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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. We are 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. Nous sommes la seule revue médicale bilingue au Canada dirigée par des étudiants.

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UOJM: PREFACE

The University of Ottawa Journal of Medicine (UOJM) is proud to share this special issue featuring the top ranked, winning submissions in each category of the fourth annual UOJM National Commentaries Contest. Through academic writing, this contest seeks to give a platform for trainees across Canada to communicate and reflect on timely topics in medicine and research.

The commentaries received ranged across a diverse range of healthcare issues. This annual contest is open to any student, medical resident, and post-doctoral fellow across Canada. Trainees were invited to submit a 1000-word commentary article on any topic related to the medical field in French or English. In the spring of 2024, UOJM received well over 60 submissions which were peer-reviewed by the UOJM Editorial Team. Double-blinded submissions were initially scored by independent peer reviewers and submissions that ranked in the top quartile of each submission category were then evaluated by a faculty expert at the University of Ottawa.

We were impressed by the quality of submissions this year, and we would like to sincerely thank everyone who participated in this contest! We also thank reviewers, faculty evaluators, as well as the various UOJM sponsors for their support. This contest continues to be one of the highlights of the UOJM and helps support our mission of encouraging and facilitating trainee research.

We hope that this collection of commentaries from trainees across Canada is an exciting, stimulating, and intriguing read. We again warmly thank everyone involved in this initiative and congratulate the winning authors!

Yannick Galipeau & Jacob Wise
Co-Editors in Chief (2024-2025)

Winners of the English Stream of the Contest:

1st place ($500): Neha Khanna
Title: What Does Autonomy Mean to You?

2nd place ($200): Pablo Arrona-Cardoza
Title: GLP-1 Agonists, Willpower, and Weight Stigma: A Paradigm Shift for Obesity

3rd place ($100): Aleksandar Mihic
Title: Strength in Numbers: An Analysis of Team-Based Primary Care in Canada

UOJM: PRÉFACE

Le Journal médical de l'Université d'Ottawa (UOJM) est fier de présenter ce numéro spécial regroupant les soumissions gagnantes les mieux notées dans chaque catégorie du quatrième Concours national de commentaires de l'UOJM. Par le biais de l'écriture académique, ce concours offre aux stagiaires de tout le Canada une plateforme pour communiquer et réfléchir à des sujets d'actualité en médecine et en recherche.

Les commentaires reçus ont porté sur une grande diversité d'enjeux liés aux soins de santé. Ce concours annuel est ouvert à tout étudiant, résident en médecine ou chercheur postdoctoral au Canada. Les participants étaient invités à soumettre un article de type « commentaire » de 1 000 mots sur un sujet lié au domaine médical, en français ou en anglais. Au printemps 2024, l'UOJM a reçu plus de 60 soumissions, examinées par l'équipe éditoriale de l'UOJM. Les textes, reçus en double aveugle, ont d'abord été notés par des évaluateurs externes indépendants ; ceux qui figuraient dans le premier quartile de leur catégorie ont ensuite été réévalués par un expert du corps professoral de l'Université d'Ottawa.

Nous avons été impressionnés par la qualité des soumissions cette année et tenons à remercier chaleureusement tous les participants ! Nous exprimons également notre gratitude aux évaluateurs, aux experts du corps professoral et aux divers commanditaires de l'UOJM pour leur soutien. Ce concours demeure l'un des moments forts du Journal médical et contribue pleinement à notre mission : encourager et faciliter la recherche par les stagiaires.

Nous espérons que cette collection de commentaires rédigés par des stagiaires de tout le Canada vous offrira une lecture enrichissante, stimulante et inspirante. Nous remercions à nouveau chaleureusement tous les acteurs de cette initiative et félicitons les auteurs gagnants !

Yannick Galipeau et Jacob Wise
Co-rédacteurs en chef (2024–2025)

Gagnants du volet francophone du concours :

1ère place ($500) : Margaret Efraim
Titre : Le bactériophage : l'ultime espoir contre les bactéries résistantes

2ème place ($200) : Tina Shaghaeefallah
Titre : L'ADN du Traitement : Combattre la Crise des Opioïdes au Canada

3ème place ($100) : Milica Ristovski
Titre : Mourir seul : Un regard sur la crise des soins de longue durée au Canada

2024 UOJM National Commentary Contest (English Stream)

What Does Autonomy Mean to You?

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Throughout life, we constantly face decisions about our health and that of our loved ones. Some decisions are straightforward, like opting for surgery to remove a life-threatening arterial blockage or using a brace to heal a sprained ankle. However, many situations present dilemmas where we must choose between multiple acceptable options or equally unacceptable [1]. In these complex cases, we often rely on healthcare professionals for guidance and advice. Yet, a critical question arises: how confident can we be that healthcare providers consider our cultural background and values in their recommendations? Establishing trust between patients and providers hinges on transparent communication that respects individual concerns and cultural beliefs. One approach to ensuring this transparency is through ethnographic methods, which emphasize understanding cultural narratives and social connections within communities [2].

In Western medicine, ethical dilemmas frequently arise around the principles of autonomy and beneficence. Autonomy asserts that individuals have the right to make decisions about their own lives, including healthcare choices that reflect their mental capacity, wishes, beliefs, goals, hopes, and fears [3]. Beneficence, on the other hand, obligates healthcare providers to act in the best interest of the patient, weighing potential benefits and burdens of treatment options [4]. Conflict arises when respecting a patient's autonomy clashes with what healthcare providers perceive as the best medical course. Bridging this gap requires navigating ethical dilemmas with minimal bias and in ways that respect the cultural and religious beliefs of patients [5]. Understanding the concept of autonomy in healthcare necessitates examining how it varies across different cultures and contexts.

Cross-cultural differences in autonomy are pronounced, reflecting varying cultural values and societal norms. Western societies often emphasize individualism, personal happiness, and self-actualization as core to autonomy [6]. This individualistic perspective prioritizes personal decision-making based on one's own preferences and values. In contrast, many non-Western cultures place greater importance on interconnectedness within social relationships and the collective well-being of the family or community [4]. For example, in Eastern cultures decisions often consider the impact on family members and the broader community, rather than solely on individual preferences. This contrasts with Western approaches where consent is usually sought from individuals rather than communities [6].

An illustrative example of these cultural differences in autonomy can be seen in research practices. In a study conducted in an Indigenous village in Taiwan, a researcher obtained consent from individual volunteers for a study involving blood donation. However, when elders in the community learned of the study, they insisted that consent must be collective for the entire village, not just from individual volunteers [7]. This cultural expectation highlights the communal nature of decision-making in contrast to the individualistic approach common in Western research practices [8].

The treatment of psychiatric disorders also underscores the impact of cultural perspectives on healthcare. The Research Domain Criteria (RDoC) initiative aimed to enhance psychiatric treatment by integrating biological, psychological, and social factors into diagnostic and therapeutic approaches [9]. However, criticisms of the RDoC framework noted its limited consideration of cultural influences on mental health. Cultural norms profoundly shape definitions of normality and influence how symptoms are perceived and treated across different populations [9]. Recognizing these cultural variations is crucial for developing effective healthcare strategies that respect diverse cultural perspectives [10].

In North America, the increasing cultural diversity challenges healthcare systems to adapt and provide culturally competent care [5]. Statistics Canada's 2016 Census revealed that racialized groups represent 22%

of the Canadian population, a number steadily rising [11]. Despite these demographic shifts, healthcare systems often struggle to accommodate the varied perceptions of autonomy and healthcare practices among diverse cultural groups [12]. Flexibility in healthcare practices is essential to respect these cultural differences and provide patient-centered care that aligns with diverse cultural values [13].

Ethnographic approaches offer valuable insights into cultural perceptions of autonomy and decision-making processes within healthcare [14]. By studying cultural narratives and social dynamics, ethnography helps healthcare providers understand how cultural beliefs and values influence patient preferences and treatment decisions. Medical anthropologists, trained in ethnographic methods, play a crucial role in bridging cultural gaps in healthcare settings [8]. They bring expertise in understanding how cultural factors such as beliefs about illness causation, socioeconomic status, and previous healthcare experiences shape patient interactions with the healthcare system [15]. Despite their potential contributions, the integration of medical anthropologists into mainstream healthcare remains limited, highlighting the need for greater recognition of their expertise in promoting culturally competent care [16].

Medical anthropology provides a robust framework for navigating ethical dilemmas in healthcare by contextualizing autonomy within broader social and cultural contexts [16]. This interdisciplinary approach enriches healthcare practices by incorporating cultural insights into patient care and decision-making processes [9]. For example, in the context of organ donation, which is viewed differently across cultures, ethnographic studies can illuminate local attitudes, cultural meanings, and personal narratives that influence decision-making. This enables an understanding of contextual factors such as social expectation or economic pressures that can impact decision making [17].

The integration of ethnographic approaches in healthcare ethics can mitigate challenges to individual autonomy by promoting informed decision-making that respects cultural nuances [18]. This is particularly crucial in overcoming language barriers or communication challenges that may hinder patients' ability to make informed healthcare choices. In ethical dilemmas involving autonomy, such as informed consent for medical procedures, understanding patients' explanatory models and cultural frameworks is essential [18]. Ethnography provides healthcare providers with tools to navigate these complexities sensitively and effectively, ensuring that patients' values and preferences are respected [19].

In conclusion, the complexity of autonomous decision-making in healthcare is profoundly influenced by social and cultural factors [20]. Moving forward, exploring the role of narrative medicine and the integration of medical anthropologists into clinical settings promises to enhance the quality of healthcare delivery. Medical anthropologists offer unique insights into cultural contexts that shape patient care and decision-making, enriching healthcare practices with diverse perspectives [9]. Their expertise in ethnographic methods provides invaluable contributions to understanding and respecting cultural differences in healthcare. Ultimately, integrating these approaches into healthcare systems can bridge cultural divides, promote patient-centered care, and improve the quality of informed decision-making in diverse cultural settings.

