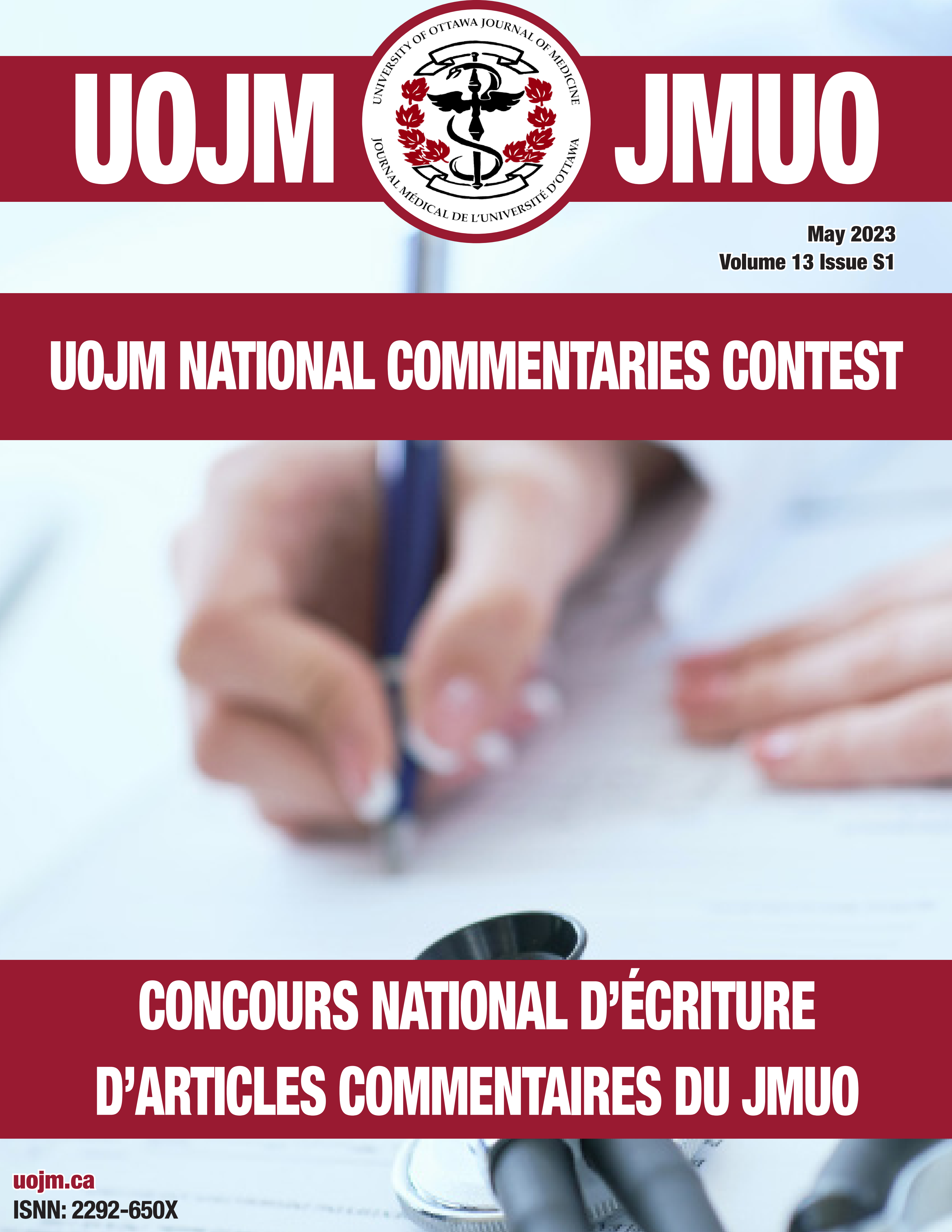

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The student-run medical journal of the University of Ottawa

ABOUT US

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

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

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UOJM: Preface

The University of Ottawa Journal of Medicine (UOJM) is pleased to have concluded the second edition of the UOJM National Commentaries Contest. This contest seeks to foster critical thinking and creativity in timely issues in healthcare through academic writing. Trainees from across Canada were invited to submit a commentary on a current medical issue, controversy, or social determinant of health, written in English or French. Each commentary was evaluated using a double-blinded procedure by the UOJM Editorial Team. Top-ranked submissions were further evaluated by clinicians and researchers at the University of Ottawa. Evaluation criteria included: topic relevance, writing quality, supporting evidence, and call to action. This current special issue of UOJM features the commentaries which placed in the top quartile of each submission category, including the winning submissions of the contest.

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

We hope you enjoy perusing the commentaries published in this special issue of the UOJM, and we invite all readers to submit their own commentary during the third edition of this contest to be announced in early 2023!

UOJM Co-Editors in Chief
Zacharie Saint-Georges & Bryce Bogie

Winners of the English stream of the contest:

1st place ($1000): Nhat Hung (Benjamin) Lam, University of Ottawa
Title: MAiD for Mental Illness Patients - What's Holding Us Back?

2nd place ($750): Donovan Makus, University of Ottawa
Title: The End of the Lecture? Rethinking Pre-clerkship Medical Education in a Post-Online Era

3rd place ($500): Jennifer Horwitz, University of Ottawa
Title: Bridging the Gap: The Deficits in Transitional Care

Post-Doc/Resident: Nicholas Fabiano, University of Ottawa
Title: Exercise as First-Line Therapy in Depression

JMUO: Préface

Le Journal médical de l'Université d'Ottawa (JMUO) est heureux d'avoir conclu la deuxième édition du Concours national d'écriture d'articles commentaires du JMUO. Ce concours vise à encourager la pensée critique et la créativité sur des questions d'actualité dans le domaine de la santé à travers l'écriture académique. Les apprenants de partout au Canada ont été invités à soumettre un article commentaire sur une question médicale d'actualité, une controverse ou un déterminant de la santé, rédigé soit en français ou en anglais. Chaque article commentaire a été évalué selon une procédure en double aveugle par l'équipe éditoriale du JMUO. Les soumissions ont ensuite été évaluées par des cliniciens et des chercheurs de l'Université d'Ottawa en tant que juges finals. Les critères d'évaluation comprenaient: la pertinence du sujet, la qualité de l'écriture, les preuves à l'appui et l'appel à l'action. Ce numéro spécial du JMUO présente les articles commentaires qui se sont classés dans le premier quartile de chaque catégorie de soumission, y compris les soumissions gagnantes du concours.

Le Journal tient à remercier sincèrement tous les participant.e.s pour leurs soumissions remarquables qui ont fait de la deuxième édition de ce concours un succès! Nous désirons également témoigner notre gratitude envers les évaluateurs du concours, les professeurs titulaires qui ont servi de juges finals ainsi que les commanditaires du JMUO pour leur dévouement et leur soutien continu dans la vision et la mission du JMUO. Nous tenons aussi à souligner spécialement les Affaires francophones de la Faculté de médecine de l'Université d'Ottawa pour avoir commandité la totalité des prix francophones.

Nous espérons que vous prendrez plaisir à la lecture des articles de ce numéro spécial du JMUO et nous invitons tous les lecteurs à soumettre leur propre article commentaire lors de la troisième édition de ce concours qui sera annoncée au début de 2023!

Co-rédacteurs en chef du JMUO
Zacharie Saint-Georges & Bryce Bogie

Gagnants du volet francophone du concours :

1ère place ($1000) : Lara Pereira, Université d'Ottawa
Titre : Gouttes d'or: Le prix de l'allaitement

2ème place ($750) : Laurent Dubé, Université d'Ottawa
Titre : Les études médicales postdoctorales: un appel au changement

3ème place ($500) : Mario Corrado, Université d'Ottawa
Titre : La pandémie en ligne: Comment faire face à l'hésitation vaccinale et à l'infodémie de COVID-19

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MAiD for Mental Illness Patients - What's Holding Us Back?

1st place

Nhat Hung (Benjamin) Lam[1]

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Keywords: *Mental health, assistive dying, MAiD*

On March 17, 2021, Bill C-7 amending the legislation for Medical Assistance in Dying (MAiD) received royal assent, expanding MAiD access to numerous Canadians suffering from incurable illnesses.[1] Among the major changes is the added eligibility for people suffering from a "grievous and irremediable medical condition" even if death is not imminent or reasonably foreseeable. However, individuals whose sole medical condition is a mental illness remain ineligible for another two years, while the government gathers expert opinions to construct necessary safeguards and qualifying criteria.[2] This essay will explore the controversies surrounding MAiD access for mental illness patients and propose the necessary measures to ensure safe and equitable implementation for this population.

