

# UOJM



# JMUO

## UOJM National Commentaries Contest

## Concours national d'écriture d'articles commentaires du JMUO



April 2026  
Special Issue

---

# UOJM

UNIVERSITY OF OTTAWA  
JOURNAL OF MEDICINE



# JMUO

JOURNAL MÉDICALE DE  
L'UNIVERSITÉ D'OTTAWA

VOLUME 16    SPECIAL ISSUE    APRIL 2026

**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. 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.

## CONTACT INFORMATION

### Address:

University of Ottawa Journal of Medicine  
Journal Médical de l'Université d'Ottawa  
451 Smyth Rd  
c/o UGME Room 2046  
Ottawa, Ontario, Canada  
K1H 8M5

Website: [uojm.ca](http://uojm.ca)

## CORRESPONDENCE

Editorial, recruitment and sponsorship correspondence can be made to [contact@uojm.ca](mailto:contact@uojm.ca)

Manuscripts can be submitted online via <http://uojm.ca>

Articles published in the UOJM can be digitally archived and indexed at uO Research:

<http://www.ruor.uottawa.ca/en>

To inquire about receiving print versions of current and past issues of UOJM, contact the Co-Editors in Chief at [contact@uojm.ca](mailto:contact@uojm.ca)

---

---

# JOURNAL STAFF

**Co-Editors-in-Chief**

Jacob Wise  
Emily Tran

**Consulting Editor**

Yannick Galipeau

**Managing Editor**

Spencer Pasternak

**Publication Co-Directors**

Jamie Goldman  
Abdallah Alami  
Billy Johnston  
Daniel Kurtz

**Administrative Director**

Areebah Ahmed

**Publication Assistants**

Stephanie Musa  
Shelly Palchik  
Jake Miles  
Inaru Enriquez  
Ethan Mewhinney  
Rama El Hakim

**Associate Editors**

Taylor Carson  
Michèle Michichiuc  
Jade Poirier  
Quin Brohart  
Mohammad Al Ayach

**Promotions Director**

Olivia Ardilliez

**Scholarly Indexing  
Director**

Gabriella Ripstein

**Research Communication  
Directors**

Rebeca Yakubov  
Afamia Maria Mastanfuono  
Elena Esina

**Translation Directors**

Nicolas Gauthier  
Meriam Zeghal

**Finance Director**

Mathieu Levesque

**Reviewers**

Mohamad Hemadi  
Dawson Livingston  
Alexa Moschella  
Jennifer Fiene  
Zahraa El Hajj  
Tony Lin  
Niko Merlak  
Alexandra Kane  
Thalia Molloy Charette  
Aria Wills  
Victoria Klimkowski  
Hollie Davies  
Zahra Kanaan  
Raidah Islam  
Partha Patel  
Lauren Woytowicz  
Holly Shannon  
Jeff Li  
Theodore Liu  
Jean-Paul Azzi  
Charlotte Li  
Soumiya Sivasathiyathan  
Bayan Abou Mehrem  
Milan Lobana  
Keegan Yang  
Yifan Wang  
Ellie Hao  
Adel Yasin  
Grace Stocker  
Isra Omar  
Julianne Bianca Cruz  
Haneen Alkhawaldeh

---

# TABLE OF CONTENTS

## **5 UOJM: Preface**

## **6 JMUO: Préface**

## **8 When Bias Becomes Knowledge: How Sociodemographic Inequities Shape Medical AI**

Om M. Patel (1<sup>st</sup> place, English Stream)

## **11 Getting Political: The Role of Politics in Physician Advocacy**

Ashley Jackson (2<sup>nd</sup> place, English Stream)

## **13 More Than an Apple a Day: How Food Insecurity Tests the Boundaries of Medicine**

Alexis St. Pierre (3<sup>rd</sup> place, English Stream)

## **16 Navigating the Next Wave of Clinical Trials for Alzheimer's Disease Research**

Rachel Sudhakar

## **19 When the Calculator Is Biased: Rethinking Cardiometabolic Risk Assessment in Indigenous Health**

Aishwarya Rajesh Krishnan

## **24 Médicaliser la pauvreté : quand le système de santé canadien compense l'échec des politiques sociales**

Yanis Amroun (1<sup>ère</sup> place, volet francophone)

## **27 Médecines moderne et traditionnelle en santé mentale : ennemies jurées ou pratiques complémentaires?**

Yasmine Zemni (2<sup>ème</sup> place, volet francophone)

## **30 Exposition solaire en construction: Un risque occupational sous estimé au Canada**

Seyyon Satkunanathan, Thusanth Thuraisingam\* (3<sup>ème</sup> place, volet francophone)

\*Superviseur de l'auteur principal

---

---

# UOJM: PREFACE

The *University of Ottawa Journal of Medicine* (UOJM) is pleased to share this special issue featuring the top ranked, winning submissions in each category of the fifth 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 single-authored, 1000-word commentary article on any topic related to the medical field in French or English. In the winter of 2026, UOJM received 25 submissions which were peer-reviewed by the UOJM Editorial Team. Double-blinded submissions were scored by independent peer reviewers and submissions that ranked in the top five of each submission category were published in this special issue.

We were impressed by the quality of submissions this year, and we would like to sincerely thank everyone who participated in this contest! We would also like to thank the reviewers and 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!