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GLP-1 Agonists, Willpower, and Weight Stigma: A Paradigm Shift for Obesity

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Since 1990, the worldwide prevalence of adult obesity has more than doubled [1]. In Canada, one in three adults has obesity [2]. This high prevalence, its negative health effects [3], and its economic burden [4] have made obesity one of the most challenging public health concerns yet. Populational-level interventions for obesity have been carried out with admirable efforts, such as Chile's food labeling and advertising law [5]. While these efforts should be continued, we must recognize that drastic changes to the food environment could prove too hard, as these must jump over political, economic, and cultural hurdles. In the clinical realm, lifestyle modification, although important, has a record of modest outcomes for weight loss. Of people who lose weight through diet and exercise, more than half regain some weight, and almost 10% gain more than they initially lost [6]. Conversely, bariatric surgery is usually observed to be more effective than lifestyle interventions [7]. However, the invasiveness of the procedure and the risk of complications might deter some from seeking this option. Then, there is pharmacotherapy, which for obesity has had a rocky history [8], until now.

Glucagon-like peptide-1 (GLP-1) is an incretin, a type of gut-derived hormone capable of stimulating pancreatic insulin secretion and acting as an anorexigenic hormone in the brain [9]. GLP-1 receptor agonists (GLP-1RA), while first developed for type 2 diabetes [10], have now demonstrated effectiveness in treating obesity. A weekly injection with 2.4mg of semaglutide (a form of GLP-1RA), resulted in a 14.9% reduction in body weight, compared to just a 2.4% reduction with a placebo [11]. Additional trials have shown improvements in cardiovascular health with semaglutide [12,13]. Now tirzepatide, a combination of GLP-1RA and glucose-dependent insulinotropic polypeptide, has shown similar positive results [14]. Currently, GLP-1RAs are approved in Canada for weight loss [15], with an estimated range of 900,000 to 1.4 million current users [16]. As GLP-1RAs become widely prescribed, their social relevance will increase. This leads to the question: How does the public perceive these therapies? For example, 357 adults were asked how they perceived a fictional woman who lost weight either by diet and exercise or by using a GLP-1RA. Individuals believed that the woman who lost weight through medications took "the easy way out" and perceived her more negatively compared with the woman who did not use medications [17]. And while not the majority, a sizable portion of the population, has strong, often unfounded, opinions about the controllability of weight. According to a U.S. survey, 34% believe that willpower alone is enough to lose weight [18]. Thus, it can be assumed that these beliefs reinforce increasing issues of weight stigma and bias [19], potentially affecting individuals' pursuit and adherence to treatment for obesity.

This stigma often comes from a misunderstanding of the disease of obesity. Socially, and to an extent in the medical community, we equate obesity with fatness (excess adiposity). But fatness can be better understood as a consequence of obesity, rather than the disease itself [20]. Obesity is a neurobehavioral disease characterized by a "dysregulation" of the hypothalamic control of feeding and a "resetting" of the body weight set-point, which culminates in a chronic, sustained positive energy balance [21]. What are the symptoms of obesity? They mostly appear during attempts to lose weight: hyperphagia, preoccupation/obsession with food, excessive craving, and diminished satiation/satiety [22], challenging the notion that one can lose weight just by willing themselves to "eat less" [23]. Missing this key distinction can create erroneous ideas about anti-obesity medications, such as the idea that they are a "crutch" or a replacement for diet and exercise. In reality, GLP-1RAs are leveling the playing field. For example, GLP-1RAs can reduce "food noise", defined as persistent and intrusive food-related thoughts [24]. These medications can therefore help create the necessary conditions so that individuals with obesity can readily engage in the lifestyle changes that drive weight loss and reduce the risk of further disease.

Undoubtedly, as with a lot of medications, side effects occur. Nausea, vomiting, and gastrointestinal issues are the most reported [25]. Muscle mass loss has been a side effect portrayed by the media [26]. Nonetheless, closer scrutiny of the data suggests otherwise. In the STEP 1 trial, participants in the semaglutide group lost 10.4 kg of fat and 6.9 kg of lean mass, proportionally less than the placebo group who lost 1.17 kg of fat, and 1.48 kg of lean mass [11]. Still, physicians should prescribe exercise, particularly strength training, due to its benefits, including minimizing muscle loss and maintaining long-term weight loss [27]. However, low exercise participation rates among the population [28] and physicians' reported lack of knowledge about exercise [29] highlight the need for medical school training on this topic. For instance, exercise education has been shown to increase physician and medical student confidence in addressing exercise with patients [30, 31]. Likewise, collaboration with dietitians and mental health experts is crucial, as multidisciplinary approaches to weight loss are preferable [32]. Lastly, the medical community must recognize and address weight stigma. Prejudice against a patient's weight can affect the quality of the patient's overall healthcare, particularly when dealing directly with obesity [33]. If the physician holds unsubstantiated ideas about this new wave of anti-obesity medications, or obesity in general, it can amplify existing bias.

GLP-1RAs indeed show promise in combatting the obesity epidemic. But medications like this must still navigate the same economic, political, and cultural barriers as any other intervention for obesity. Still, research will continue to resolve open questions about these drugs. It is within the healthcare professionals' power to keep educating themselves on how GLP-1RAs work, how to best integrate lifestyle changes, and minimize weight stigma. All this not only to improve the effectiveness of obesity treatment, but also to better the quality of life of individuals suffering from this disease.

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Strength in Numbers: An Analysis of Team-Based Primary Care in Canada

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The COVID-19 pandemic has served to amplify a plethora of pre-existing shortcomings with Canadian healthcare – subjecting these issues to extreme public scrutiny in the wake of an overburdened system. When addressing these concerns, it is critical to recognize that there is no one-size-fits-all change to remedy such problems. Rather, it is important to adopt a multifaceted, goal-oriented approach through which healthcare can be improved across a variety of parameters. High quality healthcare in Canada is defined as timely, effective, efficient, equitable, and patient centred [1] – by focusing on these parameters healthcare professionals, policy makers, and other key stakeholders can work towards the betterment of Canadian healthcare. One such piece of this issue involves investment in primary care. This does not simply entail an increase in funding, but also requires pursuing necessary infrastructure changes. More specifically, this commentary delves into the expansion of team-based primary care and how it can be implemented to tackle some of the key shortcomings facing the Canadian healthcare system.

Team-based healthcare can be described as a delivery model in which a patient's individual needs are addressed through coordinated efforts from multidisciplinary health teams [2]. For example, a primary care team might include family physicians, nurse practitioners, dieticians, administrative staff, among other allied healthcare professionals. This encourages each member of the healthcare team to work within their optimal scope of practice in order to best meet patient needs [3]. In the absence of such a system, lapses in efficiency, communication, and an overarching cohesion of healthcare services impair efforts to improve healthcare quality [3]. In such cases, care delivered by non-team based providers can result in significant delays and lead to poorer health outcomes and increased cost [4]. Indeed, team-based healthcare approaches have been linked with several benefits, perhaps most importantly being improved patient outcomes [4,5]. Effective team-based care has been shown to directly improve health outcomes and quality of care through reduced medical errors [6]. The benefits of team-based healthcare compared with more traditional methods are perhaps most evidently highlighted in the care of patients with multiple chronic conditions, where a single primary care provider not only lacks the expertise but also the time to provide sufficient care to an average panel of patients [7]. Further studies suggest that fostering a "team-culture" can help to prevent primary care provider burnout [8]. Additionally, several studies report not only improved patient satisfaction, but also improved provider satisfaction [9,10]. Team-based primary care has been associated with significant decreases in healthcare costs through the utilization of lower-cost providers who, in their given scope of practice, can provide superior patient care [11]. Additionally, patients who have regular access to team-based primary care have been found to be less likely to use emergency medical services, further reducing healthcare system costs [12].

Although team-based healthcare can provide numerous benefits, there are also several negatives to consider. One potential negative of team-based care, as with any form of teamwork, is that the efficiency of such a system is largely contingent on the ability of each of its constituents to effectively communicate and coordinate care amongst themselves. Potential lapses in the coordination of patient care can lead to worsening health outcomes and unnecessary increases in cost [13]. Additionally, it is important to consider the patient-provider relationship; by implementing team-based care, there is inherently limited continuity of care with a primary care physician. As part of the team-based approach, patients are unlikely to have the same provider for every appointment, making it more difficult to develop and sustain strong relationships between the regular primary care physician and the patient [14]. Moreover, patient preference has to be taken into consideration. Although improved patient satisfaction with a team-based model has been reported [15], this will certainly not be the case for all patients. It would be incorrect to assume this applies to all patients, particularly within geriatric populations who have been receiving the same primary care for several years, and may on average be more resistant to these types of change [16].

In order to effectively meet the healthcare needs of those they serve, it is critical that physicians act as both leaders and healthcare advocates – this includes working towards the betterment of the healthcare system. The path to having widely available primary care health teams for all will inevitably take time. Systemic changes of this nature require the necessary funding, infrastructure, and legislation to reach full maturity – many of which are beyond the say of any individual clinician. Physicians should be encouraged to work with other healthcare professionals in the primary care setting including nurses and social workers to deliver team-based care, where possible. These stances are supported by both the Canadian Medical Association (CMA) as well as the Canadian Nurses Association (CNA), for example [17,18]. Further, physicians should be encouraged to engage with policy makers and to join professional organizations where collectively like-minded groups can have a stronger impact than any one individual. As ever, medicine, its norms, and policies are greatly driven through evidence-based approaches; physicians should be encouraged to participate in growing bodies of research supporting the effectiveness of team-based care to help with advocacy efforts in support of policy change.

The strained Canadian healthcare system has many issues which need to be addressed. A team-based primary care model offers many compelling arguments as to why its broader implementation should be considered including decreased healthcare system costs, improved patient outcomes, improved patient and provider satisfaction, as well as reducing provider burnout. To bring about such changes, physicians should be urged to act as leaders and advocates for patient health, promoting interdisciplinary teamwork, partaking in research, and engaging with policy makers and professional groups. Together, by recognizing key deficiencies and following evidence-based approaches for improvement, Canadian physicians can work together towards the betterment of the healthcare system in which they are part of.