One prominent opposing viewpoint surrounds the "grievous and irremediable" definition of mental illnesses.[3] First, grievousness refers to the subjective suffering of patients, which they deem intolerable and not amenable to alleviation by methods acceptable to them.[1] The grievousness of mental illnesses is widely recognized by clinicians, the public, and legislators alike. It manifests itself in the psychological anguish that can and does result in physical suffering and co-morbidities.[4,5] It is undeniable that such suffering warrants relief, whether from evidence-based treatments or consideration for a medically assisted death. Nevertheless, when it comes to psychiatric conditions, this is accompanied by the complex temporality of symptoms and morbidity of these illnesses. Save for neurodegenerative diseases and refractory eating disorders, both of which qualify as eligible conditions under MAiD, the severity of many psychiatric conditions waxes and wanes: their long-term trajectories remain unpredictable even with the best existing evidence.[6] In this view, a severe mental illness does not translate to an irreversible downward spiral of anguish and declining function, but rather a chronic condition with episodic exacerbations which, with proper treatments, could remain manageable and tolerable to patients for extended periods of time.[7] It is worth noting, however, that mental illness suffering rarely exists in a vacuum: it permeates throughout all aspects of a person's life, and the neurologic and physical toll it takes on them is often cumulative and contributes significantly to their long-term decline.

Such interpretation brings us to the discussion of whether mental illnesses are "irremediable". While grievousness is a subjective experience of one's illness, irremediability should be guided by objective medical evidence. Currently, there is no established threshold for when a mental illness should be considered irremediable.[2,6] One aspect of this complex question arises from the aforementioned unpredictability of psychiatric episodes: their onset, severity, and duration. Given such symptom temporality, a question arises of whether allowing psychiatric patients to seek MAiD is ethical if there is an appreciable chance that they will recover from an episode. Given this possibility, when can one's mental illness be deemed irremediable? It is conceivable for patient's physical state to deteriorate with each psychiatric episode to the point where a natural death becomes reasonably foreseeable and qualifies them for MaiD. Yet a far more prevalent and ethically murky scenario is where a person may decide that despite the possibility of subsequent recovery, the mere prospect of an exacerbation would be intolerable and unacceptable to them, and thus, might wish to access MaiD.[4] To follow their request would require fundamental changes in the way the law defines "irremediability", opening the gate for many other chronic conditions.[8] Without stringent safeguards surrounding this qualifier, its ambiguity could result in vastly different care decisions – one patient might have their request for MAiD approved and their life ended, whereas another might be persuaded to prevail their current episode.[7] While variations in clinical judgment are commonplace in medicine, they are not acceptable when a patient's life is at stake. Therefore, physicians providing psychiatric care have the responsibility to connect with their patients to understand their views of their illnesses and how, if MAiD ever comes under consideration, they would like to approach it.

Lastly, mental health patients' right to access MAiD was opposed on the basis that a significant portion of their suffering was due to social determinants of health.[9] Mental disorders remain a leading cause of disability in Canada.[10] Despite efforts to raise awareness and support, individuals with mental illness still struggle to obtain and maintain employment.[11] Stable employment is central to one's ability to cope with their illness by forming the foundation for other determinants such as economic participation, social inclusion and housing security.[12] These social connections not only offer patients financial stability and emotional support, but also provide them with a sense of self-worth and hope, the loss of which underpins the psychological suffering in mental illness patients and undoubtedly drives them to seek MAiD.[13] Lack of access to mental health care is another tremendous challenge.[4] Wait times are long and ever-increasing for mental health services (averaging at more than 1.5 years), as well as for emergency and specialist care.[14,15] Additionally, structured psychotherapy, alongside pharmacotherapy, albeit shown to be highly effective, are not universally publicly covered,[16] imposing yet another socioeconomic barrier to treating mental illnesses. Therefore, employment and access to high-quality care are key areas with immense potential for advocacy and advancement. It is one thing for a person to seek relief in death after having exhausted all the acceptable support and treatments available to them. But it would be unconscionable for us to let them end their lives to escape the socioeconomic deprivation and lack of resources that precipitate their deterioration in the first place.

In conclusion, bodily integrity and the right to a dignified death without undue suffering is fundamental to the patient autonomy with any serious medical conditions. It remains steadfastly true that Canadians whose mental disorders have progressed beyond their ability to cope and manage should and must have the right to relieve their suffer via MAiD. Notwithstanding, it is also our responsibility as a society, as fellow Canadians and as healthcare professionals to advocate for changes, not only in legislations surrounding MAiD but also structural and social support to ensure that people will only access MAiD when they absolutely have to.

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The End of the Lecture? Rethinking Pre-clerkship Medical Education in a Post-Online Era

2nd place

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Keywords: *Medical education, active learning, COVID-19*

For much of the past 100 years Canadian pre-clerkship medical education's core format has remained relatively unchanged. Transformed post 1910 by the fateful Flexner report, medical students would attend lectures taught by expert physicians or researchers, and supplemented by hands-on learning in anatomy, histology, pathology, and other laboratory medicine aspects.[1] Students would also receive instruction in physical exams and a burgeoning social medicine curriculum.[1] Over the decades since then there has been a proliferation of medical knowledge, with an increasing volume of treatments, pathways, and overall content to cover. The 2001 version of First Aid for the United States Medical Licensing Exam (USMLE) Step 1, representing a third-party's best effort to cover all the core knowledge tested after pre-clerkship, was 481 pages, up from approximately 200 pages in the 1990s.[2,3] In 2001, the same paperback review book had grown to 848 pages.[4] Canadian medical students are not required to write the USMLE, yet this same knowledge proliferation has diffused worldwide creating a challenge for new generations of medical learners. Concurrently, an increased focus on clinical experience and social determinants of health has created conflict in curriculum time allotment.[5] It was in this setting that, in March 2020, SARS CoV-2 disrupted medical education in Canada. As lectures shifted online to "stop the spread," the era of the sizable in-person lecture was interrupted. For the past two years medical education has been marked by transitions, from in-person to online, from online to hybrid delivery, and in some locations, back to in-person.[6] These shifts changed lecture delivery and attendance patterns profoundly. Suddenly lectures could be accessed from anywhere with an internet connection, and recorded lectures accessed asynchronously. At the same time, the question of the relevance of lectures presents itself once again.

Is the traditional didactic lecture the most efficient way to teach medical knowledge? No, and rethinking their utility will allow for a better, more flexible, pre-clerkship medical education focused on active learning.

The disadvantages of lectures are numerous. Famously described as far back as 1927 as "that mysterious process by means of which the contents of the professor's notebooks are transferred by means of the fountain pen to the pages of the student's notebooks without passing through the minds of either." The process of traditional lecturing remains popular due to its cost advantages and ability to leverage one lecturer to teach many students, but does not reflect advances in adult learning theory, which indicates attention wanes after 10-15 minutes.[7,8] One suggested improvement, increasingly seen in medical education, is the incorporation of active learning; interspersing didactic instruction with questions and case studies.[9] While already an improvement over the unidirectional traditional lecturer to student model of lecturing, a further improvement would be to remove the traditional lecture entirely. Instead of lectures, the core curriculum time could be reduced by curating resources for students to teach themselves, as adult learners, with lecturers leading large interactive sessions. team-based learning sessions, where one facilitator leads multiple small groups through cases, answering questions as needed or even preferably, small group sessions, would be much more conducive to actual learning.[10]

In this more individualized form of medical education, the role of the established medical or research expert, the prior lecturers, can mutate into more of a facilitator role. Gone are the days of the researcher explaining which drugs are used for asthma attacks and long lists of definitions read verbatim in psychiatry lectures. Instead, the lecturer can present interactive cases and questions aimed at increasing learning and testing medical students' abilities to apply their knowledge to problems, mimicking the real-world practice of medicine in precious instructional time. This format is not merely theoretical, being used in Canada at the McMaster school of Medicine, where most pre-clerkship classes are replaced by small-group learning, forcing students to interact actively with the material.[11] Even in the more test-based American medical education system, some medical schools have eliminated traditional lectures.[12]

While this evolving landscape existed prior to SARS CoV-2 disruptions, the potential to learn from the online aspects of the curriculum changes is a new development. Medical student lecture attendance was improved by online lecturers, which boost higher attendance than in-person equivalents.[13] Shuttered away from school, medical students increased their reliance on external resources, stating that these improved their time efficiency, ability to pace themselves, and reduced academic anxiety.[14] In an era of ever-increasing demands on student time and increase in medical knowledge, this increased efficiency is pivotal. This highlights past findings that more medical students (14.38%) reported never using instructor-guided resources than reported never using online resources (11%) in the context of physiology education.[15] These patterns, transmitted to following years via the social transmission of knowledge acquisition, will lead to new cohorts of learners who rely increasingly on these external resources and eschew traditional lectures. Adopting true active learning by replacing lectures with interactive team-based learning sessions where inadequate numbers of lecturers are available, or true small group sessions where there are ample numbers of facilitators on hand, will improve student learning while improving the ability of students to develop reasoning and critical thinking skills. A renewed pre-clerkship medical school curriculum can minimize lecture time, instead relying on the rise of new technologies to improve learning efficiency such as adaptive spaced learning.[16] Students already report heavy utilization of online and non-curricular resources, and retooling curricula to reflect a shift away from traditional lectures would meet the learners where they are, improving student engagement. In 2021, 68.8% of American medical students reported using online videos for medical education, a figure that should be similar in Canada. As medical education emerges into the light from the darkness of SARS CoV-2 isolation, now is the time to rethink a 100-year-old model and instead embrace the advances in learning theory and educational practice to improve the education of tomorrow's physicians.