**Jacob Wise & Emily Tran**  
Co-Editors-in-Chief (2025-2026)

---

## Winners of the English Stream of the Contest:

**1<sup>st</sup> place (\$500):** Om M. Patel

**Title:** When Bias Becomes Knowledge: How Sociodemographic Inequities Shape Medical AI

**2<sup>nd</sup> place (\$250):** Ashley Jackson

**Title:** Getting Political: The Role of Politics in Physician Advocacy

**3<sup>rd</sup> place (\$100):** Alexis St. Pierre

**Title:** More Than an Apple a Day: How Food Insecurity Tests the Boundaries of Medicine

---

---

# JMUO: PRÉFACE

Le *Journal médical de l'Université d'Ottawa* (JMUO) est fier de présenter ce numéro spécial regroupant les soumissions gagnantes les mieux notées dans chaque catégorie du cinquième Concours national de commentaires de JMUO. 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, rédigé par un seul auteur, sur un sujet lié au domaine médical, en français ou en anglais. À l'hiver 2026, le JMUO a reçu 25 soumissions, examinées par l'équipe éditoriale de JMUO. Les textes, reçus en double aveugle, ont été évalués par des pairs indépendants ; ceux qui figuraient parmi les cinq premiers de leur catégorie ont été publiés dans ce numéro spécial.

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 et aux divers commanditaires de JMUO pour leur soutien. Ce concours demeure l'un des moments forts de JMUO 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 !

**Jacob Wise et Emily Tran**  
Co-rédacteurs-en-chef (2025–2026)

---

## Gagnants du volet francophone du concours :

**1<sup>ère</sup> place (\$500) :** Yanis Amroun

**Titre :** Médicaliser la pauvreté : quand le système de santé canadien compense l'échec des politiques sociales

**2<sup>ème</sup> place (\$200) :** Yasmine Zemni

**Titre :** Médecines moderne et traditionnelle en santé mentale : ennemies jurées ou pratiques complémentaires?

**3<sup>ème</sup> place (\$100) :** Seyyon Satkunanathan

**Titre :** Exposition solaire en construction: Un risque occupational sous estimé au Canada

# **2025 UOJM National Commentary Contest (English Stream)**

# When Bias Becomes Knowledge: How Sociodemographic Inequities Shape Medical AI

Om M. Patel<sup>1</sup>

<sup>1</sup> Faculty of Health Sciences, McMaster University, Hamilton, ON, Canada

Correspondence: [patelo31@mcmaster.ca](mailto:patelo31@mcmaster.ca)

Date Published: April 30, 2026

DOI: <https://doi.org/10.18192/UOJM.V16iS1.7834>

Artificial intelligence (AI), especially with the recent advancements of large-language models (LLMs), has become an integral part of clinical decision-making, affecting triage, risk stratification, diagnosis, and treatment selection.<sup>1</sup> These tools are typically presented as ways to improve efficiency and objectivity within healthcare. However, emerging research suggests that healthcare-related artificial intelligence does something more consequential and troubling: it takes pre-existing biases in clinical practice and translates them into a seemingly “objective” clinical judgment.<sup>2</sup>

Recently, a 2025 study evaluated nine different LLMs, and demonstrated that even when the same clinical data is inputted, triage priority, treatment recommendations, and even the mental health assessments differed solely on the basis of race or gender-based demographic indicators.<sup>3</sup> As opposed to correcting inequities, large-language models seem to legitimize them, under the guise of objectivity.<sup>3</sup>

The majority of the evaluation metrics pertaining to medical AI systems focuses primarily on technical performance, measuring values such as sensitivity, specificity, area under the receiver operating characteristic curve (AUC-ROC), and F1-scores (a composite measure of recall and precision).<sup>4</sup> These metrics address the wrong question entirely. The core issue here is not about the performance of these AI systems, but about the type of knowledge that is being learned and reproduced by them.<sup>5</sup>

The root cause for AI biases is well understood. Decades of research document systematic disparities in care. For instance, in comparable injuries, Black patients are significantly less likely than White patients to receive opioid analgesia in emergency department settings.<sup>6</sup> Women with acute coronary syndrome experience longer times to di-

agnosis and are less likely to receive guideline-consistent treatment.<sup>7</sup> Black patients are more likely to be diagnosed with schizophrenia and less likely to be diagnosed with mood disorders compared to White patients presenting with similar symptoms.<sup>8</sup> These inequities remain significant after adjusting for clinical severity and comorbidities, suggesting that they cannot be explained by medical factors alone. When such clinical decisions are treated as ground truth by machine-learning systems, historical inequities are learned, reinforced, and then propagated throughout the healthcare system.<sup>5</sup>

Bias also enters healthcare through clinical documentation. Studies of electronic health records (EHR) show that symptoms of Black patients are more likely to be documented in ways that suggest non-compliance or exaggeration, and symptoms of women are more likely to be attributed to anxiety or stress.<sup>9</sup> Medical documentation is the primary training input for many AI models, meaning what is considered neutral training data is already plagued with social bias.<sup>5</sup>

Machine learning algorithms trained on such data cannot differentiate between medically relevant information and systemic inequity. Their task is simply to identify statistical patterns which predict future outcomes. When historical practice has been unequal, the algorithms encode these disparities as a normative pattern. From the model’s perspective, unequal care is not a problem to be solved, but the very process from which it learns. Bias has thus, become knowledge.<sup>10</sup>

The true danger of algorithmic bias lies in its authority. Unlike clinicians who can reflect and change behavior, algorithms codify historical patterns as fixed parameters, reproducing them consistently at scale without capacity

for self-correction. Their recommendations are often perceived as data-driven, but this perception is misleading.<sup>5</sup> This contributes to automation bias, where clinicians defer to algorithmic recommendations even when they conflict with clinical judgment.<sup>11</sup> Bias that once emerged episodically in bedside encounters now operates continuously at population scale, shaping care across institutions in ways that are systematic, persistent, and far more difficult to rectify.