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The Unheard Voices of 'First in Family' Medical Students

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Decades of research has demonstrated that medical student and physician diversity is associated with enhanced educational experiences, improved patient care outcomes, and culturally competent healthcare. [1–10] Despite these findings, a variety of groups continue to be underrepresented in medicine (URiM). [11] Since 2010, the Association of Faculties of Medicine of Canada (AFMC) has made public commitments to addressing the issue of representativeness and inclusion in medical school admissions; specifically focusing on removing barriers that impede URiM applicants. [12] As a result, medical schools across Canada have introduced specialized application pathways, such as Black, Indigenous, and low-income background streams, to increase accessibility and promote the recruitment of URiM candidates. [13–15]

Historically, equity, diversity, and inclusion (EDI) efforts in medical education have focused on ethnic, racial, and financial minorities in medicine [16]; however, an important URiM population that has been regularly overlooked is 'first in family' (FiF) medical students.

As defined by the Higher Education Act, FiF students are students with parents who did not obtain a bachelor's degree or higher.[17] The term FiF is newly identified as a category in education research to investigate the unique experiences of individuals for whom the culture of higher education is new. [18,19] FiF status presents an additional dimension of disadvantage, that plays a notable role in shaping students' mentality and experiences as applicants, learners, and practicing physicians. [20]

FiF students are particularly impacted by limited social capital, which is defined as social networks and relationships that provide access to guidance and opportunities. [20] In Canada, medical students are more likely than the general population to have parents who have attained high levels of formal education. [21] Non-FiF students are more likely to have expert guidance in higher education as a result of inherited social networks that are easily accessible. [20] FiF students not only lack these networks, but also face consequential barriers tied to self-concept, which includes perceiving a medical degree as an unattainable goal or an exclusive preserve of the social elite. [22] These factors may not only cause FiF students disproportionate stress during the application process, but they may also deter them from applying entirely. Issues tied to self-concept persist after admission, with FiF medical students reporting challenges 'fitting in' amongst their peers, and difficulty reconciling with a new identity that is unfamiliar to their friends and family. [23]

Despite these challenges, the FiF background cultivates resiliency and perseverance, as students are able to achieve a milestone that generations before them have not. [23] It fosters an appreciation to attend medical school and become a physician, which harbors commitment to the field. These are valuable qualities to capture in the physician workforce, as patients with similar experiences can relate to resiliency in the face of adversity. [23]

There is currently no published data on the proportion of Canadian medical school applicants or medical students who are FiF. In addition, the FiF population has not been formally identified by the AFMC as a population of concern in admissions recruitment or social accountability efforts. [24] The lack of published information on this population leaves many questions unanswered.

Due to the novelty of studying the FiF population, the literature is limited in number and sample size, which has presented challenges in describing this group. Collectively, the term 'low socioeconomic status' has been used to identify students from low-income households, who consequently, are more likely to have parents who are not university educated. [20] This collective definition assumes that FiF status co-occurs with a low-income background. Although studies have shown that FiF students report financial difficulties and holding jobs while studying medicine full time [17,20], it is unclear if all FiF students face financial obstacles. Therefore, demographic data on FiF status and economic status should be collected distinctively, to better understand the diverse experiences that may exist within this group and address both financial and non-financial barriers.

Furthermore, the ratio of Canadian FiF applicants to accepted FiF candidates is also unknown. This presents a challenge in identifying which areas in pursuing medicine (applying, gaining admission, or during medical school) that FiF students may need support. Studies have pointed to the importance of family, teachers, and mentors in motivating students to apply to medical school. [25,26] Attitudes toward the application process, including confidence, resourcefulness, and perseverance are also known to affect the application experience and influence results. [26] Once in medical school, having personal connections to health professionals provides advantages, such as access to clinical or research opportunities, that may not be available to students from non-medical families. [23] These concepts may help to explain obstacles to FiF recruitment and/or the FiF experience during medical school.

The most appreciable limitation implicated by FiF membership is restricted social networks, guidance, and resources in the context of higher education. Therefore, it is plausible that an appropriate action step is to provide access to social support that is lacking. Mentorship programs have been routinely used throughout EDI initiatives in medicine to help students navigate personal and systemic barriers. [27] Studies show that when executed well, these programs have a significant impact on forging connections, building social capital, and improving student success. [20,28] However, students respond best to mentors with similar backgrounds and shared experiences, which facilitates discussion about overcoming similar challenges and adversities. [20,28] Therefore, a matched FiF mentee to FiF mentor initiative would likely be most effective but may be limited by the number of FiF senior students or physicians to act as mentors.

In conclusion, the considerable knowledge gaps regarding Canadian FiF students in medicine presents a pressing call to action for Canadian medical schools and the AFMC to collect more information about this understudied population. As members of the medical community, it is our responsibility to advocate for a medical workforce that accurately reflects the diversity within our society and ensures equitable opportunities for all aspiring physicians. This will forge a healthcare system equipped to address the unique needs of patients from a diverse array of backgrounds.

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Organ-izing the Future: Navigating Innovation and Ethical Challenges in Transplantation

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Organ transplantation represents a major medical advancement that has been consistently improved through ongoing developments. Its significance is emphasized by recent research demonstrating organ transplantation's substantial impact on improving quality of life (QoL) [1]. The Canadian Institute for Health Information (CIHI) reports that approximately 3,428 organ transplants were conducted in Canada in 2023 [2]. Advancements in biotechnology have been shown to have a profound impact on solid organ transplantation. For example, the use of spatial transcriptomics in organ transplantation shows promising results, providing hope to refine transplant rejection phenotypes and scoring [3]. However, advancements present significant ethical challenges, particularly pertaining to 3D-printed organs and xenotransplantation. These issues must be thoughtfully addressed to ensure that organ transplantation practices remain ethical and responsible.

Advancements in biological tissue engineering have led to several breakthroughs in building various vascularized tissues for organs, including the heart, liver, lung and kidney [4]. Recently, tissue engineering technologies for the creation of vascular networks have also begun to include microfluidics, organ-on-chip systems, and 3D printing [4]. Building an artificial organ using 3D printing involves constructing a three-dimensional pre-designed microstructure through the integration of multiple 2D patterns generated by computer-aided technology [5]. This procedure leads to a scaffold consisting of precise deposition of biomaterials [4]. In essence, 3D printing is an excellent alternative to traditional organ transplants with a donor and recipient, however, clinical trials are still needed to establish their safety and efficacy. Another transplantation approach is xenotransplantation, which entails transferring animal organs into humans [6]. The main challenges associated with xenotransplantation include the risk of organ rejection due to the recipient's immune response and the potential for cross-species transmission of pathogens [6]. However, several advancements have been made over the years to enhance xenograft survival. For example, attempts have been made to alleviate the host response by genetically modifying the donor animals [6]. Molecular mechanisms underlying host immune rejection alongside strategies to overcome them have also been identified. Nevertheless, significant health and ethical concerns regarding xenotransplantation persist.

As previously noted, ethical dilemmas related to organ transplantation must be addressed. One notable ethical issue is the use of xenogeneic cells in 3D-printed organs. The primary concern pertains to potential psychological and sociological problems that may arise [7]. These may include psychosocial problems associated with the recipient's identity resulting from xenotransplantation or cognitive dissonance due to religious beliefs involving a disagreement with the use of cells from animals [7]. An alternative to avoid these ethical concerns involves the use of induced pluripotent stem cells (iPSCs), which can be manipulated to differentiate into a variety of different adult body cell types to be deposited onto a 3D-printed scaffold [7]. However, the application of iPSCs requires genetic screening of the lines of stem cells for their appropriateness for medical use [7]. Other concerns include the protection of human rights, such as the handling and processing of organ models in 3D, representing personalized data of humans. Some of the key questions like "Who will hold legal rights to the model?" [7] and "Can the model be used without the consent of the patient?" [7]—bring out the need for the protection of privacy of information about patients.

Following the several ethical dilemmas revolving around organ transplantation, it is vital to recognize the need for robust ethical and regulatory frameworks to guide the development and use of these technologies. The importance of establishing ethical frameworks extends far beyond clinical feasibility. Government policymakers endeavouring to improve the accessibility and equity of health care in general strive that such technological developments do not exacerbate any existing disparities or create new ones [8]. To ensure this, they work to implement equitable allocation processes, promote transparency of decision-making processes and protect patient rights. Policymakers very much desire a fine balance between innovation and ethical concerns with the idea of making progress while being fair and protecting the interest of patients [8]. Further, there must be constant monitoring and revision in policy for emerging challenges to address so that such advancement finally benefits diverse populations without affecting their ethical standards.

In conclusion, organ transplantation has evolved alongside advancements in tissue engineering and has shown promising results for future transplantation. It is in this respect that organ transplantation calls for a feasible integration of ethical frameworks with concerns for patient safety and policymaking. The barriers to organ donation factors, as found across the world, call for urgent attention to constructing and sustaining trust between people and their health systems. Guarantees for the applicability of ethical practices under transparent policies are important in building confidence and having an overall impact on effectiveness and equitability in transplantation processes.

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Navigating the Crisis: Addressing the Growing Demand and Declining Supply of Ontario Nursing Homes

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From a population of under half a million in 2001, to a million in 2024, to a projection of over three million by 2051, Canadians aged 85 and older (older seniors) are a rapidly growing demographic [1]. This is especially observed in cities, which provide greater access to amenities, services, and healthcare. Over 2.5% of the population in large urban centres constitutes older seniors, a significant portion of whom need complex care in long-term care homes (LTCH) [1]. Currently, there are over 40,000 people on waitlists for these facilities [2]. This figure has doubled over the past decade, and is expected to rise to nearly 50,000 by 2030 [2]. The consequence of an ageing population is an increased complexity amongst residents, with more concomitant chronic conditions, prescription medications, and extensive impairments upon admission [3]. An increasing number of LTCH are closing their doors, particularly in cities like Toronto and Ottawa due to a variety of elements, including financial instability and facility regulations. As homes close, patients are left facing fewer options for long-term care, leading to increased wait times, and creating a perfect storm that compromises the quality of care and overall well-being of older seniors.

A contributing factor to home closures are regulatory pressures. LaPointe-Fisher Nursing Home, a 92-bed facility in Guelph, ON, is one of many homes that are closing due to a 2025 automatic fire sprinkler deadline for LTCH in the province [4]. While safety is essential, meeting these deadlines has been structurally challenging due to the ageing foundations of the building and increasing construction costs [4]. Homes like Mount Nemo in Burlington, ON, rely on well water filtration and septic systems, which would need to be significantly overhauled for renovations such as sprinklers [4]. Unfortunately, closures due to regulations are exacerbated in rural communities with few LTCH, ultimately forcing residents to leave their community. The social impact of moving between facilities due to closure can be immense. Lisa Sharp, the president of LaPointe-Fisher spoke regarding residents saying, “[they have] to start all over again, with a new roommate, with a new facility, new staff…” [4]. This is especially significant in residents diagnosed with dementia who rely heavily on routine to continue socialisation and daily activities [5,6]. Losing relationships with fellow residents and staff at their existing home and potentially moving further away from their support system can negatively impact these residents.