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Bridging the Gap: The Deficits in Transitional Care

3rd place

Jennifer Horwitz[1]

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Keywords: *Transitional care, chronic disease management, adolescents*

Between 14.8% and 18% of all youths in North America have a chronic health condition, with up to 98% of those expected to reach the age of 20.[1] Despite this fact, most sites in Canada do not possess the appropriate resources, supports, and educational opportunities required to support chronic disease patients transitioning from pediatric to adult care.[2] Transition is defined as “the purposeful, planned movement of adolescents and young adults with chronic physical and mental conditions from child-centred to adult-oriented healthcare systems”.[3] While ‘transfer’ of care refers to a single point in time, ‘transition’ spans the length of time preceding and following the actual transfer.[2] The key goals for a successful transition are to optimize health outcomes, increase adolescent involvement in their own care, and provide uninterrupted healthcare to the patient.[2,4] The adolescent period involves the development of cognition, social groups, and sexuality that already poses several challenges. The addition of chronic disease management makes adolescence an especially sensitive period for this patient population that necessitates the need for a comprehensive clinical framework. Unfortunately, at present there exists several limitations in the guidelines and practical transitional care provided to this high-risk patient population. Pediatric rheumatic disease can be used as an excellent model for demonstrating the gaps that exist, as these chronic conditions are often diagnosed young and require long-term management to prevent disease flare-up.

There is increasing evidence that supports quality transitional care as a predictor of good rheumatologic outcomes.[5] Despite this, there continues to be reports of incomplete needs in this area. In fact, 25-75% of youth with juvenile idiopathic arthritis and other rheumatic diseases have fragmented care or are lost to follow-up during the transition to adult care.[2] Further, there is a tendency towards increased disease activity during this transition, with 50% of this young adult population experiencing active disease or flares at that time.[6] These numbers are alarming given that many of these conditions pose a significant morbidity and mortality risk when not well-controlled. Even more worrisome is that many of these statistics transcend diagnosis or even specialty.[7] Multiple factors contribute to these figures. Namely, insufficient time to provide transition services, inadequate readiness of adolescents, lack of specialty adult care providers, and significant delays in the first adult visit have all been cited as major problems requiring attention.[2,6]

To accomplish a successful transition of care, many factors need to be considered. Timing is an integral component of transition planning, yet no consensus has been reached regarding the optimal patient age to begin the process. American guidelines have recommended initiation of the process as early as 12 years, and that final transfer to adult care should be completed between 18 and 21.6 Conversely, Canadian sources have expressed that many factors beyond age should be considered when starting the transition, including patient readiness and request for transition, and disease activity.[2] Many pediatric rheumatology providers have reported prolonging their care due to concerns that their adolescent patients lack the requisite skills needed to transition successfully.[8] There is an established need for clear consensus guidelines to filter these inconsistencies and optimize transitional care.

Another area of confusion has centred around which physician is responsible for overseeing transition to fruition. Historically, the pediatric rheumatologist has been the primary participant in the transition process, with the adult provider taking a less active role. Compared to pediatric rheumatologists, adult providers are less likely to have a written transition policy in their practice or to have given one much thought.[2] This represents a significant gap in care, given that studies have found 50% of the indicators for successful transition to focus on engagement between the patient and the adult provider.[6] Open communication between both physicians and the patient is a critical component of the transition process that should be emphasized going forward. At present, most patients choose to prolong pediatric care due to concerns that adult doctors will be unfamiliar with their condition or medical history.[9] Further, nearly half of adult providers have reported being dissatisfied with the information they receive from their pediatric colleagues.[6] To alleviate both of these concerns, adult physicians should be provided with the necessary resources and encouraged to be an active participant in the transition process.

Many factors make adolescence the ideal time for flares in chronic disease. In addition to the potential for fragmented care during transition, this time period often aligns with the move to post-secondary education. The decision to move away from home might mean accepting the prospect of admission to an unfamiliar hospital. Likewise, adolescent patients experience an increased incidence of anxiety and depression during the transition period,[6] which can lead to further withdrawal from the healthcare system at a time when they are medically vulnerable. In some, the intersection between their disease and newfound contraceptive requirements may be quite overwhelming. Clearly, an array of scenarios can morph adolescence into the perfect melting pot for disease flares. Consequently, this is an area of medicine that requires utmost attention to improve patient outcomes.

To address gaps in the transitional care framework for adolescents with chronic disease, several areas must be considered. The lack of designated funding has translated into a shortage of services, with 38.7% of Canadian rheumatologists stating that they have no transition service available in their area.[2] Increased financial support could alleviate these scarcities and act as a monetary incentive for physician involvement in transition. Likewise, an improved national approach to transition care is needed to supplement guidelines that currently exist. This resource should guide pediatric and adult providers through a unified model of care and should reference transition resources available in local areas. Finally, lack of patient and family education has been cited as one of the largest barriers to care.[2] Implementing education sessions and peer-support services could empower youth with knowledge about their condition, while easing parental reluctance to withdraw from their child's care.[10] The implementation of these initiatives has the potential to transform transitional medicine for the better, an obligation that we owe to our adolescent patients.

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Exercise as First-Line Therapy in Depression

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Mental and physical health intertwine and influence one another in multiple ways. Patients with chronic physical conditions are more likely to suffer from mental illness. Likewise, those with mental illness are more prone to developing a variety of physical ailments.[1] Particularly, depression is known to adversely impact sleep and hormonal balances which directly influences one's overall physical well-being, contributing to higher incidence of ischemic heart disease, stroke, and cancer.[2] Similarly, the chronic burden of cardiovascular disease has been identified as a trigger for depressive episodes in vulnerable individuals.[3] The bi-directional link between mental and physical illness suggests a common biological mechanism which is crucial to fully understand in order to best serve our patients. Despite this, the current treatment paradigm in depression primarily focuses on psychotherapy and pharmacotherapy, without fully addressing the importance of one's physical well-being as a fundamental component of their mental health. Exercise has the unique ability to simultaneously bolster one's mental and physical health, which highlights its integral role in the treatment of mental illness.[4] This becomes increasingly important during the COVID-19 pandemic where physical activity levels have drastically decreased with depression on the rise.[5,6]

Regular exercise has direct benefits to one's mental health. It has been shown to both prevent and delay the onset of depression and has demonstrated therapeutic benefits when used as the sole or adjunct treatment.[7] Further, the management of depression with selective serotonin reuptake inhibitors (SSRIs) often takes many weeks for a noticeable clinical change to be apparent. This delayed onset leads to a higher burden of disability and increased risk of suicide.[8] It also leads to decreased adherence to medical therapy due to perceived ineffectiveness, with only 19% of patients continuing their SSRIs according to guidelines after 6 months of treatment.[9] In the interim, aerobic exercise has been shown to have measurable reduction in depression after only 10 days.[10] This earlier onset of symptom improvement is crucial to fill the gap in time left when initiating pharmacotherapy, in order to minimize the burden of disease. The more rapid clinical improvement with combined exercise and pharmacotherapy may also lead to better future compliance of medications, leading to higher rates of sustained remission. Unfortunately, around 30% of patients with depression are not responsive to pharmacotherapy and are deemed to have treatment-resistant depression (TRD).

Oftentimes those with TRD are tapered off of their medical therapy due to the lack of clinical improvement in their depressive symptoms and are lost to follow-up. This leads to a large proportion of individuals with a diagnosed depressive disorder who are not actively receiving any treatment, which has numerous negative implications for the individual and society as a whole.[11] Despite this, exercise has been shown to have significant improvement in the management of TRD. Those with TRD who continued treatment with their SSRIs while simultaneously starting an exercise program had significantly higher remission rates in just 12 weeks.[12] This significant effect is likely due to the notion that patients suffering from depression are more likely to be sedentary. By prescribing an exercise program to these patients, it has been found that over half of patients continue with regular exercise at a one-year follow-up. The patients who continue to exercise have lower depression scores than their sedentary counterparts and also rank exercise to be the most important element in their treatment program.[13] Exercise seems to have a dose-dependent response to improvement in depressive symptoms, however recent research has found benefits from being physically active, even at levels below the public health recommendations.[14] This highlights our duty as clinicians to encourage any increase in exercise to decrease the burden of depression.

Despite the numerous benefits, exercise is not routinely discussed in the setting of mental health, with depression accounting for only 4% of conditions for which exercise was prescribed by physicians.[15,16] A common misconception is that patients, particularly those suffering from depression, are not willing or motivated enough to participate in an exercise regime.[17] However, patients with depression have been shown to have similar adherence rates to those observed in the general population.[18] Occasionally patients do experience some barriers to initiating a regular exercise program such as lack of time or knowledge, however these barriers are quickly overcome with assistance from their physician.[19] When physicians do recommend exercise to their patient, they often fail to provide a clear executable regime to be followed. As a result of these vague recommendations, patients often do not adopt the suggestions made.[15] Some physicians refuse to discuss exercise entirely, citing lack of knowledge as a significant barrier.[20] This lack of knowledge is often the result of receiving no formal education in prescribing physical activity.[21] Therefore, it is imperative that medical school and residency curricula adapt to include these exercise prescribing practices for more holistic care of patients. Currently, the onus is on the physician to educate themselves in order to prescribe a clear exercise regimen by using a format such as frequency, intensity, time, and type of exercise (FITT).[22] These parameters provide the patient with realistic goals that can be monitored and tailored as necessary. As a result, patients become more involved with their treatment plan which emphasizes an internal locus of control, which is associated with lower rates of depression.[23]

Undoubtedly, pharmacotherapy and psychotherapy are essential for the management of patients suffering from depression. However, exercise has proven itself to be an effective adjunct for the treatment of depression which is not readily presented as an option to patients.[15] Especially during the times of the COVID-19 pandemic where physical activity levels are at an all-time low and the prevalence of depression is increasing, the duty of prescribing exercise is imperative.[5,6] This places the onus on each physician to properly educate themselves on counselling patients with regards to creating a realistic exercise program which can be incorporated as first-line therapy for the management of depression.