No single solution can fully address this. From a technical perspective, evaluation criteria need to shift from purely performance-focused validation to evaluation methods that interrogate bias directly.<sup>12</sup> A promising method would be counterfactual stress testing, where models are tested on the same set of clinical cases with varying social cues such as names or pronouns. This method directly assesses whether models are biased towards demographic identifiers rather than medical data while making recommendations.<sup>13</sup> Adding such tests to the pre-deployment validation process would enable institutions to identify bias mechanisms that are normally missed by standard validation metrics.<sup>14</sup>

However, technical solutions alone are not sufficient. As long as AI models are trained on clinical documents that are reflective of inequitable care, models will inevitably learn inequity as the ground truth.<sup>15</sup> This highlights the need to intervene at the data curation and annotation phase. Instruction tuning datasets with balanced representation of clinical presentations across sociodemographic groups can minimize the strength of associations learned by models between certain conditions/behaviors and sociodemographic groups.<sup>10</sup> Furthermore, data augmentation techniques, which involve the use of counterfactuals such as swapping demographic information and keeping medical content constant, can also be employed to break associations learned by models between identity and healthcare needs. While these techniques cannot completely remove inequity from model representations, they can minimize its salience.<sup>16</sup>

Individual stakeholders also play a key role. Medical students should begin to see AI literacy as a core clinical competency, seeking formal education on algorithmic bias. Clinicians should continue to critically appraise AI-generated recommendations, especially when they conflict with clinical judgement. Researchers and developers should

also employ equity-centered validation into model design from the start, rather than treating bias audits as an afterthought.

Although AI has tremendous potential to revolutionize healthcare, one of its greatest dangers is in hardwiring such invisible biases as “knowledge” that informs care. Several challenges lie ahead. To tackle this, we need to mitigate bias in training data, rigorously test performance across subgroups, and build regulatory frameworks that keep equity enforced beyond initial model deployment. The future is promising however. Medical regulators are starting to acknowledge this need. For example, the U.S. Food and Drug Administration (FDA) new 2025 draft guidance on AI-enabled medical devices emphasizes bias mitigation.<sup>17</sup> The medical-AI landscape is advancing fast, and awareness among clinicians, researchers, and policymakers is growing. Done right, AI can do more than streamline care; it can push medicine toward something more equitable and transparent. That future is possible and worth pursuing.

## REFERENCES

1. Maity S, Saikia MJ. Large Language Models in Healthcare and Medical Applications: A Review. *Bioengineering (Basel)* 2025; 12: 631.
2. Straw I. The automation of bias in medical Artificial Intelligence (Ai): Decoding the past to create a better future. *Artificial Intelligence in Medicine* 2020; 110: 101965.
3. Omar M, Soffer S, Agbareia R, et al. Sociodemographic biases in medical decision making by large language models. *Nat Med* 2025; 31: 1873–1881.
4. Hicks SA, Strümke I, Thambawita V, et al. On evaluation metrics for medical applications of artificial intelligence. *Sci Rep* 2022; 12: 5979.
5. Cross JL, Choma MA, Onofrey JA. Bias in medical AI: Implications for clinical decision-making. *PLOS Digit Health* 2024; 3: e0000651.
6. Jarman AF, Hwang AC, Schleimer JP, et al. Racial Disparities in Opioid Analgesia Administration Among Adult Emergency Department Patients with Abdominal Pain. *West J Emerg Med* 2022; 23: 826–831.
7. Lunova T, Komorovsky R, Klishch I. Gender Differences in Treatment Delays, Management and Mortality among Patients with Acute Coronary Syndrome: A Systematic Review and Meta-analysis. *Curr Cardiol Rev* 2023; 19: e300622206530.
8. Merritt CC, Halverson TF, Elliott T, et al. Racial Disparities and Predictors of Functioning in Schizophrenia. *Am J Orthopsychiatry* 2023; 93: 177–187.
9. Ivy ZK, Hwee S, Kimball BC, et al. Disparities in Documentation: Evidence of Race-Based Biases in the Electronic Medical Record. *J Racial Ethn Health Disparities* 2025; 12: 3294–3300.
10. Rajkomar A, Hardt M, Howell MD, et al. Ensuring Fairness in Machine Learning to Advance Health Equity. *Ann Intern Med* 2018; 169: 866–872.
11. Kücking F, Hübner U, Przysucha M, et al. Automation Bias in AI-Decision Support: Results from an Empirical Study. *Stud Health Technol Inform* 2024; 317: 298–304.
12. Char DS, Shah NH, Magnus D. Implementing Machine

Learning in Health Care — Addressing Ethical Challenges. *N Engl J Med* 2018; 378: 981–983.

13. Chakradeo K, Huynh I, Balaganeshan SB, et al. Navigating fairness aspects of clinical prediction models. *BMC Med* 2025; 23: 567.
14. Chen RJ, Wang JJ, Williamson DFK, et al. Algorithm fairness in artificial intelligence for medicine and healthcare. *Nat Biomed Eng* 2023; 7: 719–742.
15. Obermeyer Z, Powers B, Vogeli C, et al. Dissecting racial bias in an algorithm used to manage the health of populations. *Science* 2019; 366: 447–453.
16. Mehrabi N, Morstatter F, Saxena N, et al. A Survey on Bias and Fairness in Machine Learning. *ACM Comput Surv* 2022; 54: 1–35.
17. FDA Issues Comprehensive Draft Guidance for Developers of Artificial Intelligence-Enabled Medical Devices. FDA, <https://www.fda.gov/news-events/press-announcements/fda-issues-comprehensive-draft-guidance-developers-artificial-intelligence-enabled-medical-devices> (2025, accessed 30 January 2026).

**Conflicts of Interest Disclosure**

There are no conflicts of interest to declare.

