée et une inoculation sans frais. Une campagne éducative plus forte, des services de transport, ainsi que des congés payés pour les vacances sont essentiels pour surmonter les difficultés d'accès au vaccin contre la COVID-19, principalement en réduisant la charge financière.

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Inégalités systémiques et de santé soulignant l'impact disproportionné de la pandémie de COVID-19 sur les peuples autochtones

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Les mesures de santé publique restrictives visant à réduire la propagation d'infection par le COVID-19 ont amené les Canadiens à affronter les perturbations socio-économiques résultant de la pandémie. Cependant, les inégalités systémiques et de santé chez les peuples autochtones les prédisposent à être touchés de manière disproportionnée par la pandémie. Ce groupe minoritaire est confronté à des risques accrus d'infection, de morbidité et de mortalité liés au COVID-19, une détérioration de la santé mentale, une crise économique, ainsi qu'une multitude d'autres problèmes.

Comme un autochtone sur quatre vit dans la pauvreté,¹ beaucoup d'entre eux subissent des conditions de vie déplorables qui favorisent la propagation de l'infection. Des logements surpeuplés et multigénérationnels par exemple limitent l'auto-isolément et la distanciation

physique, et les salles de bain communes qui ne sont pas régulièrement nettoyées et désinfectées augmentent le risque de transmission. En raison de la qualité médiocre des infrastructures d'approvisionnement en eau potable et de traitement des eaux usées, de nombreuses personnes n'ont pas accès à de l'eau potable; depuis le 31 mars 2021, 54 avis sur la qualité de l'eau potable à long terme sont toujours en vigueur dans 34 communautés.² En plus, les patients autochtones ont souvent un pronostic plus défavorable du COVID-19 en raison d'une prévalence plus élevée de maladies chroniques comorbides comme l'obésité, le diabète de type 2, et l'hypertension.³

Pour minimiser le risque d'infection, de morbidité et de mortalité lié au COVID-19 et aux autres maladies infectieuses, il est important de répondre à la crise des logements et de l'eau potable, et de financer la réparation

et le développement de ses infrastructures. La mise en place des programmes d'apprentissage et de formation professionnelle permet de créer des emplois et de former des personnes dans les secteurs de la construction, la réparation des logements et la gestion des systèmes de traitement d'eaux. Il faut aussi intensifier les efforts visant à fournir aux communautés autochtones des ressources adéquates de soins de santé, notamment des équipements de protection individuelle, des produits désinfectants et des établissements et services de santé bien équipés.

Un domaine qui souligne l'importance d'offrir des soins efficaces et individualisés est la santé mentale, qui est un autre sujet important chez les autochtones de tous âges. Depuis des décennies, cette population minoritaire souffre de plusieurs troubles mentaux en raison de conditions de vie insoutenables, de racisme systémique et de traumatismes historiques intergénérationnels liés à des atrocités comme le système des pensionnats autochtones. Depuis le début de la distanciation physique dû à la pandémie, 60 % des participants autochtones ont indiqué que leur santé mentale était « un peu moins bonne » ou « bien moins bonne ». ⁴ En plus, des cérémonies et des événements communautaires en groupes ont été interrompu, privant de nombreux individus de ce soutien et entraînant un sentiment d'isolement et de désespoir. Dans les cas plus graves, les autochtones étaient deux à quatre fois plus à risque d'avoir des pensées suicidaires ou de commettre des tentatives d'automutilation depuis l'apparition de la COVID-19 comparés à la population générale. ⁵

Plus que jamais, il faut établir, soutenir et développer des programmes, des initiatives et des organisations dirigés par des autochtones et orientés vers des communautés, comme le Centre Wabano à Ottawa ou l'organisation nationale Thunderbird Partnership Foundation (TPF), qui fournissent des services aux autochtones et intègrent des approches holistiques du bien-être mental. ⁶ En outre, les services de santé mentale actuels peuvent être ajustés pour répondre à une demande accrue et s'adapter aux préférences des patients, par exemple par des consultations virtuelles et des rencontres dans des espaces privés dans la nature.

Les vulnérabilités économiques ont également touché les peuples autochtones avant COVID-19 et continuent

à s'aggraver à présent. Environ 17,3 % de la population autochtone a de faibles revenus – deux fois plus que le taux de la population canadienne en général. ⁷ Par conséquent, la pandémie aura un impact plus important sur la capacité des autochtones à gérer leurs obligations financières et besoins essentiels, particulièrement avec le problème additionnel de perturbations d'emploi sous la forme de licenciements massifs et de gels d'embauche. ⁸ L'insécurité alimentaire est aussi problématique chez les autochtones, car les prix des aliments dans les régions isolées sont très élevés en raison des frais d'expédition et coûts élevés d'exploitation et d'entretiens. Par exemple, la prévalence de l'insécurité alimentaire est la plus élevée dans les Territoires du Nord-Ouest et au Nunavut, avec 21,6 % et 57,0 % des ménages, respectivement. ⁹ La pandémie a entraîné la fermeture d'usines de fabrication, des restrictions sur les activités d'importation, et la fermeture de programmes/banques alimentaires, ce qui a aggravé l'insécurité alimentaire.

Pour atténuer ces difficultés économiques à l'avenir, il convient d'investir davantage dans de nouveaux secteurs industriels (ex. énergie durable) pour favoriser la diversification économique et le développement des communautés rurales. Les télécommunications sont également essentielles pour la croissance de ces communautés éloignées en offrant aux habitants d'obtenir un emploi et de travailler tout en continuant à vivre dans leur communauté, et aux étudiants de poursuivre leur éducation par le biais de l'apprentissage à distance. En outre, les banques alimentaires et organismes de bienfaisance ne peuvent qu'aider temporairement les individus, ne ciblant pas les causes de l'insécurité alimentaire. Il faut donc développer des usines et des serres rurales pour promouvoir une production alimentaire durable, réduire les coûts associés et donc faire baisser les prix des aliments.

De nombreux obstacles préexistants ont entravé le développement et la prospérité durables des communautés autochtones. Par conséquent, ces facteurs ont aggravé l'impact disproportionné de la pandémie de COVID-19 sur ces peuples en entraînant un risque plus élevé d'infection, de morbidité et de mortalité par le virus, un accroissement des troubles mentaux et une aggravation des situations financières. La pandémie a mis en évidence la responsabilité des dirigeants de la société de collaborer

avec les peuples autochtones et de les inclure dans les discussions politiques afin qu'ils offrent un contexte culturel précieux lors de la conception de solutions durables et à long terme qui profitent à tous.

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