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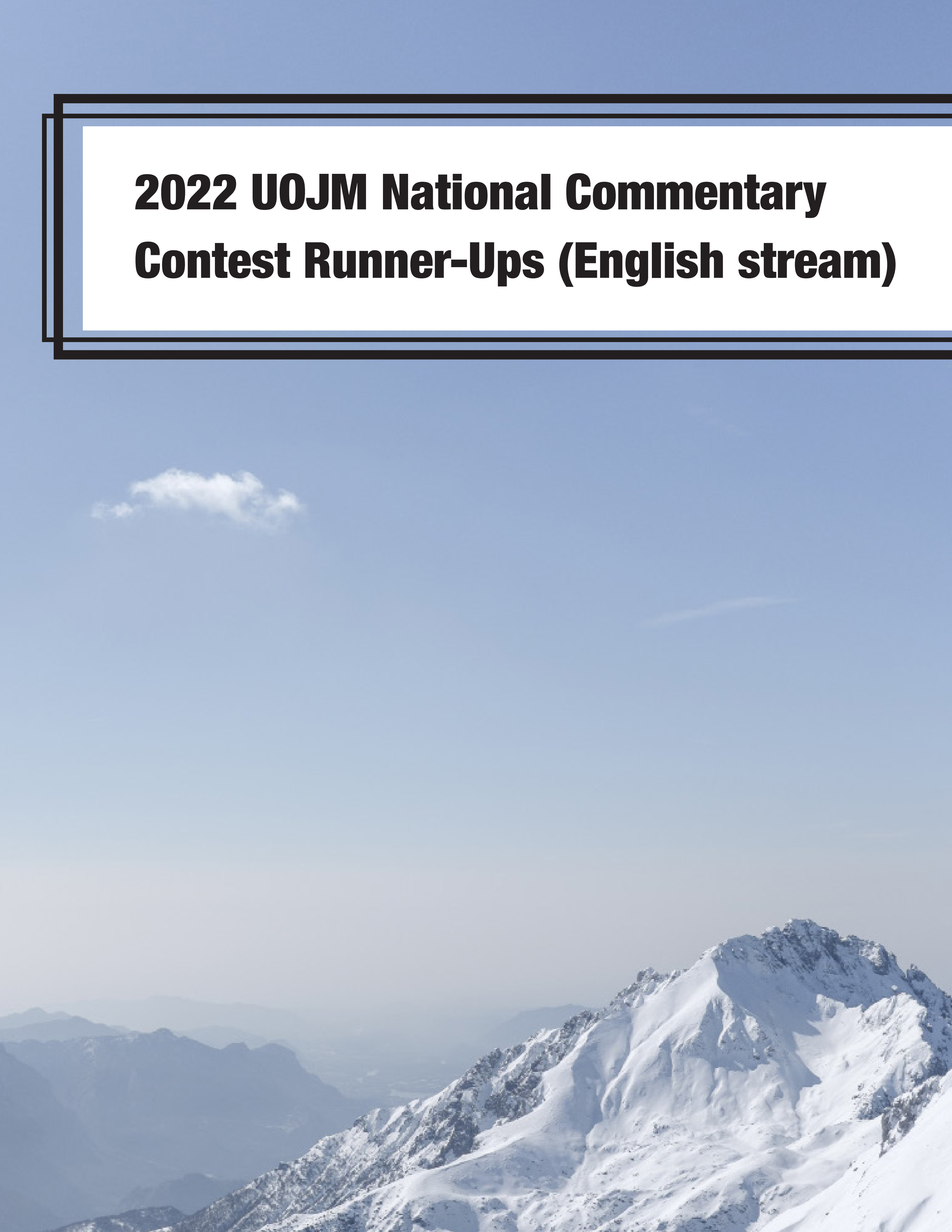
2022 UOJM National Commentary Contest Runner-Ups (English stream)



How Our Healthcare System Has Failed Trans Canadians

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Census studies have revealed that approximately 75,000 people in Canada (0.25 - 0.5% of the population) self-identify as transgender or conforming to a non-binary.[1] Unfortunately, this statistical portrait further revealed that Canadian trans individuals were 3x more likely to face discrimination and report their mental health as poor or fair as compared to their cisgender counterparts.[1] These statistics emphasise the adversity that trans Canadians experience on a daily basis, begging the question: how have we failed to address their unique healthcare concerns and what should Canada's call to action be? Historically, transgender individuals are no stranger to socioeconomic disadvantages, stigma and discrimination, predisposing them to higher rates of disease burden and poorer health outcomes.[2] However, the institution of healthcare research is turning a blind eye to these disparities, with general health continuing to be one of the most understudied areas in transgender research.[3] Thus, the onus is on both the current and future generation of healthcare workers to address this unacceptable gap in literature. In this commentary, I will highlight the current landscape of healthcare disparities experienced by trans Canadians, along with potential solutions to bolstering care for this population.

Gender dysphoria is defined as a "marked incongruence between (one's) experienced or expressed gender and the one they were assigned at birth".[4] For some trans individuals, it can take charge of their lives, leading to a significant mental health burden, from poor self-esteem, to a negative sense of well-being, to symptoms of anxiety and depression.[4] To overcome this incongruence, trans individuals have looked towards gender-affirming therapies and procedures.[5] For instance, rates of suicidality amongst trans individuals markedly decreased once their personal journey with gender transition was complete.[5] Evidently, gender-affirming therapies are an integral component of trans healthcare and should undoubtedly be considered medically necessary. However, funding and financial considerations continue to serve as the most significant barrier to care for most patients.[6] As of April 19, 2022, it is pitiful that not one Canadian province provides full coverage for the complete range of gender-affirming procedures.[6] In the context of top surgery, although mastectomies are covered by most provincial health plans, trans patients are often hit by unexpected "breast contouring" fees for up to $3000.[6,7] Furthermore, most provincial health plans do not even scratch the surface of gender-affirming therapies, where procedures including vocal cord tightening, tracheal shaving and facial feminization are not covered.[6] It is abundantly clear that federal and provincial governments must implement more comprehensive coverage for trans healthcare in Canada. Specifically, Canadian policymakers can look no further than Yukon as an example of how to effectively implement trans healthcare coverage.[8] Yukon's healthcare insurance plan — unveiled March 2021 — will expand coverage to include a variety of gender-affirming procedures, such as facial feminization.[8] Apart from funding, there is also an ostensibly clear lack of literature on gender-affirming procedures.[9] Various systematic reviews from 2015 to 2019 have concluded that it was impossible to determine the "best available" techniques for gender-affirming procedures (e.g., vaginoplasty, phalloplasty) due to a lack of heterogeneity and high-quality evidence.[9] Thus, to improve healthcare outcomes for trans individuals, it is our social imperative to address this alarming gap in literature.

In Canada, primary care provided by family practitioners serves as the first point of contact for receiving healthcare, with gender-affirming therapies being no exception.[10] However, trans individuals have been outspoken in their grievances with accessing primary care in Canada.[11] As compared to 9.1% of Ontarians overall, 17.2% of trans Ontarians reported not having a family physician in the Trans Pulse Ontario study.[11] Furthermore, among the trans individuals who do have access to a family physician, approximately 40% were hesitant to discuss their trans-specific healthcare needs.[11] Trans individuals have identified a lack of adequate gender-informed care as a cause of this hesitancy.[12] For example, approximately 38% of both transmasculine and transfeminine individuals in Ontario reported facing one or more negative experiences in a family medicine setting.[12] Specifically, these negative experiences were rooted and often stemmed from a lack of physician knowledge on trans issues and healthcare.[12] It is disheartening and unacceptable to hear that the lived experiences of trans patients in Ontario includes a lack of accessible providers trained in gender-informed care.[13] Thus, the institution of medicine must look towards implementing mandatory training on gender-informed care for healthcare providers both during and after their undergraduate and postgraduate education. This call-to-action is pivotal as when trans individuals feel comfortable with their family physicians, they are more likely to report improved general and mental health.[14]

After having discussed the clear disparities that trans individuals experience in Canada, it is abundantly clear that there is an acute and pressing need to support the health and livelihoods of this population. However, in order to progress towards improved gender-informed care and coverage for gender-affirming therapies, governmental bodies, as well as medical professionals, must look towards amplifying the voices and research of trans Canadians. Hopefully, as medical students, we are also given chances to engage with trans populations, bolstering our ability to provide gender-informed care and allowing us to act as much needed catalysts within the healthcare system.

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Why do Many Long-Term Care Homes have so few Physicians?