# Getting Political: The Role of Politics in Physician Advocacy

Ashley Jackson<sup>1</sup>

<sup>1</sup> Faculty of Medicine, University of Ottawa, Ottawa, ON, Canada

Correspondence: [ajack028@uottawa.ca](mailto:ajack028@uottawa.ca)

Date Published: April 30, 2026

DOI: <https://doi.org/10.18192/UOJM.V16iS1.7806>

During my first week of medical school, in a presentation about professionalism, we were given a clear message: physicians and trainees should remain apolitical. I found the concept peculiar. As it was, my medical schooling began in the fall of 2020, when just south of the border, one of the most pivotal elections of our time was unfolding—one that would sway the fate of several medical issues.

The notion of political neutrality is rooted in the goal of maintaining patient safety and preserving the physician-patient relationship. For years, many have argued that there is no role for politics in medicine and that remaining politically neutral is necessary to ensure adequate patient care.<sup>1</sup> However, since 2020, amid the fallout from the pandemic and the emergence of an increasingly divided society, medicine has become ever more political. Issues like women's reproductive rights, end-of-life care, and the privatization of healthcare have become hot topics of debate. More than ever, decisions affecting healthcare spending, access, and legislation are made not by healthcare professionals in hospitals but by politicians in parliament.

While the Canadian Medical Association (CMA) and Royal College of Physicians and Surgeons (RCPS) are less explicit about their stance on physicians' role in politics, the American Medical Association has deemed political involvement suitable, so long as it does not interfere with patient care.<sup>2</sup> But how exactly can political involvement impact patient care? A recent American study found that patients prefer physicians with similar political views and have less trust in those with different views.<sup>3</sup> One could argue that preventing any outward support (or dissent) for a particular party or its policies could help preserve the trust that patients have in their physicians, leading to better health outcomes. On the other hand, politics may have already eroded the patient-physician relationship. In

the same study, they found that, overall, the medical community was perceived as more left-leaning following the COVID-19 pandemic.<sup>3</sup> As a result, those on the right of the political spectrum endorsed less trust in physicians and the healthcare system than ever before.<sup>3</sup> These findings suggest that the medical profession as a whole has become politicized and that blurring the lines between politics and medicine has the potential to further break down the trust that patients have in their physicians and medicine as an institution.

On the flip side, there has been a recent push to promote advocacy in medicine. The RCPS outlines Health Advocate as one of the fundamental CanMEDS roles.<sup>4</sup> In this role, the RCPS highlights that physicians should be competent in advocating for patients “within and beyond the clinical environment” and advocate for “system-level change in a socially accountable manner”.<sup>4</sup> While there is no direct reference to political advocacy in the description of this role, it is hard to imagine implementing system-level change without some level of political involvement.

These ideas also raise further questions about which topics exactly fall within the realm of physician advocacy. I think most would agree that a physician speaking on topics such as legislation that directly impacts healthcare is well within their scope of practice. This type of advocacy may be more easily separated from politics and seen as “neutral advocacy”. For example, a Canadian physician advocating against the push to privatize healthcare may not be seen as a politically charged act, even if a particular political party proposes these ideals. I think the real question lies in the more politically charged topics that, on the surface, aren't directly related to healthcare. For example, Canadian physicians supporting calls to action for a Universal Basic Income or publicly dissenting to potentially harmful

projects, such as when the People's Health Movement Canada wrote a letter opposing the implementation of the Coastal Gaslink Pipeline, may appear outside of the scope of physician advocacy yet have significant downstream effects on the health of individuals and particular marginalized groups.<sup>5</sup> It is the speaking out on these more nuanced issues impacting the social determinants of health that is more often met with questioning looks outside of the medical community and seen as overtly political statements. So too is advocacy related to larger global issues, such as conflicts and injustices worldwide that affect healthcare and the safety of groups of individuals.

Of course, one could argue that the best way to approach advocacy is to remain as politically neutral as possible. Grounding advocacy work in facts and evidence, with direct ties to medicine, may limit the broader implications of this work. Still, as the world becomes progressively divided and as medicine and politics become even more intimately intertwined, it is becoming increasingly challenging for advocacy efforts to be seen as solely apolitical. Furthermore, staying silent and remaining neutral on politically charged topics is now viewed as a political statement in and of itself.

As the world, and healthcare, is becoming increasingly politicized, it is important that physicians learn tangible skills about how to advocate appropriately while balancing the needs of their patients. While classes and modules throughout Canadian medical training emphasize the importance of advocacy as an essential role of the physician, rarely do they teach such practical skills. Instead of pushing the politically neutral agenda, medical training needs to embrace the changing societal landscape and revamp its curricula to explore what it means to be a physician advocate in increasingly political times. Whether it be through providing more opportunities to get involved in political advocacy during medical training, the exploration of case studies of physician advocacy gone right (and wrong), or more seminars highlighting the overlap between policy and medicine, curricula should evolve to teach medical trainees how to balance broader advocacy efforts with individual patient care, rather than treating advocacy as an abstract concept. Navigating the professional duties to individual patients and to society is challenging, yet it is a balance that must be struck to uphold our role as health advocates.

## REFERENCES

1. Huddle TS. Perspective: Medical professionalism and medical education should not involve commitments to political advocacy. *Acad Med.* 2011;86(3):378-83.
2. KB OR. Patients and politics: What the AMA Code of Medical Ethics Says. American Medical Association; 2018.
3. O'Brian N, Kent T. Partisanship and Trust in Personal Doctors: Causes and Consequences. *British Journal of Political Science.* 2025;55.
4. Canada RCoPaSo. Understanding the CanMEDS Roles: Health Advocate [cited 2026 January 12]. Available from: <https://www.royalcollege.ca/en/standards-and-accreditation/canmeds/health-advocate-role>.
5. Canada P. PHM Canada Letter In Support Of Unist'ot'en Resistance To Coastal Gaslink Pipeline 2023 [Available from: <https://phm-na.org/2023/06/phm-canada-letter-in-support-of-unistoten-resistance-to-coastal-gaslink-pipeline/?utm>].