A dramatic rise in operating costs over the past few years has exacerbated the problem, making it difficult to hire, train, and retain staff when combined with pressures for renovation [7]. The vast majority of LTCH feel they cannot adequately fill provider shifts. Nearly 59,000 more care staff needed to accommodate rising needs by the end of the decade [2]. Changes in leadership at nearly half the LTCH in Ontario over the past few years have added to the dire situation as well [2]. Near Ottawa, ON, Madonna Care Community closed due to rising costs of repairs and staff, leaving residents and families weary of adjustment to a new home that may be much further from their loved ones [8]. Many LTCH have thus chosen to sell their property to housing developers [9]. There are 20 facilities, as of last year, that did not intend to meet the June 2025 deadline for renovations, including six in Toronto alone [9]. These homes account for nearly 10% of the beds within the city [9]. The majority of LTCH in Canada are owned by private companies, highlighting the downsides to privatised healthcare and leaving the provincial government in a vulnerable position.

Actions such as early goals of care conversations, increased funding for family caregivers, and expansion of facilities are a necessity for the present and future. Goals of care conversations are essential for patients with chronic illnesses to ensure care is consistent with the patient's wishes, using the gold standard framework (GSF) for palliative care [10]. These conversations can, "help improve anxiety, depression, and quality of life" as a part of a holistic approach [11]. This will ensure patients whose wishes are consistent with palliative care units are referred to these facilities, as opposed to a lengthy wait that may not adequately meet their goals.

At-home living is usually preferred amongst seniors, but families may not be able to commit to their level of care, or home care may not be an option through existing pathways. We can aim to fortify these areas of concern through increased funding for caregiver benefits and programs such as Ontario Health atHome's High Intensity Supports At Home (HISH) program [12]. By providing more extensive options outside of LTCH, we can ensure care for those who are on waitlists due to a lack of alternatives.

The provincial government has made strides to provide funding for the construction of LTCH, which will help overcome increased construction costs that are slowing down developments [13]. As part of this initiative, we should attempt to introduce a greater proportion of nonprofit homes to avoid administrative decisions, such as home closure, being made for financial gain. While building facilities is beneficial in the long-term, subsidies for renovations to current homes can take advantage of existing infrastructure. Studies on nursing home closures in the United States and England found that homes with smaller bed sizes were more likely to close, perhaps demonstrating a need for larger facilities that reduce inefficiencies [14,15]. Moreover, alternative fire suppression systems and regulatory deadline extensions for renovating homes can be considered to ensure safety standards are met without further closures in rural areas.

Ontario's finance minister, Peter Bethlenfalvy, captured the essence of this issue by stressing the importance of action. He stated, "We owe the seniors who helped build this province a huge debt of gratitude and the dignity of modern, comfortable long-term care facilities" [13]. Through home care programs, emphasising early goals of care conversations, and expediting construction and renovation of facilities, Ontario's seniors can receive the level of care they deserve.

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Out of Sight, Out of Mind: Addressing Mental Health in the Canadian South Asian Diaspora

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In Canada, South Asian (SA) communities account for 2.6 million individuals, reflecting 7.1% of the population [1]. This group is expected to double within the next twenty years, comprising a substantial proportion of the racialized public [1]. Likewise, the number of Canadians reaching the diagnostic threshold for various mental illnesses has increased nearly two-fold in the past decade [2], underscoring the need for more mental health care services. Despite higher instances of disease "severity" [3], the Canadian SA diaspora exhibits greater apprehension towards mental illness and associated interventions [4], a trend consistent within communities in the United States and United Kingdom [5], [6]. This finding is largely attributed to perceived taboos and a paucity of culturally relevant treatments, both of which pose significant impediments to service accessibility. Evidently, the complex relationship between SA Canadians, psychological care, and practitioners requires sensitive mediation. This translates to a dialogue that enables stakeholders to redefine their understanding and galvanizes specialists to employ more holistic measures. Therefore, mental health within the South Asian diaspora demands a bilateral approach incorporating collective psychoeducation and culturally adaptive interventions.

A recent Canadian report suggests that mental health is generally an unspoken subject within South Asian groups, exacerbating misconceptions and creating additional obstacles to care [4]. Given SA communities often exhibit collectivist values, "courtesy stigma" deters individuals from addressing mental illness because of the adverse social implications for those around them [6]. This phenomenon is rooted in interdependent self-construal, meaning that many South Asians situate their introspective perceptions according to their surrounding community [6]. Within the context of mental health, such manifests in cultural ideologies that emphasize conformity and regulation, sometimes to the detriment of emotional wellbeing [6], [7]. To illustrate, the Hindu concept of karma dictates that negative outcomes are the result of past misdeeds committed by an individual and their kin. This belief system may thus ascribe personal fault to a person living with mental illness, triggering broader social isolation and poor self-esteem [6]. The association between such principles and collective acceptance clearly highlights the importance of community within South Asian culture.

Consequently, improving psychoeducation among SA Canadians may mitigate stigma and encourage intracommunal cooperation. Because family heavily influences South Asians' self-perception [4], effective mental health literacy must enlist this crucial axis of support. Additionally, having psychoeducation delivered by community leaders may further enhance its credibility and accessibility. Through such initiatives, SA Canadians are empowered to lead discussions on mental wellbeing within a culturally relevant milieu, enhancing engagement and individual outcomes.

When therapy is sought, many SA patients report feeling disengaged by practitioners' cultural blind spots and generalized methodologies [4]. Although cognitive behavioural therapy (CBT) is a highly effective psychological treatment [8], its individualist orientation could trigger friction when faced with collectivist attitudes [9]. For instance, CBT typically involves challenging core beliefs, the origins of which vary between cultures. While a Western perspective may anchor these thinking patterns to independent self-perceptions, a South Asian viewpoint rationalizes them relative to external factors [10]. Furthermore, large-scale CBT evaluations often fail to mention cultural background or use overly general groupings like 'Asian' [11], making it difficult to gauge the relationship between patients' backgrounds and interventional efficacy. Given these factors, culturally transposing CBT is dependent upon practitioners' recognition of their own biases and adaptation to patients' value systems.

To address this, the Centre for Addiction and Mental Health (CAMH) has recently pioneered culturally-adaptive cognitive behavioural therapy (CaCBT) for South Asian Canadians [4]. By interviewing a mixture of community members, specialists, and caregivers, researchers gained insight into common accessibility barriers and themes. In so doing, they developed a training manual for practitioners and a multilingual pamphlet for the general public. The former contains a wide variety of content ranging from chapters on familial connection to problem-solving handouts [12]. Most strikingly, this manual situates psychotherapeutic methods within a South Asian context. For example, anxiety management techniques are accompanied by suggestions on food and religious meditation because many South Asian communities believe in "multidimensional" healing [12]. Other chapters encourage therapists to question their assumptions and consult with SA colleagues to expand their cross-cultural understanding. As a whole, this resource provides an invaluable collection of exercises, case studies, and most importantly, South Asian outlooks on mental wellbeing.

While the Canadian South Asian population rapidly grows, mental health care must evolve to address this group's psychological needs in a culturally relevant manner. From a psychoeducational standpoint, such requires awareness of collectivist belief systems and the corresponding significance of community support. As demonstrated by the CaCBT training manual, mental health practitioners can foster meaningful therapeutic connections by incorporating elements of SA belief systems in common techniques. Overall, opening the dialogue on mental health amongst South Asian Canadians further enriches community wellbeing, placing a brighter future within mind and sight.

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On the Pleas of Humanity: the Evolution of Advocacy in Medicine

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The essence of a physician's role lies in the thoughtful appraisal of the biomedical, social, and historical dimensions of health as they apply to their patients and communities. Some of the implicit challenges of this role is the diversity of experience, knowledge, and predispositions held by the practitioner. The contemporary physician must grapple with ambiguous decisions. As a field, deliberate consideration of decolonization, diversity, equity, and inclusion (EDID) must be incorporated [1]. Opposing viewpoints, often rooted in outdated biases, may challenge this premise, but the inclusion of EDID principles is essential for the evolution of medical practice much like the integration of evidence-based medicine was crucial to improving patient outcomes.

Advocacy is a modern issue that calls for redefinition of professionalism and what it means to be competent as a Canadian physician. At its core, advocacy is rooted in the principles of EDID. Being an advocate is a critical function for each and every medical practitioner [2]. From advocating for a single patient's needs to influencing health policy on a national scale, advocacy manifests in many forms, all requiring a foundation of EDID principles. Advocacy is not merely an adjunct to medical practice; it is a competency that every physician must master, akin to their clinical skills or ethical reasoning.

Throughout history, warfare has expanded the challenges and responsibilities of physicians' roles [3]. For months on end, civilians are forced into a nomadic lifestyle in significant poverty. They are starved, subjected to infectious disease, and without significant relief. Every one of their hospitals is destroyed, every school reduced to rubble. All individuals suffer, especially those who live with untreated chronic health conditions. Physicians and health practitioners are met with the insurmountable task of healing in an environment where human life is not sacred.

While a medical learner in the first world sitting in the peace and seclusion of their medical education environment bears no responsibility for the unspeakable conditions and humanitarian catastrophe suffered, perhaps they may call for more to be done. Not only being one of the core principles of global and public health, but many individuals may also feel a moral imperative to act on this issue.

The challenge advocacy faces in this scenario is fear. It so happens that the academic setting, institution, hospital, or the professionals themselves may look down upon those who speak up. Perhaps they may be discriminated against in their residency applications or passed up for a job. While social media poses an immense capacity for good, any deviation from the social script prescribed to physicians presents a liability to medicine. Even if, in its agnostic, apolitical and platonic conception, the medical humanitarian imperative calls for the resolution of suffering, removal of oppression and immediate grant of life saving aid, the humanized and living, breathing, dogma of medicine will reproach it.