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It was a spring evening, and I was on a walk to distract myself from the stress of my medical school exams. I called Ms. G, like I did every other week; she is my senior buddy through a volunteer program aiming to prevent senior social isolation. Her voice sounded weak; she was not feeling well. Had she seen a physician, I asked? She told me that she had seen the nurse, but the physician visited only twice a month in a residence of over 100 people. She did not feel connected to her physician as a result.

I left that call frustrated and motivated; we need to do better at caring for our elderly. As a medical learner, I began to wonder about the role of physicians in long-term care (LTC). Why does the presence of physicians appear to be so limited? Is it simply due to a lack of physicians working in the sector? What resources would be required to improve care for those living in LTC? I don't have all the answers but I am beginning to piece together a picture of the problem.

I see the physician's role as a medical expert who should address the health needs of residents in LTC. However, like in Ms. G's case, LTC residents are faced with challenges in accessing timely care from physicians. Currently, a small number of family physicians provide care in LTC.[1] Most physicians who work in LTC do so on a part-time basis. A 2005 analysis of LTC in Ontario found that one physician may only visit an LTC site 2.6 times in a month with an average of 42.5 residents under their care.[1] The on-site presence of physicians in LTC may also vary based on geographical setting, whereby family physicians in rural settings are overstretched. More recently, an analysis of the COVID-19 response by the Canadian Institute for Health Information highlighted that LTC residents received fewer physician visits during the pandemic than prior years.[2]

Fundamentally, there is a need to ask, is the part-time presence of physicians sufficient? From the perspective of LTC medical directors, one 2006 survey showed that 82.7% of directors agreed that there was a significant shortage of physicians working in LTC, and 42% had considered leaving the sector due to burnout amongst other reasons.[3] This information suggests the need for increased physician presence in LTC, and that the strategy for this should include a focus on satisfaction and retention. Proposed interventions from this survey included increased remuneration, support for administrative burden, and more exposure to LTC work during residency.[3]

From another perspective, caregivers of LTC residents also expect physicians to be more present. A qualitative study from the US found that caregivers felt that physicians were "missing in action".[4] Specifically, there were incidents of caregivers never meeting the assigned physician, miscommunication among staff and physicians, and the impression that physicians did not know the patient resulting in poor quality care.[4] Similar complaints have been made in the Canadian context.

The need for change is clear. Evidence suggests that increased physician participation improves outcomes. In a retrospective cohort study of 161 LTC in Ontario, they found that same-day physician access lowered hospitalization and emergency department visit rates compared to LTC with longer wait times.[5]

The COVID-19 pandemic presented additional challenges in LTC, though at the same time, the pandemic has sparked an important conversation around what needs to change. In fact, healthcare leaders have responded with innovative models of care. For instance, one hospital-LTC partnership in Toronto provided mobile teams with family physicians, nurses, and LTC staff to help address staff shortages.[6] Initiatives like this can continue post-pandemic to provide quality care to residents.

Physicians are also talking about how to improve physician presence in LTC. A recent article in the Journal of the College of Family Physicians in Canada has a series of recommendations on improving physician involvement in LTC. For physicians to respond to the needs in LTC, a comprehensive approach is necessary. Recommendations include defining time commitment expectations, increasing exposure earlier in medical training for recruitment, appropriate remuneration, and other supports to prevent dissatisfaction and burnout.[7]

At a societal level, physicians can advocate to transform the delivery of care to the elderly. This movement includes the launch of new groups like Docs4LTCJustice demanding the need for national standards, transitioning away from for-profit care, and legislating minimum staffing ratios.[8] The Ontario Medical Association has also become more outspoken on the issue. They made recommendations such as, to "appoint a chief medical officer for LTC for each Ontario Health region to ensure the best quality care is being provided" and to "shift social attitudes so that caring for frail older adults is considered to be one of the most important jobs in the world".[9] These examples highlight that physician advocacy is essential. It starts with improving the practice of individual physicians and creating a healthcare system that prioritizes the needs of an ageing population.

In my time as a medical learner, I have realized that for physicians to be leaders, they need to be present to lead the team. Physician presence in LTC is currently limited, and for those who engage, there is insufficient support to thrive in the role. Family physicians are overstretched, and their shortage has led to a system where our elderly are taken care of by doctors who can only visit them a few times a month. For physicians to fulfill the medical expert role of helping patients with complex comorbidities, they need to have a more dedicated presence. This approach could reduce hospital transfers, help them make better decisions for the patients while improving their inter-professional relationships. I am convinced that there is a need to rethink the role of physicians in LTC, and it starts with us, medical learners, being exposed to people like Ms. G, and being motivated to learn about elderly care.

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Canada's Healthcare System Needs a Paradigm Shift to Meet Current and Future Medical Needs

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Canada's healthcare system was already under immense pressure before the COVID-19 pandemic. Hallway medicine, weeks-long wait times, overcrowded emergency departments, and exhausted healthcare professionals were the norm. The COVID-19 pandemic has only further exacerbated the problems in our healthcare system. The structure of today's healthcare system was first established in the 1960s[1] and operates in a treatment-focused manner, comprised mostly of doctors and hospitals.[2] Healthcare needs of the past were predominantly for the treatment of acute diseases and injuries. However, an increasingly aging population and the prevalence of chronic diseases, often associated with functional impairment or disability, are changing the types of health services requested. Reforming the structure of Canada's healthcare system is imperative to address the evolving needs of the population. What Canadians need the most is a reformed healthcare system that will improve access and provide the most cost-efficient and appropriate care for all, by investing in the distribution of healthcare services through primary care, virtual care, and long-term and home care.

Primary care networks (PCNs) provide holistic, patient-centered care in the community and place a greater focus on preventative interventions. The value of PCNs lies in their ability to provide easy, localized, timely, and continuous care to patients. Numerous studies consistently show a correlation between more or higher quality primary care and superior health outcomes including lower mortality rates of all causes,[3-5] whereas the lack of connected and coherent care was associated with a higher risk of mortality.[6,7] As PCNs operate at the community level, healthcare workers can provide regular care and foster a provider-patient relationship over time. Building strong relationships between patients and their physicians can improve the uptake of preventive care and enhance treatment adherence. Additionally, clinical settings such as hospitals are limited in their reach and capacity. PCNs can deliver health interventions in community settings and can reach people where they are located, which is especially important for patients living in rural and remote areas. By improving access to primary healthcare, patients will stay healthier, and as a result are less likely to require treatment in hospitals.

Virtual care was quickly adopted during the COVID-19 pandemic to curb the spread of the disease, but also has important implications beyond the pandemic. A recent study by the Canadian Institute for Health Information (CIHI) showed that underserved rural and remote communities benefit the most from virtual health services thanks to easier access to care provided by technology.[8] Additionally, preliminary data from Nova Scotia from March to December 2020 shows that patients who used virtual care the most were those with chronic issues or intermittent illnesses.8 Patients in rural or remote communities and those with chronic illnesses may find it difficult to travel to meet with their doctors; therefore, strengthening telemedicine is crucial for prevention, early detection, and early treatment. Patients will benefit from faster, proper, and regular care before more acute and expensive services are required.

Investing in healthcare programs such as long-term care (LTC), personal home care (PHC), community mental health, and other types of supportive housing is a long-term solution to relieving the pressure on hospitals. Even before the COVID-19 pandemic, many hospitals were operating over capacity.[9,10] When hospitals reach capacity, patients may be treated in unconventional areas such as hallways or meeting rooms of a hospitals, which is where term "hallway medicine" came about.[11] Hallway medicine is so prevalent because a high number of patients who occupy a hospital bed do not actually need hospital-level care. These patients, designated as alternate level of care (ALC) patients, can include elderly patients with dementia and younger patients with intellectual disabilities, all of whom are treated in hospitals while waiting for space to open in more appropriate settings such as LTC homes or supportive housing. In 2019, over 5,300 ALC patients waited in an acute or post-acute hospital bed in Ontario, occupying 17% of hospital beds.[12] The cost of treating an ALC patient in a hospital bed is approximately $700/day, compared to just $200/day for a LTC bed or $100/day for PHC.[13-16] Settings such as LTC, home and community care, supportive housing, and community mental health can provide more appropriate and personalized care for ALC patients at a lower cost. By investing in solutions outside of hospital walls, government spending will become more cost-effective. In addition, ALC patients can be transferred to more appropriate settings to receive more suitable care. Transitioning ALC patients out of hospitals will create more room to treat people who really need to be there or to accommodate a sudden increase in patients, as with the COVID-19 pandemic.

As the population continues to grow and age, demands for healthcare services are expected to rise. Canada's current healthcare system is not equipped to handle the pressures caused by the changing demographics. The efficient use and allocation of limited resources is critical to keep up with demands of the future population, or in the event of another pandemic. By expanding primary healthcare, patients can have easier, faster access to care, and receive higher quality and more personalized care for their conditions. Virtual care will improve access to everyone, especially to people in rural and remote areas. Investing in healthcare outside of hospitals will help ALC patients to move out of hospital beds and transition back into their communities, while also reducing the strain on hospitals, freeing up more beds, and reducing costs. Thus, the distribution of healthcare services through different types of facilities will allow us to allocate our limited resources more efficiently and to serve patients more effectively, which in turn will lighten the burden on hospitals. Remodeling our healthcare infrastructure will require a paradigm shift, from a hospital-centered model to a distributed care model. This will need coordination from all government levels, from federal to municipal, and cooperation from all health care organizations and professionals to implement these changes. Such a reform will pay off severalfold, providing Canadians with high quality, timely and personalized health care in a cost-efficient manner.