## Conflicts of Interest Disclosure

There are no conflicts of interest to declare.

# More Than an Apple a Day: How Food Insecurity Tests the Boundaries of Medicine

Alexis St.Pierre<sup>1</sup>

<sup>1</sup> Faculty of Medicine, University of Ottawa, Ottawa, ON, Canada

Correspondence: [astpi033@uottawa.ca](mailto:astpi033@uottawa.ca)

Date Published: April 30, 2026

DOI: <https://doi.org/10.18192/UOJM.V16iS1.7822>

The patient's chart says *non-adherent*. Their blood pressure remains uncontrolled, their cholesterol is elevated, and previous recommendations for a nutritious diet were never followed. On paper, the problem appears straightforward, but the chart does not note that this patient must choose between groceries and rent each month, and the fight for groceries rarely wins.

This scenario is not an exception. In 2023, Statistics Canada reported that 25.5% of Canadians live in households experiencing food insecurity.<sup>1</sup> Food insecurity refers to inadequate or insecure access to food due to financial constraints, with experiences ranging in severity from worrying about running out of food to going whole days without eating.<sup>2</sup> While hunger itself may seem separate from medicine, its consequences are not. In exam rooms and emergency departments, food insecurity is not an abstract social issue but a clinical reality. It's no secret that lack of access to affordable, healthy food is directly associated with increased risk of cardiovascular disease, diabetes, and poor mental health, or even that individuals experiencing food insecurity are more likely to experience premature death.<sup>2,3,4,5</sup> When these preventable health consequences affect millions of Canadians, the impact goes far beyond individual patient encounters and pours into the healthcare system itself.

Food insecurity places an enormous and costly burden on the healthcare system. Individuals experiencing food insecurity are more likely to require acute care, experience longer hospital stays, and face higher readmission rates.<sup>6</sup> These patterns translate into higher costs for the healthcare system, as the average acute care expenditure for a Canadian facing food insecurity is \$400-\$565 higher per year than that of someone who is food secure.<sup>6</sup> Between 2011 and 2017, total acute care expenditures among adults in

sampled Canadian regions were estimated at \$155 billion, of which 4.4% (\$6.82 billion) represented excess costs attributable to food insecurity.<sup>6</sup> Faced with this widespread impact, the question becomes unavoidable: who is expected to respond to this crisis? In the day-to-day, it seems that the finger points at physicians and frontline healthcare providers.

Canadian physicians are increasingly asked to treat hunger with stethoscopes, often managing the medical consequences of food insecurity rather than its root causes. However, this is not a failure of individual physicians, but rather a reflection of the systems that ask medicine to compensate for the gaps in social programming that it was never designed to fill. Repeated exposure to the health consequences of food insecurity without the means to meaningfully intervene creates a burden that is not only clinical, but also moral.<sup>7</sup> While treating the downstream effects of hunger remains possible, treating hunger itself often is not. This dissonance between recognizing a patient's unmet needs and the lack of tools to intervene can create an immense sense of distress that grows larger over time.<sup>8</sup> Unsurprisingly, physicians report barriers such as limited appointment time and feeling inadequately prepared to connect patients with appropriate resources to manage food insecurity.<sup>7</sup>

As this moral and clinical burden grows, healthcare provider burnout has reached an all-time high, with physicians increasingly expected to meet both rising clinical demands and unresolved social needs of their patients.<sup>9</sup> In the absence of effective interventions, physicians are left to manage problems they did not create and cannot resolve on their own. As current government programming falls short and local food banks are overwhelmed, atten-

tion has turned to a potential intervention situated at the boundary between healthcare and social need: prescribing groceries.

Food prescriptions are an emerging, evidence-informed healthcare intervention aimed at improving access to healthy foods while reducing burdens on the healthcare system.<sup>10,11</sup> In practice, these programs may involve physicians prescribing vouchers that enable patients to access nutritious food through participating retailers and community partners, or referring patients to dietitians and food literacy programming.<sup>10</sup> Research has shown that food prescription programs can improve affordability and accessibility of nutritious food, increase fruit and vegetable intake, and enhance household food security.<sup>11,12</sup> Additional benefits include improved food literacy, such as enhanced nutrition knowledge, greater exposure to healthy ingredients, and the acquisition of essential cooking skills.<sup>12,13</sup> Compared with emergency food provisions (e.g., local food banks), food prescription programs can be integrated into clinical care, enabling physicians to directly reduce patients' barriers to accessing food. These programs align closely with broader efforts to address the social determinants of health, ultimately advancing health equity.<sup>14</sup> While concerns about program costs are valid, these interventions may reduce healthcare utilization, yielding potential healthcare system savings alongside improved quality of life and reduced rates of premature mortality.<sup>5,6</sup>

However, food prescriptions are not a cure for food insecurity. These programs do not provide sufficient food to meet all nutritional needs and will not lead to lasting health benefits if the root causes of food insecurity remain unchanged.<sup>11</sup> Although food prescriptions cannot solve food insecurity, they may be seen as a harm-reduction tool: important measures that reduce preventable illness and alleviate the moral distress physicians experience when hunger is identified but left unaddressed.<sup>14</sup> They are not substitutes for social policy but provide temporary support when more substantial interventions are unavailable. Given these limitations, a broader response is needed. When physicians alone cannot solve food insecurity, collective advocacy within medicine becomes especially important. Medical trainees and healthcare providers can do their part by supporting the integration of food security screening and advocating for partnerships with community organizations that strengthen food access initiatives.<sup>13,15,16</sup> At the policy level, professional medical corporations may leverage their

collective voice to advocate for income supports and social policies that address the root of food insecurity.<sup>14</sup>

Food insecurity is a health crisis that drives preventable illness, strains healthcare systems, and contributes to growing physician burnout.<sup>1,5,9</sup> Physicians cannot solve food insecurity on their own, but given their proximity to its consequences, they have a collective responsibility to call it as it is. Hunger is not a medical oversight, but a policy failure with profound medical consequences. Acknowledging this is the first step toward sustainable change in addressing food insecurity.