The ongoing genocide occurring in Palestine, where tens of thousands have been directly killed, in addition to likely hundreds of thousands more from secondary causes reminds society of the significance of medical advocacy [4]. The analogy is, when learners, physicians, or leaders speak up for a morally just cause, they are looked at with skepticism. With deceit. With disdain for challenging the status quo.

"You should focus on bettering yourself before you try to take on the world"

What medicine teaches us is to learn on the scale of a lifetime, if not more. If the physicians of Baghdad, Rome, Alexandria, or Berlin had merely punched in and punched out, focusing solely on medical knowledge without delving into the broader societal and historical contexts, it is unlikely we would have seen the profound advances in philosophy, medicine, and healing that shape our practices today. Their legacy reminds us that medicine cannot be isolated from the world in which it operates; we must integrate this understanding into our daily work, just as they did.

To implement the concepts of EDID does not necessitate one to take on the named role of "EDI person". Too many times have we sat in meetings, in classrooms, or seminars where instructors or colleagues pass on an underwhelming and unimpressive land acknowledgement, urging sentiment to move things along. Not often enough are data based on race, gender, religion, sexuality, or any other diversity metric used in discussions amongst colleagues let alone for consideration of challenges faced by our patients. I urge every medical trainee to recognize that EDID is not a supplementary aspect of your training—it is fundamental to the practice of medicine. To overlook the intersectional nature of healthcare is not only to shortchange your patients but also to betray the core principles of our profession. Embracing EDID is essential to delivering truly equitable care and advancing the health of all communities.

There is namely a revolution occurring on this front. Despite its bleakness and the tremendous injustice fielded by those pioneers who advocate for justice, I believe a better world is coming. One where we move beyond performative actions, and the norm of the profession is to incorporate these EDID principles without sacrificing excellence. Justice for the Palestinians breeds a path to justice for all oppressed people. While there are ample issues to solve and injustices to atone for abroad and in Canada, I encourage you all to see a beacon of hope. As we strive to uphold the principles of justice and equity in our work, we must remember the words of Martin Luther King Jr.: "The arc of the moral universe is long, but it bends toward justice." Change is on the horizon, as it always has been. How readily, painlessly, and efficiently it is adopted depends only on us, the collective.

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From Diabetes to Weight Loss: The Problems with Semaglutide's Expanded Use

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In 2018, a semaglutide formulation, Ozempic, was introduced to the Canadian market [1], as a treatment for Type 2 diabetes. By stimulating the release of insulin from the pancreas, semaglutide results in lower blood glucose and body weight, combating symptoms of diabetes [2] Recently, semaglutide-based medications have been the subject of controversy due to their "off-label" use solely for weight loss purposes. Social media and celebrities have popularized the use of semaglutide drugs for weight loss, leading to a dramatic surge in public interest [3].

Supporters of the expansion to have semaglutide used for weight loss argue that semaglutide could be beneficial for those living with obesity. It can become incredibly difficult for someone struggling with obesity to lose weight due to hormone resistance [4]. Semaglutide can serve as a solution to improve fat metabolism and regulate appetite. With the negative impacts that obesity has on health, investigating possible treatments is crucial. However, semaglutide might not be the best option as a study demonstrated that after discontinuing its use, participants regained two-thirds of their lost weight [5]. Critics argue that semaglutide-based medications are seen as a "quick fix," preventing patients from learning the necessary lifestyle modifications to maintain their new weight. Regaining lost weight could cause emotional stress in individuals, along with putting them into a cycle of continually restarting the medication (semaglutide).

The use of semaglutide isn't limited to those with medical conditions, as it has also been used for cosmetic weight loss, which may be dangerous. Semaglutide has been reported to have both minor and major side effects. The minor side effects include nausea and stomach pain, while the more severe side effects include acute pancreatitis [6], breathing problems [7], and thyroid tumors [8]. Poison control centres in Ontario, Quebec and Manitoba have reported an increase in calls involving semaglutide, with rises of more than 50% [9]. If being used for cosmetic purposes, such as weight loss, then the risks may not outweigh the benefits. The long-term effects of using semaglutide for cosmetic purposes remain unclear, raising concerns about potential unknown health risks which may reveal themselves in the future.

Additionally, using semaglutide medications for weight loss was opposed due to shortages in supply which impacted those who rely on it as part of their diabetes treatment. In 2019, the number of people prescribed Ozempic (one of the brand names for semaglutide) in Saskatchewan was 5,755. By 2023, that number surged to 194,916, with only 40% of users being diagnosed with Type 2 diabetes, the original target demographic of the drug [10]. It is unclear whether the remaining users had been diagnosed with obesity or were taking it for cosmetic weight loss. Nonetheless, the seriousness of the semaglutide "shortage" was exemplified when many individuals with diabetes had to pause their treatment, and physicians were unable to prescribe it to those in need. Some provinces in Canada have attempted to remedy the shortage by implementing restrictions on access to semaglutide. The Ontario government, for instance, has limited coverage of Ozempic to those with Type 2 diabetes [11].

Lastly, the ability to obtain prescriptions for semaglutide through digital health companies has led to a lack of education surrounding the medication. Patients may consult physicians through a phone call, however, these providers don't have a relationship with the patient and lack access to their medical history. In some areas, a phone call isn't required and patients can get access to semaglutide by just filling out a form. Many weight loss companies, such as WeightWatchers, offer to connect participants with a physician who can prescribe semaglutide [12].

Individuals using these services are hoping to lose weight quickly and may not be in a position to make a fully rational choice regarding their health. With the lack of involvement from a primary care provider and quick turnaround times, patients aren't being given the opportunity to learn about their options and ask questions. There is also concern that individuals with eating disorders, such as anorexia nervosa, will gain access to the drug through these platforms, using it to further deteriorate their health.

While semaglutide-based medications offer promising benefits as treatments for diabetes and obesity, their expanding use raises ethical and medical questions. It is crucial for healthcare providers to inform patients of the risks associated with these medications, ensuring they have a full understanding of the potential harm they may be doing to their bodies. Restrictions on access to semaglutide should continue to prioritize those who need it for health reasons until more research is conducted on the long-term effects of using it for cosmetic purposes. It is also the responsibility of society and the media to avoid sensationalizing medication with significant health risks to impressionable audiences.

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Prevention vs Palliation: A Change in Treatment Mindset for Cancer Patients

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Cancer in itself is a scary word to process, but when it is followed by palliation, patients and their families often struggle to appreciate the realities of what they are about to face. This is partly due to the ambiguity of the word itself. In fact, there is no consensus in literature on the definition of palliative care given the nature of its heterogenous use in medical settings [1]. In March of 2022, my father was diagnosed with stage IV adenocarcinoma of his sigmoid colon. Until August of this year, my family pushed for prevention over palliation in an attempt to rid my father of his disease through countless rounds of radiation and chemotherapy. Despite our best efforts and wishes, the cancer continued to grow and spread throughout his body, sparing almost no part of him. From August 11 to 17, my father was placed on palliative care in-hospital until he succumbed to his illness. Needless to say, my family is devastated by his loss, but through this life-altering experience we have a newfound appreciation for palliative care. The purpose of this commentary is to shed light on the benefits of palliation by sharing my father's story as well as relevant research for those who may be facing similar uncertainties or wish to learn more about this controversial topic.

What is palliative care? The term "palliative" is derived from the Latin word "pallium" which means to "mask" or "cloak." In essence, the word describes the "masking" or "cloaking" of symptoms often associated with advanced incurable disease [1, 2]. Palliative patients often carry a substantial symptom burden including but not limited to chronic pain, difficulty breathing, fatigue, weight loss, reduced appetite, and emotional suffering. For cancer patients specifically, the symptomology varies based on a patient's cancer type, stage, age, general medical condition, genetic factors, and the list goes on [3]. In my father's case, he suffered from all the aforementioned symptoms to some degree. Due to his chronic pain and reduced appetite, his fatigue and weight loss only worsened. This limited his ability to continue the job he loved and carry out daily functions of living, thus reducing his quality of life. As such, symptom control is an integral part of cancer care. Palliative care, as described by the World Health Organization, aims to improve the quality of life of patients and their families through early identification and treatment of pain and other physical, psychosocial, and spiritual symptoms [2].

When is palliative care implemented? To answer this question, it is important to understand what palliative care has to offer. Palliative cancer treatments include radiation and chemotherapy to improve the quality of life in patients with advanced disease by controlling adverse symptoms such as pain. Despite their ability to reduce symptom burden, they are not curative measures [4]. Evidence in literature suggests that patients receiving palliative care commonly misunderstand their prognosis [5], intentions of treatment [6], and often harbor unrealistic expectations about a cure for their cancer [7]. In a nation-wide American study including over 1,100 patients undergoing stage IV chemotherapy, 69 percent of lung cancer patients and 81 percent of colorectal cancer patients did not understand their treatment was unlikely to cure their disease [8]. In hindsight, I now wonder about the timeline for when my father's treatment became strictly palliative. Despite doctors' best interests for keeping their patients well-informed, there exists a grey area where palliation and curative care may overlap. Palliative care can therefore involve more elaborate options in place of supportive measures such as hydration and nutritional support, but ultimately is not aimed for cure. It can thus be implemented based on the patient's and provider's discretion, bearing in mind that both parties should understand and appreciate the consequences of its intended use.

Is palliative care analogous to giving up? In short, absolutely not. Cachexia, body wasting that cannot be reversed by consuming more calories, and anorexia, major loss of appetite and resulting low body mass, have been termed as “cancer’s covert killers” [9]. Evidence from literature suggests that about a quarter of cancer deaths are attributable to malnutrition rather than cancer itself. The so-called functional decline experienced by cancer patients is characterized by exacerbations of the disease in the last year of life [10]. In the words of my father’s oncologist, it is not the cancer that kills the patient, but rather the irreparable toll it takes on the body. This phenomenon is described as a catabolic crisis resulting from disease progression with a negative impact on nutrition with intercurrent phases of recovery. According to this model, there is no return to baseline during each recovery phase, meaning the patient’s condition continues to periodically worsen despite intermittent stable intervals [11]. Recent clinical data suggests there exists an anabolic potential during stable stages of advanced cancer [12], highlighting the importance of recognizing these therapeutic windows early before refractory cachexia is established [13]. It is important to note that even in terminal cancer patients whose disease cannot be cured, patients may continue to survive for months or years, during which time nutritional support should be maximized to reduce the sequelae of malnutrition [8].