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On a Positive Note: Current Genetic Strategies Promises a Revolutionary Transformation for the Future of Medicine

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For the longest time, medical problems associated with our DNA have been the hardest to correct. Genetically inherited diseases and disorders, somatic mutations both cancerous and non-cancerous, and even retroviral infections all lead to intrinsic- and extrinsic- driven modifications in our genome that can negatively impact our health. These medical issues have now re-emerged in a different light, as we optimize recently developed genetic sequencing[1-3] and editing[4-8] strategies. It is an exciting time for the field of precision medicine as it reaches new heights in characterizing diseases and acquiring viable solutions to current issues in medical genetics.[3,6]

The year 2003 marks the completion of the Human Genome Project, which had taken 13 years to generate and complete the first human reference genome with a total expense of $2.7 billion dollars.[9-11] Thanks to various technological advancements and the development of parallel sequencing via microscale reactions, we have made tremendous advancements. Today, it takes less than 2 days and costs less than $1000 dollars to sequence an entire human genome.[10,12] This allowed an increase in samples and genetic diversity in our existing genome databases. As a result, statistical analyses can be conducted to efficiently identify disease-causing variants through Genome-Wide Association Studies (GWAS).[13,14]

With the expansion of human genetic variant catalogs and reduced cost of genome sequencing, the field of medical diagnostics now has the potential to enhance disease characterization with genetic-level accuracy.[10] For example, cancer was previously characterized simply based on its size and organ of origin; today, we recognize that 'same' cancer types can be unique across individuals depending on the oncogenes involved. Given that the presence or absence of specific genes can have a significant impact on the stability and effectiveness of drugs, gene identification and characterization will provide more information on disease progression and treatment response.[15] Furthermore, this also challenges our traditional 'one-size-fits-all' approach in treating complicated genetic diseases, including cancer.[16] With reduced price and increased efficiency of genome sequencing, the 'luxury' of personalized, precision medicine (at the genetic level) is now within reach.[11]

Rather than characterizing gene functions and mutations through labor-intensive genetic knock-out studies in animals, the statistical top-down approach of GWAS has transformed current genetic research by efficiently identifying phenotype-related mutations.[14] At this rate, we will be able to identify most common disease-causing genetic variants, characterize rare ones and track novel mutations emerging in our population. In addition, it can be used to reveal genes involved in complex polygenic traits and illnesses, which will expand our understanding of non-Mendelian genetics and present the big picture behind genetic interactions.[17] Due to developments in gene-sequencing technologies, we are now at the edge of transforming the field of medical genetics as we unlock previously impervious issues.

Coincidentally, enabled by the advancements in DNA sequencing strategies, we now have a potentially viable solution to cure genetic diseases that were and will be characterized. A breakthrough emerged in 2013, when Zhang and his team realized the potential of a bacterial immune response to be used as an efficient gene-editing tool and introduced the CRISPR-Cas9 strategy.[7] Although gene modification strategies have been around for decades, this technology has also substantially increased the efficiency and reduced the price of gene editing compared to previously available techniques.[8]

As a precaution with this technique's current limitations, its direct usage for human genome modification(s) is highly restricted.[18] Nevertheless, due to its revolutionary potential in eliminating genetic diseases and predispositions, it has already made indirect ways inside medical research. In search for more effective cancer treatments, various immunotherapeutic studies are undergoing initial phases of clinical trials with very promising results.[16] The strategic utilization of genetically modified T-lymphocytes or oncolytic viruses may one day successfully eliminate cancer and provide personalized vaccines against future re-emergence.[19,20] At such an early stage of technique development, CRISPR already promises many possibilities that can revolutionize the future of medical treatment. In addition, its reduced cost and practicality has made it an invaluable tool for both medical and academic research, this increased use presents an opportunity for optimization and refinement of the technique.[6,7] Each limitation will inevitably be characterized and addressed, hopefully leading to the development of an effective genetic disease treatment.

Historically, high demand accompanied with price deflation and increased efficiency were common themes behind exponential growth,[21] similar to the trends we currently observe in genetics. Due to its promising trajectory, the field is currently receiving attention from influential and powerful investors. Cathie Wood, the CEO and founder of ARK invest, claims that "the genomic revolution is going to change healthcare as we know it, partly because of the 'good' kind of deflation" - as she alludes to Wright's law of experience curve.[21,22] With the support of both public and private sectors, funding for genetic medical research will continue to increase, which will further expedite future developments. Undeniably, these snowballing advancements are now at the cusp of undertaking revolutionary strides towards transforming the fields of medical diagnostics and treatments.

Undoubtedly, these novel discoveries and the possibilities they offer brings great bioethical and safety concerns,[18] and it would be foolish to ignore the dangers and repercussions associated with them. However, as we tackle each limitation and establish appropriate regulations, they will certainly develop into powerful tools that will surely revolutionize medicine as we know it.

Clearly, our accomplishments thus far have helped shine the light at the end of the tunnel for the endless possibilities we strive to create in medicine. Medical institutions should update current curriculums and consider these changes to better prepare future medical practitioners for the inevitable transformation in the field of healthcare.[23] Hopefully, with our advanced understanding of these concepts and issues, we would be inspired to act by stimulating conversations and generating new ideas both within the scientific community and the general public. Together, these actions will inevitably propel us towards the promising medical future ahead.

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Gagnants du Concours national d’écriture d’articles commentaires du JMUO 2022 (volet francophone)

Gouttes d'or: Le prix de l'allaitement

1ère place

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Aucun coût n'est facturé au lait d'une mère pour son enfant. Serait-ce donc une controverse qu'une mère doit payer de sa poche pour en produire?

CHEO, en tant que promoteur de la santé, fait preuve d'empathie pour ses patients dans le contexte d'alimentation. D'après un article de Radio Canada,[1] leur menu offert aux patients admis a changé il y a environ 10 ans. Les choix fixes et non accueillants pour les enfants, menant à un faible taux de satisfaction de seulement 30%, ont été remplacés par un menu interactif où les patients choisissent leur propre repas. Dans une entrevue datée de 2019, la diététicienne responsable des services alimentaires à CHEO avait rapporté que l'hôpital dépense 15000$ de moins en nourriture chaque année depuis ce temps-là, qu'il y a moins de gaspillage de nourriture, et que le taux de satisfaction a augmenté à 98%. L'hôpital se montre capable de répondre aux déterminants sociaux de la santé en offrant du soutien social aux enfants admis et en démontrant sa capacité d'adaptation à sa population et leur besoin. Ce bel effort consacré aux patients affecte une grande partie de la population admise.

Pour les nourrissons allaités au sein d'autres initiatives plus récentes développées par des experts médicaux et collaborateurs dans plusieurs domaines de la santé ont aussi été mises en place. En tant qu'exemple, le service de consultation de lactation a vu le jour en décembre de 2020, venant à l'aide des nouveaux parents pour les éduquer et pour maximiser la qualité et quantité de l'allaitement.

Maintenant, qu'en est-il de la mère, qui sauve l'hôpital des frais d'alimentation en nourrissant son enfant elle-même? Imaginez ce scénario: vous êtes une mère allaitante de 3 enfants, le plus vieux ayant 5 ans. Votre cadet de 2 semaines est admis à CHEO pour un traitement important. Vous êtes en congé de travail; il faut payer les frais de garderie pour les 2 autres enfants à la maison et votre partenaire doit travailler des heures plus longues pour compenser votre congé. Vous passez vos journées à l'hôpital avec votre bébé car il est bien trop petit pour passer ses nuits tout seul. N'ayant personne pour cuisiner pour vous, vous devez acheter votre nourriture à l'hôpital, au prix de 15$ par repas. Vous êtes fatiguée et stressée. Vos enfants et votre propre lit à la maison vous manquent. Malgré tout ce stress, vous avez besoin d'allaiter au sein votre bébé toutes les 3 heures pour le supporter dans ce temps essentiel. En termes de déterminants sociaux de la santé, cette famille a un revenu limité, ou un des parents n'est pas en condition de participer à son emploi. Ces facteurs, d'après Santé Publique Canada, exercent une influence sur la santé, démontrant qu'un séjour hospitalier, difficile et prolongé d'un enfant peut mener à une situation financière délicate pour ceux de statut social plus faible.[2]

En plus, allaiter n'est pas commode. Le corps a besoin d'un supplément de 450 à 500 calories par jour pour produire du lait pour un nourrisson.[3] D'après Harvard Health Publishing, il s'agit de l'équivalent d'une heure à vélo pour une personne de 155lbs, par jour.[4] Encore, d'après le Food Drug Administration et CDC, 75% des mères ressentent de la douleur durant l'allaitement dans les 2 premières semaines postpartum.[5]

Je lance le défi aux lecteurs de ce commentaire pour penser à une façon simple permettant aux hôpitaux pédiatriques de venir au secours de familles allaitantes admises. Serait-il possible de fournir des repas de façon gratuite aux mères allaitantes durant le séjour de leur enfant à l'hôpital?