## REFERENCES

1. Statistics Canada [Internet]. Canadian Income Survey 2023. Statistics Canada; 2025 May 1. Available from: <https://www150.statcan.gc.ca/n1/daily-quotidien/250501/dq250501b-eng.htm>
2. Odoms-Young A, Brown AGM, Agurs-Collins T, Glanz K. Food Insecurity, Neighborhood Food Environment, and Health Disparities: State of the Science, Research Gaps and Opportunities. *Am J Clin Nutr*. 2024 Mar;119(3):850-861. doi: 10.1016/j.ajcnut.2023.12.019. Epub 2023 Dec 30. PMID: 38160801; PMCID: PMC10972712.
3. Tait CA, L'Abbé MR, Smith PM, Rosella LC. The association between food insecurity and incident type 2 diabetes in Canada: A population-based cohort study. *PLoS One*. 2018 May 23;13(5):e0195962. doi: 10.1371/journal.pone.0195962. PMID: 29791453.
4. Tarasuk V, Cheng J, Gundersen C, de Oliveira C, Kurdyak P. The Relation between Food Insecurity and Mental Health Care Service Utilization in Ontario. *Can J Psychiatry*. 2018 Aug;63(8):557-569. doi: 10.1177/0706743717752879. Epub 2018 Jan 7. PMID: 29307216; PMCID: PMC6099753.
5. Men F, Gundersen C, Urquia ML, Tarasuk V. Association between household food insecurity and mortality in Canada: a population-based retrospective cohort study. *CMAJ*. 2020 Jan 20;192(3):E53-E60. doi: 10.1503/cmaj.190385. PMID: 31959655; PMCID: PMC6970600.
6. Men F, Gundersen C, Urquia ML, Tarasuk V. Food Insecurity Is Associated With Higher Health Care Use And Costs Among Canadian Adults. *Health Aff (Millwood)*. 2020 Aug;39(8):1377-1385. doi: 10.1377/hlthaff.2019.01637. PMID: 32744947.
7. Heaberlin S, Skelly K, Rosenbaum M, Bunt S. Food Insecurity: Physician Perspectives, Screening and Communication. *PRiMER*. 2024 Jul 1;8:38. doi: 10.22454/PRiMER.2024.400838. PMID: 39238494; PMCID: PMC11377074.
8. Foxwell AM, H Meghani S, M Ulrich C. Clinician distress in seriously ill patient care: A dimensional analysis. *Nurs Ethics*. 2022 Feb;29(1):72-93. doi: 10.1177/09697330211003259. Epub 2021 Aug 24. PMID: 34427135; PMCID: PMC8866161.
9. Ontario Medical Association [Internet]. Physician burnout. Toronto (ON): Ontario Medical Association; c2026. Available from: <https://www.oma.org/advocacy/physician-burnout/>
10. Little M, Dodd W, Brubacher LJ, Richter A. Food prescribing in Canada: evidence, critiques and opportunities. *Health Promot Chronic Dis Prev Can*. 2024 Jun;44(6):279-283. doi: 10.24095/hpcdp.44.6.04. PMID: 38916555.
11. Little M, Rosa E, Heasley C, Asif A, Dodd W, Richter A. Promoting Healthy Food Access and Nutrition in Primary Care: A Systematic Scoping Review of Food Prescription Programs. *Am J Health Promot*. 2022 Mar;36(3):518-536.

- doi: 10.1177/08901171211056584. Epub 2021 Dec 10. PMID: 34889656; PMCID: PMC8847755.
12. Trapl ES, Smith S, Joshi K, Osborne A, Benko M, Matos AT, Bolen S. Dietary Impact of Produce Prescriptions for Patients With Hypertension. *Prev Chronic Dis*. 2018 Nov 15;15:E138. doi: 10.5888/pcd15.180301. PMID: 30447106; PMCID: PMC6266424.
  13. Forbes JM, Forbes CR, Lehman E, George DR. "Prevention Produce": Integrating Medical Student Mentorship into a Fruit and Vegetable Prescription Program for At-Risk Patients. *Perm J*. 2019;23:18-238. doi: 10.7812/TPP/18-238. PMID: 30939289; PMCID: PMC6443358.
  14. Gottlieb L, Fichtenberg C, Alderwick H, Adler N. Social Determinants of Health: What's a Healthcare System to Do? *J Healthc Manag*. 2019 Jul-Aug;64(4):243-257. doi: 10.1097/JHM-D-18-00160. PMID: 31274816.
  15. Aiyer JN, Raber M, Bello RS, Brewster A, Caballero E, Chennisi C, Durand C, Galindez M, Oestman K, Saifuddin M, Tektiridis J, Young R, Sharma SV. A pilot food prescription program promotes produce intake and decreases food insecurity. *Transl Behav Med*. 2019 Oct 1;9(5):922-930. doi: 10.1093/tbm/ibz112. PMID: 31570927; PMCID: PMC6768858.
  16. American Medical Association [Internet]. How one-minute patients can help head food insecurity. Chicago (IL): American Medical Association; c2025. Available from: <https://www.ama-assn.org/public-health/prevention-wellness/how-one-minute-patients-can-help-head-food-insecurity#:~:text=Follow%2Dup%20is%20easy,and%20lifestyle%20in%20health%20care>

#### Conflicts of Interest Disclosure

There are no conflicts of interest to declare.