Through this short commentary, I hope to have answered relevant questions that often arise with the topic of palliative medicine. Given the complexity of cancer, more research is needed to fully understand the benefits of palliation, specifically as it pertains to maximizing patient quality of life while reducing symptom burden. My beloved father passed away on August 17, so I write this essay with a heavy heart, but I know this is what he would have wanted. Despite his terminal diagnosis, palliation gave him what he wanted most in the end, to be symptom-free. I am grateful to be in the unique position to share his story both from the perspective of a patient’s loved one and as a future healthcare provider. To that end, I wish to keep sharing stories like this one in an effort to help raise awareness on topics seldom discussed in medicine. This one’s for you, daddy.

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Gender Gap in Cardiovascular Research

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Cardiovascular disease (CVD) is the leading cause of death in women worldwide (1). Despite this, women are largely underrepresented in cardiovascular research (2). The underrepresentation is a multifaceted issue that has persisted despite longstanding recognition and guidelines aimed at addressing it. This disparity not only impacts the generalizability of research findings but also perpetuates inequalities in healthcare outcomes for women.

Historically, CVD was often considered a predominantly male disease, which contributed to the exclusion of women from clinical trials. This misconception has led to a lack of comprehensive data on the effectiveness and safety of various treatments for women. Despite improvements, an analysis of data from ClinicalTrials.gov found that women comprised only 38% of participants in cardiovascular clinical trials from 2010 to 2017. (3). This underrepresentation is even more pronounced in certain areas, such as acute coronary syndrome trials, where only 26.9% of participants were women (3).

Several factors contribute to the underrepresentation of women in CVD research. One key issue is the differential referral patterns, where women are less likely to be referred to specialists conducting clinical trials (4). Additionally, logistical barriers, including caregiving responsibilities, can prevent women from participating in studies (2). There is also a notable lack of female leadership in clinical trials, which has been shown to correlate with lower recruitment of female participants (2). Furthermore, there is a significant gap in data regarding the effects of treatments on women of childbearing age and pregnant women, as they are often excluded from clinical research due to perceived risks (5).

The exclusion of women from clinical trials has far-reaching implications. For instance, treatments and drugs that are effective in men may not be as effective or may even be harmful to women due to biological differences. In a review conducted by Kalibala et al, women appeared to be more prone to adverse effects of drugs treating cardiovascular diseases (e.g. hypertensive drugs) (6). The lack of sex-specific data can lead to suboptimal treatment strategies and outcomes for women. Moreover, the underrepresentation of women in CVD research exacerbates the knowledge gap regarding the pathophysiology and natural history of heart disease in women, further hindering the development of effective interventions (6).

Efforts to address this disparity must be multifaceted. Firstly, clinical trials should monitor and adjust exclusion criteria to ensure that they are not disproportionately excluding women. Concerns about hormonal fluctuations and reproductive potential have traditionally led to the exclusion of these groups (7), but more inclusive protocols, including adequate monitoring and data collection, are necessary to gather meaningful sex-specific data. Moreover, logistical challenges such as travel, childcare, and time constraints are significant barriers for women. Solutions involving remote monitoring, flexible appointment scheduling, and financial reimbursements for time and travel can help mitigate these issues. Educational interventions and sex-specific trial materials can significantly improve understanding and participation (7). Additionally, more emphasis should be placed on increasing the representation of women in clinical trial leadership as this may potentially improve the recruitment of female participants (5). Finally, there needs to be a focus on sex-specific analyses in clinical trials to ensure that treatment guidelines are applicable to both men and women (8).

To summarize, the underrepresentation of women in CVD research remains a significant barrier to achieving equitable healthcare outcomes. While awareness of this issue has grown, tangible changes in research design and execution are necessary to ensure that the unique needs of women are addressed. As the medical community continues to advocate for gender equity in research, it is crucial that these efforts translate into concrete actions that enhance the inclusivity of cardiovascular research for all patients.

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Rays of Change: Proposing Interventions for Skin Cancer Prevention in Ontario Medical Education

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The Canadian healthcare system faces numerous challenges that necessitate thorough examination and interventions. This exploration focuses on the issues concerning skin cancer incidence, awareness, and the underrepresentation of Skin of Colour (SOC) populations from sun-protection advocacy in Ontario. The aim is to discuss evidence-based recommendations, potential implementation barriers, and the roles of healthcare providers.

CONCERN #1: HIGH SKIN CANCER INCIDENCE IN ONTARIO

The strong correlation between skin cancer and prolonged ultraviolet radiation (UVR) exposure emphasizes the critical role of sun protection, with early-life habits known to significantly impact adulthood.[1,2] From 1991 to 2016, skin cancer incidence rates in Ontario rose annually by 2.3% among individuals aged 50-74 and by 4.6% among those aged 75 and older.[3] In 2022, new melanoma cases in Ontario were projected to reach 4,150, with 570 associated deaths, making melanoma one of the four cancers with the most rapidly increasing incidence rate over the past 35 years.[4,5] Ontario led in melanoma cases (54% of the Canadian total) and deaths (57% of the Canadian total), signifying the need for Ontario policy intervention.[6]

CONCERN #2: LIMITED SKIN CANCER AWARENESS AMONG CANADIAN MEDICAL STUDENTS

Canadian skin cancer awareness lags behind countries like the USA and Australia.[7] In Alberta, only 45% of adults acknowledged the association between UVR and skin cancer, with less than half adopting sun protection behaviours.[8] Comparatively, over 90% of Australians were aware of melanoma risks.[9] The age-standardized incidence for melanoma in Ontario aligns with the average age of Canadian medical students (20-24), who exhibit a lower likelihood of sun-protective behaviours.[10] Globally, medical students show a low concern for skin cancer with Canadian counterparts displaying moderate knowledge (19-33% accuracy) of lifetime risk and common types of skin cancers with only 4.1% consistently using sun protection.[11,12]

CONCERN #3: UNDERREPRESENTATION OF SOC POPULATIONS FROM SUN-PROTECTION ADVOCACY

Although SOC populations have a lower skin cancer incidence, diagnoses often occur at advanced stages with increased morbidity and mortality.[13] Sunscreen advocacy is lower in SOC individuals, contributing to delayed diagnoses.[14–16] Societal ideals perpetuate misconceptions, with little representation of dark skin tones in sun-safety literature.[17,18] However, self-reported sunburn history challenges stereotypes, as 34-66% of Black respondents reported sunburn occurrences.[19] Native American respondents reported sunburn experiences (87%), with 9% attributing their lack of sunscreen use to believing that SOC populations cannot develop skin cancer.[20]

RECOMMENDATIONS FOR IMPROVEMENT

To normalize sunscreen use, Ontario Undergraduate Medical Education (UGME) Faculties should install at least one sunscreen dispenser at each campus. These dispensers should include educational infographics on the importance of sunscreen application in SOC populations, which includes benefits outside of skin cancer prevention such as protection against pigmentation changes. This initiative serves two main purposes: advocating for sunscreen use across all skin types and informing future healthcare professionals about sun safety, intending to translate this knowledge to patients. Notably, 94.6% of Canadian medical students express the importance of sun awareness teaching, indicating potential support for dispenser installation and maintenance.[12]

Existing sunscreen dispensers in Canada

Ontario cities with sunscreen dispensers include Toronto, Ottawa, and Timmins. In Toronto, #BeSunSafe, a skin cancer prevention program, partnered with the David Cornfield Melanoma Fund, the Douglas Wright Foundation, and Shoppers Drug Mart to install sunscreen dispensers across Toronto.[21] Since 2017, 1,000 litres of sunscreen have been dispensed.[21] In Ottawa, the University of Ottawa Faculty of Medicine has a touchless sunscreen dispenser at its entrance, with an infographic containing ingredients, instructions, and safety information. In Timmins, one dispenser, purchased by the Porcupine Health Unit, was installed at a local park, and the Business Improvement Association committed to keeping the dispenser full.[22] Additionally, the Save Your Skin Foundation, in partnership with Canadian medical students, launched ten dispensers across British Columbia, Prince Edward Island, New Brunswick, and Alberta.[23] These initiatives collectively emphasize the feasibility and significance of implementing sunscreen dispensers.

Potential barriers

Despite the potential benefits, significant barriers exist. These include high setup and maintenance costs, uncertainties about upkeep responsibility, and potential reliance on external partners for Health Canada-approved sunscreen.[24,25] Updating infographics based on new research adds complexity, and concerns exist about community resistance and potential oversight of information on SOC populations. Additionally, focusing exclusively on sunscreen may neglect other preventive measures like protective clothing and shade.[25] There are also other benefits to sunscreen use outside of skin cancer prevention which should be communicated in the infographics. Investigating the correlation between dispenser implementation and community sunscreen use and skin cancer incidence demands extensive time, posing the risk of investing resources without guaranteed impact.

Overcoming barriers

To combat these challenges, Ontario UGME dermatology or oncology interest groups could assign medical students to inquire about sunscreen dispenser availability on their campuses. Communicating with the UGME health representatives or formal endorsement by the Ontario Medical Student Alliance would be potential avenues for support. Potential partners could include The Ministry of Health, UGME Hospital affiliations, #BeSunSafe, David Cornfield Melanoma Fund, The Douglas Wright Foundation, and Shoppers Drug Mart. The dispensers should contain Health Canada-approved SPF 30+ sunscreen, free from harmful ingredients, and bold signage should be used for easy identification and placement at main entrances.[25,26]

In addition to practical steps, evidence-based advocacy and physician-led research can help overcome barriers to sunscreen dispenser implementation. Engaging medical professionals to assess the impact of these dispensers enables data collection on how they influence community sunscreen use and skin cancer prevention. Although investigating long-term outcomes demands time and resources, even preliminary research can strengthen support for future interventions. By focusing on smaller-scale studies initially, stakeholders can reduce investment risks while building confidence in the program’s effectiveness. Physicians’ involvement in this research supports sustainable change, as their advocacy and endorsement enhance the evidence base on sun-safety behaviors and inform policy adjustments. Early findings could attract additional partnerships, making sunscreen dispenser programs more feasible and scalable. In this way, medical professionals play a critical role in advancing skin cancer prevention through practical, data-driven initiatives.