En fait, les analyses de la Société Pédiatrique canadienne ont montré que les coûts de l'allaitement au sein (en comparaison avec la formule) sont moindres en général pour la société.[6] Par exemple, aux États-Unis, les bas taux d'allaitement et donc manque de ses bénéfices fournissent une somme d'argent additionnelle de plus de 3 milliards de dollars américains annuels au système médical pour les soins des mères et leurs enfants. Une autre étude a décrit qu'une une hausse du taux d'allaitement exclusif de seulement 10% réduirait les couts de traitements médicaux de US$7.8 millions? dans le Royaume Uni, US$30 millions en Chine, US$1.8 millions au Brésil.[7] Ces prix sont dus aux nombreux avantages de l'allaitement. Pour le bébé, l'allaitement diminue les risques de développer certaines conditions médicales entre autres: l'asthme, l'obésité, le diabète de type 1, les otites et le syndrome de mort subite du nourrisson. Pour la mère, les risques de développer l'hypertension, le diabète de type 2 et les cancers du sein et de l'ovaire sont significativement moindres.[8] Le coût d'offrir des repas gratuitement aux mères allaitantes est donc un investissement à long terme, pouvant même encourager les mères à essayer de nourrir leurs enfants au sein. En réduisant l'incidence de ces conditions et maladies, on économise l'argent des citoyens payant des taxes.

Le lait d'une maman vaut de l'or, et est littéralement le « gold standard » en alimentation et nutrition pour le nourrisson. Les mères qui sont ouvertes à l'idée d'allaiter sont encouragées de le faire. Il n'y aurait rien de plus juste que de recevoir son repas de façon gratuite, quand les enfants nourris au sein exclusivement ont une plus courte durée d'hospitalisation, comparée à celle des autres enfants.[9]

Ce commentaire est un appel à l'action: les hôpitaux canadiens pédiatriques, par exemple Sikkids, CHEO, Stollery Children's Hospital, BC Childrens Hospital, entre autres, devraient-ils considérer les mamans qui allaitent comme étant la personne la plus importante en termes de la diète du patient? Comment les fournisseurs de soins de santé peuvent-ils être des leaders dans la mise en place d'une initiative qui transformera cette idée en une réalité?

Avec le budget de l'hôpital et une demande de fonds au gouvernements, ainsi qu'un programme d'inscription pour les mamans éligibles, une solution pourrait être offerte dans le futur.

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Les études médicales postdoctorales: un appel au changement

2ème place

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Mots clés: *Éducation médicale, formation en résidence, épuisement professionnel*

Les études médicales postdoctorales se veulent un moment charnière dans l'évolution et la formation d'un apprenant en médecine. L'unique nature de la résidence met la table à une dualité particulière entre le rôle d'étudiant et celui de membre de l'équipe traitante. Ce cadre éducatif se promet être un modèle éprouvé à l'ère de la médecine moderne. Toutefois, la résidence, qui impatronise un rythme de travail ahurissant aux médecins résidents, est de plus en plus d'actualité, en raison de son énorme contribution à l'épuisement professionnel, qui démesurément répandu dans le domaine médical. Les résidents, au mitan d'un système qui les dépasse, se retrouvent fréquemment aliénés dans une impasse où aucune solution n'est gagnante.

D'une part, la formation de médecin expert requiert non seulement une exposition clinique à une variété de patients, mais aussi une fréquence de cas congruente au développement de savoir expérientiel nécessaire à l'atteinte des compétences exigées. En d'autres termes, la limitation des heures d'apprentissage des résidents est crainte de par ses possibles répercussions sur la qualité de l'exposition clinique, qui pourrait se traduire par une prolongation des études. Une appréhension, fréquemment transmisse aux résidents par les générations antérieures de médecins, peut aussi être vécu, selon laquelle cette pratique serait un frein à la qualité d'éducation.[1-5] Une autre mention soulevée dans la littérature propose que la limite d'heure ne permettrait pas à elle seule une amélioration subséquente dans les soins des patients.[1,3,6] Bien que les erreurs médicales concomitantes à la privation de sommeil soient un phénomène bien documenté, la communauté médicale semble toutefois dubitative quant aux solutions envisageables pour adapter l'apprentissage des résidents.[3,7]

D'autre part, les résidents se retrouvent malgré eux complètement limités dans leur équilibre travail et vie personnelle, perpétuant un cycle nocif et calamiteux pour quiconque l'expérimente. On observe en société depuis déjà trop longtemps cet état dichotomique où les résidents s'écroulent sous d'insatiables exigences de la part du système, alors qu'ils sont simultanément acclamés et encouragés par la collectivité pour leur dévouement intarissable et leur absence d'équilibre de vie. Cette prémisse, selon laquelle un apprenant en médecine doit se sacrifier corps et âme afin de devenir un médecin compétant, est profondément implantée dans notre société et normalisée à un tel degré qu'on ne conteste plus sa véracité. Cette culture se fait aussi fortement ressentir à même le domaine médical, où les responsabilités ne cessent d'augmenter avec l'avancement de la médecine.[8] Les standards abusifs imposés par le système guident à tort le résident à se percevoir comme l'unique responsable des soins, engendrant une culture toxique où l'apprenant accepte cette surcharge de travail comme étant normale, qui cultive sa peur de ne pas en faire assez pour ses patients. Pire encore, les médecins évoluent communément dans un environnement malsain, où intimidation et persécution sont acceptables et normalisées.[9]

Ce modèle d'apprentissage est depuis toujours justifié par la formation de médecins dotés d'une expertise exemplaire. Bien que les aptitudes cliniques soient un élément clé des fondements de la pratique de la médecine, les paradigmes médicaux ont évolué de telle sorte que le clinicien n'est plus seulement caractérisé par ses connaissances, mais plutôt par un modèle qui vise l'excellence à travers diverses aptitudes, tels que la communication, la promotion de la santé et le leadership.[10] Cela dit, un tel modèle est non seulement peu intégré aux programmes de résidence actuelles, mais est aussi très peu applicable, considérant les exigences des études postdoctorales et de la médecine moderne.[8,11] De surcroît, lorsque les résidents partagent aussi peu que 10 % de leur temps de travail auprès des patients, le sens de la profession de médecin est inévitablement effrité, tout comme les soins prodigués sont déshumanisés, ce qui ne peut que contribuer à l'épuisement des résidents en supprimant le sens à leur dévouement.[8,12,13]

Tandis que la médecine s'est grandement modernisée, par la multiplication des options de traitement et la complexification des soins, la résidence n'a pas su proposer un modèle d'apprentissage adapté à la réalité d'aujourd'hui. Ainsi dit, le bien-être des résidents se doit de ne plus être vu comme une considération secondaire dans les programmes d'éducation médicale postdoctorale actuels et futurs. Une profonde et équitable réévaluation de la structure ainsi que des conditions de travail actuelles doit être mise en place, afin de permettre la création d'un nouveau modèle de pratique adapté à la réalité de la médecine moderne. Les résidents ne doivent plus se voir être utilisés comme l'échine du système de santé canadien. Néanmoins, alors que les solutions actuellement proposées se concentrent sur la promotion de la résilience et le développement de programme de bien-être, avec des résultats très mitigés,[14] il est impératif qu'un changement de philosophie s'effectue vers un modèle qui s'attardera à l'implantation de changements systémiques.[13] Par conséquent, la révision des conditions d'éducation postdoctorale doit assurer une approche standardisée à travers le Canada, qui permettra un cadre sécuritaire, éthique et professionnel dans lequel les résidents pourront atteindre les objectifs nationaux de compétence, tout en assurant un équilibre de vie sain. Nécessairement, de tels changements incluent l'établissement de normes et de guides nationaux régissant les heures de service des résidents, l'implantation de normes préventives multifactorielles longitudinales en matière de bien-être ainsi que la mise en place de programmes de soutien centrés sur les besoins individuels.[13]

Subséquemment, la culture entourant le rôle des résidents doit vivement être adressée, particulièrement afin de garantir un environnement de travail dépourvu de comportements ostracisants et dénigrants. L'environnement d'apprentissage en résidence doit également retourner aux sources de la profession, soit en favorisant les soins directs aux patients et aux familles, en stimulant la collaboration intra- et interprofessionnelle, en diminuant le travail administratif ainsi qu'en accentuant la place de la rétroaction.[15] Modifier la pratique dès la résidence cherche aussi à rectifier la conception de ce qu'est un environnement de travail sain et favorable au développement personnel et professionnel, ce qui favorisera un changement de la culture médicale à long terme.

De tels changements viseront non seulement l'épanouissement et l'émancipation des résidents, mais encourageront aussi une transition vers un système médical sain à long terme.