---

---

# Navigating the Next Wave of Clinical Trials for Alzheimer's Disease Research

Rachel Sudhakar<sup>1</sup>

<sup>1</sup> Faculty of Science, University of Ottawa, Ottawa, ON, Canada

Correspondence: [sudhakar.rachel@gmail.com](mailto:sudhakar.rachel@gmail.com)

Date Published: April 30, 2026

DOI: <https://doi.org/10.18192/UOJM.V16iS1.7815>

---

As the most prevalent cause of dementia globally, Alzheimer's disease continues to be a major contributor to institutionalization, disability, and caregiver burden.<sup>1</sup> For many years, the only available treatments were symptomatic ones that provided a slight, transient improvement in cognitive function without changing the course of the disease. Consequently, a growing skepticism regarding disease-modifying strategies and a string of failed trials characterized Alzheimer's clinical research. However, expectations have changed recently due to developments in therapeutic design, biomarker science, and trial methodology. These developments have brought renewed momentum to the field while also raising important questions about how progress should be interpreted.

A major turning point has been the re-emergence of amyloid-targeting therapies. In Alzheimer's disease, a protein called amyloid beta builds up in the wrong way to create plaques outside of cells, which are thought to trigger other problems like tau pathology, neuroinflammation, and synaptic dysfunction.<sup>2</sup> Previous anti-amyloid medications often failed due to their late administration or insufficient plaque removal. Newer monoclonal antibodies have been designed to overcome these limitations.<sup>3</sup> Lecanemab was tested in individuals with early symptomatic Alzheimer's disease and confirmed amyloid pathology.<sup>4</sup> Participants who received lecanemab had significant decreases in amyloid levels on PET scans and experienced a meaningful slowdown in mental and daily functioning decline over 18 months compared to those who received a placebo.<sup>5</sup> While the absolute clinical effect size was modest, the trial provided the first consistent evidence that reducing amyloid could alter disease trajectory.

Also, studies showed similar results for donanemab, an antibody that targets a modified form of amyloid beta mostly

found in existing plaques.<sup>6</sup> Donanemab treatment led to a noticeable reduction in plaques and a slower decrease in overall thinking and daily living skills in people with early symptoms of the disease. The trial was notable for using a "treat-to-clear" strategy, which halted dosage as soon as amyloid levels dropped below a predetermined threshold. This approach decreased total drug exposure and provides a possible means of striking a balance between cost, safety, and benefit.<sup>7</sup> However, both lecanemab and donanemab were linked to brain imaging issues, such as swelling and small bleeding in the brain, especially in people who carry the *APOE*  $\epsilon$ 4 allele.<sup>8</sup> These findings show how mechanism-driven success intensifies risk stratification and monitoring

In addition to amyloid-directed treatments, tau pathology has drawn more attention because it is more closely associated with neuronal loss and cognitive decline than amyloid burden alone.<sup>9</sup> Tau-targeting strategies focus on stopping the clumping or spread of abnormal tau proteins in neurons, which could help address issues later in the disease process. A growing understanding that Alzheimer's disease is biologically diverse and unlikely to respond to single-target approaches is reflected in the inclusion of tau-directed agents in combination trials, although they are still in the early stages of clinical development.<sup>9</sup> This shift toward multi-mechanism strategies marks a conceptual evolution in how Alzheimer's trials are designed, even as they complicate interpretation of outcomes.

Drug delivery advancements have also started to change the therapeutic environment. Using "brain shuttle" technology, trontinemab is a new type of anti-amyloid antibody designed to improve its movement across the blood-brain barrier by using a special process called receptor-mediated transcytosis.<sup>10</sup> In early studies, trontinemab showed a much faster and greater decrease

in plaque at lower doses than older antibodies, suggesting it reaches the central nervous system more effectively.<sup>11</sup> Although these results are biologically remarkable, they also highlight a persistent problem in Alzheimer's research: higher target engagement does not always equate to higher clinical benefit. As trontinemab moves closer to late-stage trials, its final worth will be determined by whether improved delivery results in outcomes that patients and caregivers can understand.<sup>11</sup>

Alongside advances in drug delivery, rapid progress in biomarker science has changed how Alzheimer's disease trials are designed. Blood tests for phosphorylated tau, combined with tau and amyloid positron emission tomography, now allow researchers to detect disease earlier and enroll participants at very early stages.<sup>12</sup> While this process has improved trial efficiency and biological precision, it has also raised concerns about relying too heavily on biomarkers as stand-ins for meaningful clinical outcomes. Many studies report clear biomarker changes without matching improvements in cognition, daily functioning, or quality of life.<sup>13</sup> Alzheimer's disease affects more than just memory; cognitive test scores alone often fail to capture outcomes that matter most to patients and caregivers, such as independence and behavioural symptoms.<sup>13,14</sup> Aligning trial endpoints with these patient-centered outcomes, therefore, remains a key challenge in the field.

The transition to clinical practice becomes even more challenging due to the selection of trial participants. Although multimorbidity, frailty, and advanced age are common characteristics of Alzheimer's patients, many studies on the disease do not include these individuals.<sup>15</sup> Mechanism-driven treatments may behave differently in these groups, particularly if vascular disease or polypharmacy alters their risk profiles. The disparity between trial populations and actual patients will increasingly influence clinical decision-making as disease-modifying treatments gain widespread use.

Alzheimer's disease research is at a pivotal stage. Emerging evidence indicates that early intervention can meaningfully alter disease biology and slow progression. However, translating these advances into meaningful clinical benefit will require a shift in how trials are designed and evaluated. Future studies should prioritize patient-centered endpoints, including functional independence and quality of life,

alongside traditional biomarkers, rather than relying on biomarker change as primary indicators of success. Trial populations should also be expanded to better reflect real-world patients, particularly those with multimorbidity and frailty who are frequently excluded from clinical trials. In addition, incorporating real-world outcome measures, such as functional status and caregiver burden, into trial frameworks may help bridge the gap between mechanistic success and everyday impact. Aligning biological precision with real-world relevance will ultimately determine whether these innovations represent true therapeutic progress in a field marked by both urgency and uncertainty.