Physician roles

Physicians play a pivotal role in endorsing and advocating for sunscreen dispenser installations. Their involvement in evidence-based advocacy, confirmation of infographic information, and participation in promotional activities would be crucial for spreading awareness. Active involvement in research initiatives and evaluating the outcomes of the proposed initiative would contribute to the literature on sun-safety behaviours and the impact of sunscreen dispensers on overall skin cancer incidence. However, physicians may face time constraints due to their demanding schedules, limiting their ability to actively engage in the logistics of sunscreen dispenser installation and maintenance. There could also be concerns about specific brand endorsements, potentially raising ethical questions related to commercial interests. Striking a balance between influential advocacy and potential conflicts of interest would be crucial for the success and ethical integrity of the proposed intervention.

CONCLUSION

Overall, sunscreen dispensers could increase sun safety behaviours. By targeting medical school campuses, this initiative would aim to instill sun safety habits in young adults, influencing a culture of healthy sun-safety habits. Dermatologists and healthcare providers could play a pivotal role in endorsing and educating patients about the benefits of sunscreen use, aligning with the preventive health approach. The recommendations also emphasize the importance of addressing disparities in skin cancer prevention among SOC populations, as educational infographics on dispensers should highlight the significance of SOC sunscreen use. Overall, installing sunscreen dispensers with educational infographics is a prevention method focused on increasing awareness, encouraging healthy habits, and protecting from the sun's UVR.

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Concours national d’écriture d’articles commentaires du JMUO 2024 (volet francophone)

Le bactériophage : l'ultime espoir contre les bactéries résistantes

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La montée inquiétante de la résistance aux antibiotiques est l'une des plus grandes menaces pesant sur la santé mondiale. [1]

Sans antibiotiques, les maladies que nous traitons facilement aujourd'hui pourraient redevenir mortelles. Les infections telles que la pneumonie, la tuberculose, la septicémie, les empoisonnements alimentaires et les infections urinaires pourraient devenir intraitables. [1,2] Encore pire, de petites coupures que nous considérons banales de nos jours pourraient de nouveau mener à la mort.

La résistance aux antibiotiques fut déjà la cause d'environ cinq millions de morts en 2019, [3] et l'Organisation mondiale de la Santé estime que d'ici 2050 cette résistance pourrait mener à la mort de dix millions de personnes par an. [4] Alors que nous risquons de nous retrouver dans une ère post-antibiotiques, il est impératif d'adopter des solutions innovantes. La phagothérapie, utilisant des bactériophages (phages) pour cibler et lyser spécifiquement les bactéries pathogènes, [5,6] offre une alternative prometteuse aux antibiotiques.

Les phages sont les organismes les plus abondants sur Terre. [6,7] Il en existe plus d'un mille milliards pour chaque grain de sable dans le monde. [7] Vu que l'on pense qu'il existe au moins un phage pouvant combattre chaque souche de bactérie, [7] il y aurait alors des phages pouvant combattre celles rendues résistantes à plusieurs classes d'antibiotiques. En les identifiant, nous aurions alors une solution contre l'une des plus grandes menaces pour la santé publique mondiale.

L'un des avantages majeurs de la phagothérapie réside dans sa spécificité. Les phages ciblent uniquement les bactéries responsables de l'infection, [8] contrairement aux antibiotiques à large spectre qui éliminent non seulement les bactéries pathogènes mais aussi les bactéries bénéfiques. [9] Puisque les phages sont des virus qui infectent uniquement les bactéries et non les cellules humaines, [5] la phagothérapie pourrait être sécuritaire et avoir peu d'effets secondaires. [10]

Un autre atout majeur de la phagothérapie est que, contrairement aux antibiotiques, les phages possèdent la capacité d'évoluer. [11] En coévoluant avec leur hôte, les phages ont conservé leur capacité à infecter les bactéries de manière efficace, [11] notamment celles rendues résistantes à de multiples antibiotiques. Quelques essais cliniques récents ont démontré le succès de la phagothérapie en démontrant qu'elle est sécuritaire et bien tolérée dans le traitement d'infections sévères et chroniques, tel que pour des cas d'infection par Staphylococcus aureus. [12,13] Cependant, de telles études sont peu nombreuses, limitées par la petite taille de leurs échantillons et leurs manques de témoins négatifs et propices à des biais.

Mais si les phages sont véritablement la défense ultime contre les bactéries, pourquoi n'avons-nous pas plus d'études à leur égard ?

La phagothérapie fut découverte par le Canadien-Français Félix d'Hérelle en 1917 [14] et bien que son efficacité fût démontrée au début du XXe siècle dans le traitement de maladies telles que la typhoïde, la dysenterie, la septicémie, le choléra et diverses infections staphylococciques, [14] elle a été délaissée par les pays occidentaux pendant plusieurs décennies. La raison principale étant la découverte de la pénicilline et d'autres antibiotiques. [14] Les antibiotiques, moins coûteux, plus stables, plus faciles à produire en masse, ainsi que plus rentables pour les entreprises pharmaceutiques, ont supplanté la phagothérapie. [15]

Une autre raison pour l'abandon de la phagothérapie fut politique. Dans les années 1930, Felix d'Hérelle, à la demande du gouvernement communiste de l'Union soviétique, a établi trois laboratoires de recherche sur les phages, et ce, à Kiev, à Kharkov et à Tbilissi. [14] Par la suite, la phagothérapie fut développée, promue et utilisée par l'Union soviétique et par l'armée allemande lors de la Seconde Guerre mondiale. [14] Après la guerre, puisque l'accès aux antibiotiques était restreint dans les pays du Bloc de l'Est, ces pays ont continué à développer et à utiliser la phagothérapie. [16] Cette thérapie a alors continué d'être perçue comme allant à l'encontre des valeurs occidentales et a suscité une certaine méfiance. De plus, la majorité de leurs données été publiées dans des journaux non anglophones – en langues russe, géorgienne et polonaise – les rendant difficilement accessibles à la communauté scientifique occidentale. [17]

L'abandon de la phagothérapie en dehors des pays du Bloc de l'Est a conduit à son manque d'approbation au Canada et aux États-Unis, à l'exception des cas « compassionnels » aux États-Unis. Ce n'est qu'en 2019 que le premier essai clinique de phagothérapie (par voie intraveineuse) a été approuvé en Amérique du Nord, [18] conduisant à la reconnaissance de cette approche thérapeutique.

Il nous manque encore des données sur la phagothérapie et les bactériophages. Selon la base de données GenBank du National Center for Biotechnology Information, seulement environ 34 000 génomes complets de phages ont été séquencés. Sans connaître la composition génétique de plus de phages, leurs applications thérapeutiques resteront limitées car il sera difficile de déterminer quels phages sont utiles pour quelles infections. Par exemple, pour soigner un garçon atteint de fibrose kystique infecté par Mycobacterium abscessus, plus de 10 000 phages ont été triés pour en identifier seulement trois utiles. [19] Afin de fournir aux chercheurs et aux cliniciens les ressources nécessaires pour rapidement identifier des traitements potentiels, il nous faut une base de données complète.

Face à la crise imminente de la résistance aux antibiotiques, les bactériophages ont le potentiel de révolutionner notre approche dans cette lutte grâce à leur spécificité et à leur capacité d'évolution avec les bactéries qu'ils ciblent. Il est temps de surmonter les barrières politiques et linguistiques qui ont freiné l'adoption de la phagothérapie et de collaborer pour bâtir une base de données exhaustive. Les États-Unis, l'Australie et le Royaume-Uni ont déjà pris les devants en établissant des centres de recherche phagique. [20] Le Canada doit suivre cet exemple pour que nos citoyens ne soient pas contraints d'aller chercher des traitements à l'étranger. Nous devons immédiatement financer la recherche sur les bactériophages, dont des essais cliniques à grande échelle, et créer des instituts de recherche spécialisés. De plus, il est essentiel de sensibiliser le public aux avantages de la phagothérapie et d'intégrer celle-ci dans l'éducation médicale des professionnels de la santé. L'inaction n'est pas une option : l'avenir de la santé mondiale dépend de notre capacité à adopter ces solutions et à agir sans délai.

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L'ADN du Traitement : Combattre la Crise des Opioïdes au Canada

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La crise des opioïdes au Canada s'est intensifiée pour devenir une urgence de santé publique critique, ayant causé la perte de plus de 44 000 vies ces dernières années. [1] Initialement prescrits pour gérer la douleur, les opioïdes se sont révélés être une arme à double tranchant : leur usage répandu a déclenché une épidémie de dépendance et de surdose. Depuis le début des années 1980, le volume d'opioïdes distribués aux hôpitaux et aux pharmacies a augmenté de plus de 3000 %, plaçant le Canada au deuxième rang mondial des consommateurs d'opioïdes sur ordonnance. [2] L'utilisation généralisée des opioïdes et la crise en cours soulèvent des questions cruciales : les stratégies de santé actuelles sont-elles adaptées pour atténuer cette crise? Et comment une approche plus personnalisée pourrait-elle prévenir de nouvelles pertes de vies ?

Les causes de la crise des opioïdes sont complexes, avec les prescriptions excessives jouant un rôle central. Les compagnies pharmaceutiques ont présenté ces médicaments comme étant plus sûrs qu'ils ne l'étaient réellement, induisant en erreur à la fois les médecins et les patients. En réponse, diverses initiatives ont été lancées pour réduire l'approvisionnement médical en opioïdes et limiter les dommages associés. Ces efforts, y compris l'introduction de directives de prescription plus strictes, ont entraîné une augmentation de la consommation de drogues illicites, avec les individus se tournant vers des alternatives. Beaucoup de ces drogues illégales contient du fentanyl, un opioïde synthétique extrêmement puissant qui a considérablement accru le risque de surdose, aggravant la crise. [3]

Actuellement, la stratégie principale du gouvernement canadien contre cette crise se concentre sur des mesures de réduction des risques, telles que les sites de consommation supervisée et les programmes de distribution de naloxone. [4] La réduction des risques sauve des vies et évite des dommages immédiats, mais sans efforts simultanés ciblant les problèmes sous-jacents et mettant l'accent sur la médecine préventive, le Canada demeure dans un cercle vicieux de dépendance. L'approche actuelle conduit souvent à des réadmissions fréquentes dans les hôpitaux en raison de problèmes liés aux opioïdes, perpétuant ainsi un cycle de soins hospitaliers récurrents. [5] Ce schéma suggère donc que les mesures de protection ne procurent qu'un soulagement temporaire, plutôt que d'offrir une solution à long terme.