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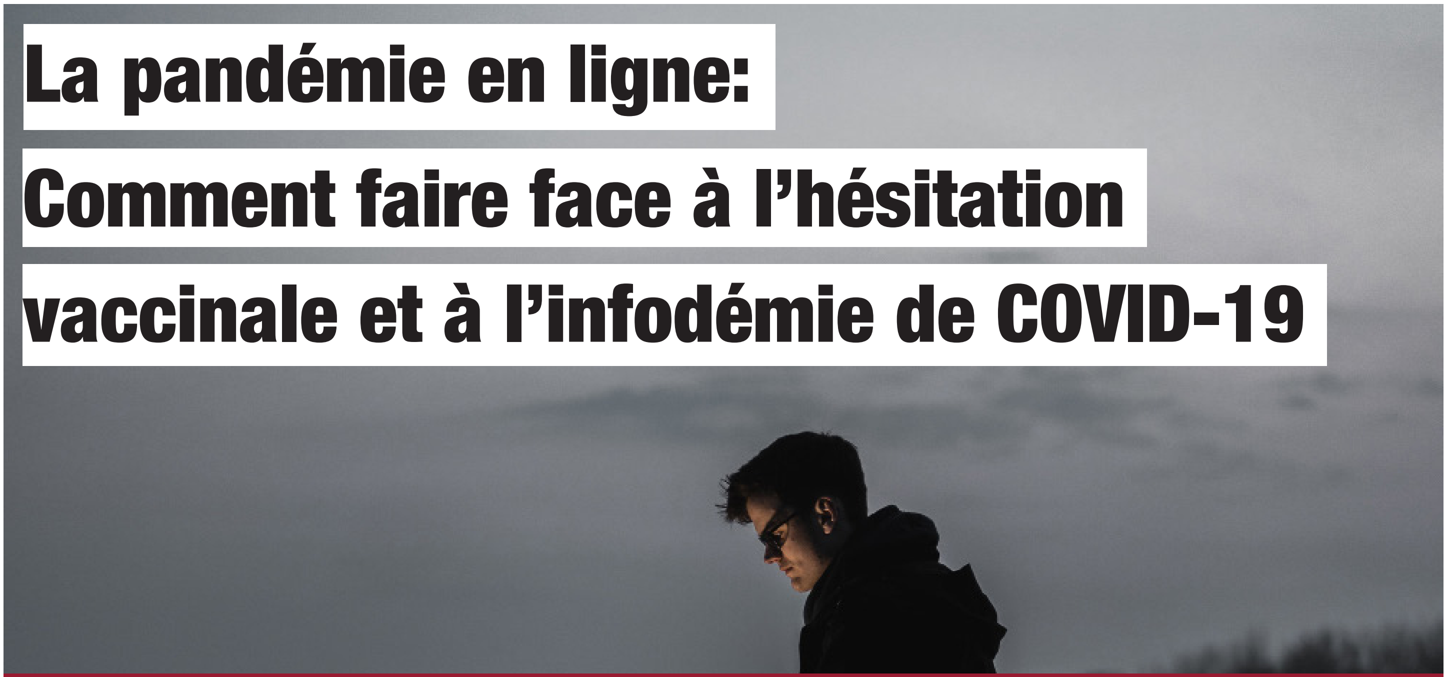
La pandémie en ligne: Comment faire face à l'hésitation vaccinale et à l'infodémie de COVID-19



3ème place

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L'émergence de la pandémie de COVID-19 dans les dernières semaines de 2019 a déclenché des ramifications médicales, économiques et sociales incommensurables.[1] Au moment de la rédaction du présent document, 3,8 millions de cas de COVID-19 et 40 000 décès ont été signalés au Canada.[2] Bien que de nombreux vaccins sécuritaires et efficaces existent contre les micro-organismes qui peuvent devenir pandémiques, dont le SARS-CoV-2 (l'agent causal du COVID-19),[3] leur développement, bien que nécessaire, est insuffisant. Si le public n'a pas une perception positive de l'utilité et de la sécurité des vaccins, ces derniers sont inutiles au niveau de la population.[4,5] Il existe donc un besoin important d'interventions et de politiques visant à favoriser l'acceptation des vaccins par la communauté.

L'Organisation mondiale de la santé (OMS) définit l'hésitation vaccinale comme un "retard dans l'acceptation ou le refus des vaccins malgré la disponibilité des services de vaccination".[6] Les sceptiques des vaccins sont aussi vieux que les vaccins eux-mêmes; lorsque Edward Jenner a introduit pour la première fois le vaccin contre la variole en 1796, il a été décrié comme un "outil satanique s'opposant à la volonté de Dieu" et a conduit à la création de la première Ligue anti-vaccination.[7,8] Aujourd'hui, la mise en place d'un vaccin doit faire face à un nouveau type de pandémie, appelée "infodémie", qui désigne la "distribution rapide d'informations sur une plateforme électronique dans le but d'informer la santé publique et les politiques".[9] Dans le contexte de COVID-19, cela a entraîné une surabondance d'informations exactes et erronées.[10] En particulier, les plateformes de médias sociaux ont été impliquées dans la diffusion de fausses informations. Les groupes anti-vaccins, dont la "Disinformation Dozen", continuent de gagner en popularité,[11] et les vidéos anti-vaccins sur YouTube sont beaucoup plus visionnées que les vidéos provaccins.[12]

La diffusion de fausses informations pendant les épidémies remonte au Moyen Âge.[13] À l'époque moderne, les médias sociaux amplifient considérablement la désinformation et influencent la perception du public. Par exemple, des millions de messages texte ont été envoyés au début de la pandémie de la COVID-19 pour diffuser de fausses informations sur l'imminence de fermetures, de nouvelles réglementations gouvernementales et d'un effondrement économique.[14] Le nombre d'affirmations non vérifiées y compris l'huile de serpent et la combustion de feuilles d'encens comme agents pour guérir la COVID-19 a fortement augmenté.[15,16] De nombreux comptes ont faussement associé la propagation de la COVID-19 à la technologie de communication sans fil 5G.[17] Il est important de noter que les médias sociaux ont intensifié la diffusion de fausses informations, ce qui a eu un impact direct sur les positions et les perceptions du public envers la pandémie.

Il a été démontré que les infodémies influencent rapidement les impressions du public sur les vaccins - une étude récente suggère qu'il suffit de 5 à 10 minutes sur un site anti-vaccins pour accroître objectivement le scepticisme d'un individu sur la sécurité des vaccins.[18,19] Du point de vue des États-Unis, l'infodémie vaccinale a contribué à la diminution de l'utilisation des vaccins, car seulement 66 % de la population américaine est considérée comme entièrement vaccinée.[20] Ce chiffre est frappant si l'on considère qu'un taux de vaccination estimé à 90% est nécessaire pour assurer la protection de la communauté.[21] Comme des mesures sont nécessaires pour combattre la pandémie de la COVID-19, des mesures doivent également être prises pour contrôler l'infodémie de la COVID-19.

Les stratégies visant à accroître l'utilisation des vaccins ne sont pas nouvelles. Les premières tentatives étaient plus agressives et impliquaient principalement des mandats de vaccination, qui ont souvent été accueillis par la violence.[8] Ainsi, lorsque les autorités sanitaires ont rendu obligatoire le vaccin antivariolique durant une épidémie à Montréal en 1885, de violentes protestations ont éclaté dans la ville entière, entraînant des dommages importants aux infrastructures de soins de santé.[22] Au cours de la seconde moitié du XXe siècle, l'accent a été mis sur l'amélioration de l'éducation en matière de vaccination et sur l'incitation à la vaccination, mais les preuves à l'appui de ces techniques restent limitées.[23] Des études sur le sujet ont souligné que, si l'amélioration de l'éducation vaccinale est nécessaire, il est peu probable qu'elle permette à elle seule d'améliorer de manière significative l'adoption de la vaccination.[24-26] D'autres méthodes sont donc nécessaires pour combattre la désinformation sur les vaccins et améliorer à la fois leur acceptation et leur utilisation.

Les médias sociaux sont un puissant moyen de diffusion des connaissances et de l'éducation.[27] Même si les médias peuvent certainement influencer négativement la perception du public, ils peuvent également être utilisés pour nous influencer positivement. La communauté scientifique a déjà commencé à utiliser les médias sociaux comme outil dans la lutte contre la désinformation sur la COVID-19. Par exemple, "Shots Heard Round the World" vise directement à diminuer la désinformation par des programmes de surveillance des médias à grande échelle.[28,29] À l'échelle internationale, l'OMS organise désormais des réunions pour discuter de la gestion des infodémies dans les situations d'urgence sanitaire.[10]

La récente vague d'initiatives en ligne constitue une excellente première étape dans la gestion de la désinformation sur les vaccins. Cependant, un effort continu est nécessaire. Les professionnels de la santé doivent être activement encouragés à participer à des forums en ligne et à publier des recherches fondées sur des données probantes. Des experts en médias sociaux peuvent être recrutés par des revues médicales très réputées afin de diffuser plus efficacement les résultats scientifiques évalués par les pairs au public. Les plateformes à fort trafic, dont Facebook et Twitter, devraient collaborer avec les professionnels de la santé, les scientifiques et le personnel de la santé publique pour accroître leur exposition en ligne et fournir un support d'informations utiles et transparentes pour le public. En résumé, les efforts déployés pour lutter contre l'infodémie de la COVID-19 détermineront la durée et la gravité de la pandémie actuelle. Nous serons mieux préparés aux futures pandémies - qui pourraient très bien être combattues en ligne.

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