De plus, un aspect crucial mais souvent négligé de la dépendance aux opioïdes est le rôle de la prédisposition génétique. Effectivement, les variations de certains gènes influencent la manière dont une personne réagit aux médicaments. Cependant, les stratégies de traitements actuels négligent ces différences génétiques, s'appuyant plutôt sur une approche de tâtonnement pour la réhabilitation. [6,7]

Par exemple, le gène *CYP2D6*, qui est crucial dans le métabolisme des opioïdes, code pour un enzyme responsable de la conversion des opioïdes en leurs formes actives. Ces métabolites actifs ont une affinité plus élevée pour les récepteurs opioïdes dans le cerveau, les rendant ainsi beaucoup plus puissants. De plus, ce gène est hautement polymorphique avec plus de 140 allèles connus produisant quatre phénotypes distincts, chacun présentant différents niveaux d'activité enzymatique. Ces phénotypes—qui vont des métaboliseurs lents aux métaboliseurs ultra-rapides—peuvent influencer profondément la réponse individuelle aux opioïdes. [7] Par exemple, les métaboliseurs lents peuvent ne pas obtenir un soulagement adéquat de la douleur, tandis que les métaboliseurs ultra-rapides pourraient être exposés à un risque élevé de surdose en raison d'une conversion excessive du médicament en sa forme active. En outre, des recherches ont même démontré que l'inactivité de l'enzyme CYP2D6 pourrait constituer un facteur de protection potentiel contre la dépendance aux opioïdes oraux, soulignant l'influence profonde de la variation génétique sur les réponses individuelles aux médicaments. [8]

Malgré ces preuves, le modèle de traitement actuel reste largement générique, ignorant des différences fondamentales entre les patients. En pleine crise, une approche généralisée n'est plus acceptable. Il serait alors plus efficace de se concentrer sur la médecine personnalisée, où le dépistage génétique pourrait permettre d'adapter les plans de traitement pour chaque patient.

En fait, cette approche n'est pas aussi irréaliste qu'elle pourrait paraître. En 2021, le Clinical Pharmacogenetics Implementation Consortium (CPIC) a publié des lignes directrices pour l'utilisation des opioïdes basées sur la génétique. Il a attribué des niveaux de signification aux paires gènes-médicaments, tel qu'un Niveau A pour la paire CYP2D6-codéine, désignant ainsi le gène *CYP2D6* comme une considération génétique importante avant l'administration de codéine. [7] Ces données sont disponibles et peuvent être rapidement utilisées pour diverses applications.

Bien que cette approche soit prometteur, elle présente des défis. L'une des principales préoccupations concerne le coût initial et l'infrastructure nécessaire pour mettre en œuvre des tests pharmacogénétiques à grande échelle, ce qui pourrait au départ mettre à rude épreuve les ressources de santé. De plus, bien que le coût des tests génétiques diminue progressivement, atteindre un accès universel reste un défi important en particulier dans les régions mal desservies. [9] Il est donc crucial de veiller à ce que ces tests soient disponibles pour toutes les populations afin de garantir une prestation de soins équitable de la médecine personnalisée.

Toutefois, malgré ces défis, les avantages pourraient tout de même l'emporter sur les inconvénients. Investir dans les tests pharmacogénétiques, c'est investir dans une solution à long terme. Cela pourrait mener à des mesures préventives plus personnalisées et efficaces, réduisant finalement les coûts à long terme associés à la crise des opioïdes qui se chiffrent déjà en milliards de dollars par an. [10]

À mesure que les tests génétiques deviennent plus accessibles, y compris certains désormais disponibles dans les pharmacies, il existe une opportunité croissante d'adopter la médecine de précision. [9] L'emploi d'un effort concerté pour identifier des facteurs génétiques supplémentaires et compiler ces informations dans une base de données exhaustive pourrait grandement améliorer notre capacité à gérer et atténuer la crise à sa source. Enfin, cette transition vers la médecine personnalisée est une étape essentielle vers une stratégie thérapeutique qui correspond à la nature complexe de la dépendance aux opioïdes, ouvrant la voie à des solutions à long terme.

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Mourir seul : Un regard sur la crise des soins de longue durée au Canada

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Au Canada, les soins aux personnes âgées sont en situation de crise. Le manque de financement et de structure est illustré par l'histoire d'une amie de ma famille. C'est une femme incroyable : non seulement elle est mère monoparentale d'une fille de cinq ans tout en travaillant à temps plein, mais elle a également la responsabilité supplémentaire de s'occuper de ses parents âgés qui vivent avec elle et sa fille. Son père est à un stade avancé de la maladie d'Alzheimer. Sa mère ne parle ni français, ni anglais. Bien qu'elle fasse de son mieux, il est extrêmement difficile pour une seule personne d'assumer toute cette responsabilité. Elle essaie de placer son père dans une maison de retraite depuis trois ans.

Selon Statistique Canada, la population âgée de 85 ans et plus a doublé depuis 2001 [1] et devrait triplera dans les 20 prochaines années [2]. Par conséquent, ce problème continuera à croître si rien n'est fait rapidement. Le délai d'attente moyen actuel pour une maison de retraite publique est de 702 jours dans la région de Champlain, le plus élevé étant de 1791 jours [3]. Les maisons privées ne sont pas beaucoup mieux avec un délai d'attente moyen de 602 jours [3].

Sans même aborder les problèmes exacerbés par la COVID-19, le secteur des maisons de retraite a été longtemps négligée [4]. Les patients qui réussissent à avoir une place bénéficient de moins de trois heures de soins par jour. La diversité linguistique, culturelle et religieuse croissante ajoute un fardeau additionnel à ce système [4]. Par exemple, j'ai une proche dans une maison de retraite à Ottawa, qui après avoir subi un AVC, ne parle que le serbe, ce qui pose une barrière linguistique majeure, limitant son progrès. Cependant, j'ai été extrêmement surprise lorsque sa colocataire, une Franco-Ontarienne alitée, essayait d'obtenir de l'aide en français sans succès. En plus de l'isolement et des barrières linguistiques, seulement 6% des résidents décédés ont reçu des soins palliatifs au cours de leur dernière année de vie en 2016-2017 [4].

Les causes profondes de cette crise sont multiples, notamment un financement insuffisant, une pénurie de professionnels de la santé et un système surchargé. Les conséquences sont vastes, affectant non seulement les patients et leurs familles, mais également les prestataires de soins qui les servent. Les médecins et infirmières souffrent de burn-out professionnel. Les préposés aux services de soutien à la personne (PSSP) travaillent dans bon nombre de ces établissements, et même si l'Ontario en diplôme environ 7200 chaque année, environ 40% ne commencent jamais à travailler dans les maisons de retraite ou partent après un an, même avant la pandémie de COVID-19 [4]. Avec l'exode de PSSP pendant la COVID-19, il faudrait embaucher plus de 6000 nouveaux PSSP pour compenser cette perte [4].

Pour relever ces défis, une approche multidimensionnelle est nécessaire. Tout d'abord, un financement accru pour les maisons de retraite pourrait considérablement atténuer la pénurie actuelle. Même dans les maisons existantes, il est clair que le gouvernement sous-finance par résident. Par exemple, la municipalité de la région de York prend en charge 46 % des soins totaux aux patients, tandis que la subvention provinciale ne couvre que 39 % (le reste étant payé par le résident), ce qui montre que la municipalité estime que les soins prodigués aux résidents ne sont pas suffisants [4].

Pour compenser au manque de médecins, des équipes d'infirmières praticiennes (IP) ont été déployées pendant la pandémie de COVID-19. Selon le Dr McGilton et al., les IP ont pu alléger la charge des maisons de retraite en diagnostiquant et en traitant les affections mineures, en contenant la propagation de la COVID-19 dans les maisons, en soutenant le personnel et les familles et en assurant un lien entre les prestataires de soins[5]. Cela permet aux médecins de se concentrer sur les problèmes de santé de plus en plus complexes que présentent les patients. Les IP apporteraient un avantage significatif à l'heure actuelle, du moins jusqu'à ce que le problème du manque de médecins.

En outre, les initiatives communautaires représentent une voie prometteuse. En accordant des subventions et des incitations aux groupes communautaires pour qu'ils créent leurs propres maisons de retraite, le gouvernement peut tirer parti de la force des diverses communautés canadiennes pour élaborer un système plus inclusif et accessible. Ces installations communautaires peuvent offrir des soins adaptés aux besoins culturels et linguistiques de leurs résidents, favorisant ainsi le sentiment d'appartenance et améliorant le bien-être général. Cependant, le succès de ces initiatives dépend de l'élaboration de politiques claires visant à garantir que ces maisons répondent à des normes de soins élevées et soient accessibles à tous, quels que soient leurs moyens financiers. En utilisant le modèle Butterfly Home, il a été démontré que, bien que les maisons de soins de longue durée communautaires plus petites puissent être plus coûteuses à mettre en place, elles peuvent fonctionner sans frais supplémentaires une fois instaurées [4,6]. Toutefois, la gestion de plusieurs établissements de soins durée de petite taille pourrait poser des défis pour les médecins car ils devraient consacrer plus de temps aux déplacements entre les établissements, ce qui pourrait augmenter la marge d'erreur en raison des changements de localisation.

En conclusion, la crise de l'accès limité aux maisons de retraite au Canada exige une attention urgente et multisystémique. Parmi les premières mesures à prendre pour améliorer les établissements de soins de longue durée figurent l'augmentation du financement, l'emploi de professionnels de la santé diversifiés et la promotion d'initiatives communautaires. Toutefois, la réalisation de ces réformes nécessite un effort collectif du gouvernement, des prestataires de soins de santé, des communautés et du public. En tant que Canadiens fiers, il est temps d'agir pour que nos aînés ne soient pas considérés comme des laissés pour compte « mourant effrayés, seuls et dans la douleur [4] », mais comme des membres estimés et aimés de notre société.

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