## REFERENCES

1. 2025 Alzheimer's disease facts and figures. *Alzheimers Dement*. 2025 Apr 29;21(4):e70235. doi: 10.1002/alz.70235. PMID: PMC12040760.
2. Murphy MP, LeVine H 3rd. Alzheimer's disease and the amyloid-beta peptide. *J Alzheimers Dis*. 2010;19(1):311-23. doi: 10.3233/JAD-2010-1221. PMID: 20061647; PMID: PMC2813509.
3. Alkhalifa AE, Al Mokhlif A, Ali H, Al-Ghraiyyah NF, Syropoulou V. Anti-Amyloid Monoclonal Antibodies for Alzheimer's Disease: Evidence, ARIA Risk, and Precision Patient Selection. *J Pers Med*. 2025 Sep 15;15(9):437. doi: 10.3390/jpm15090437. PMID: 41003140; PMID: PMC12470750.
4. Knopman DS. Lecanemab reduces brain amyloid- $\beta$  and delays cognitive worsening. *Cell Rep Med*. 2023 Mar 21;4(3):100982. doi: 10.1016/j.xcrm.2023.100982. PMID: 36948153; PMID: PMC10040446.
5. van Dyck CH, Swanson CJ, Aisen P, Bateman RJ, Chen C, Gee M, et al. Lecanemab in Early Alzheimer's Disease. *N Engl J Med*. 2023 Jan 5;388(1):9-21. doi: 10.1056/NEJMoa2212948. Epub 2022 Nov 29. PMID: 36449413.
6. Jayaprakash N, Elumalai K. Translational Medicine in Alzheimer's Disease: The Journey of Donanemab From Discovery to Clinical Application. *Chronic Dis Transl Med*. 2024 Dec 16;11(2):105-116. doi: 10.1002/cdt3.155. PMID: 40486952; PMID: PMC12142702.
7. Shcherbinin S, Evans CD, Lu M, Andersen SW, Pontecorvo MJ, Willis BA, et al. Association of Amyloid Reduction After Donanemab Treatment With Tau Pathology and Clinical Outcomes: The TRAILBLAZER-ALZ Randomized Clinical Trial. *JAMA Neurol*. 2022 Oct 1;79(10):1015-1024. doi: 10.1001/jamaneurol.2022.2793. PMID: 36094645; PMID: PMC9468959.
8. Smith EE, Phillips NA, Feldman HH, Borrie M, Ganesh A, Henri-Bhargava A, et al. Canadian Consortium on Neurodegeneration in Aging Investigators. Use of lecanemab and donanemab in the Canadian healthcare system: Evidence, challenges, and areas for future research. *J Prev Alzheimers Dis*. 2025 Mar;12(3):100068. doi: 10.1016/j.tjpad.2025.100068. Epub 2025 Jan 31. PMID: 39893139; PMID: PMC12184013.
9. Congdon EE, Ji C, Tetlow AM, Jiang Y, Sigurdsson EM. Tau-targeting therapies for Alzheimer disease: current status and future directions. *Nat Rev Neurol*. 2023 Dec;19(12):715-736. doi: 10.1038/s41582-023-00883-2. Epub 2023 Oct 24. PMID: 37875627; PMID: PMC10965012.
10. Klein G, Rabinovici GD, Zetterberg H, Tonietto M, Bittner T, Rukina D, et al. Interim biomarker results for trontinemab, a novel Brainshuttle™ antibody in development for the treatment

- 
- 
- of Alzheimer's disease. *Alzheimers Dement.* 2025 Dec 25;21(Suppl 5):e104288. doi: 10.1002/alz70859\_104288. PMID: PMC12740797.
11. Smith J, Mummery CJ, Cummings JL, Rabinovici GD, Salloway S, Sperling RA, et al. TRONTIER 1 and TRONTIER 2: Pivotal trials of trontinemab in early symptomatic Alzheimer's disease. *Alzheimers Dement.* 2025 Dec 26;21(Suppl 5):e104294. doi: 10.1002/alz70859\_104294. PMID: PMC12741723.
  12. Zhang Y, Bi K, Zhou L, Wang J, Huang L, Sun Y, et al. Advances in Blood Biomarkers for Alzheimer's Disease: Ultra-Sensitive Detection Technologies and Impact on Clinical Diagnosis. *Degener Neurol Neuromuscul Dis.* 2024 Jul 30;14:85-102. doi: 10.2147/DNND.S471174. PMID: 39100640; PMID: PMC11297492.
  13. Pascoal TA, Aguzzoli CS, Lussier FZ, Crivelli L, Suemoto CK, Fortea J, et al. Insights into the use of biomarkers in clinical trials in Alzheimer's disease. *EBioMedicine.* 2024 Oct;108:105322. doi: 10.1016/j.ebiom.2024.105322. Epub 2024 Oct 3. PMID: 39366844; PMID: PMC11663755.
  14. Stoeckel LE, Fazio EM, Hardy KK, Kidwiler N, McLinden KA, Williams B. Clinically meaningful outcomes in Alzheimer's disease and Alzheimer's disease related dementias trials. *Alzheimers Dement (N Y).* 2025 Feb 19;11(1):e70058. doi: 10.1002/trc2.70058. PMID: 39975465; PMID: PMC11837731.
  15. Stirland LE, Choate R, Zanwar PP, Zhang P, Watermeyer TJ, Valletta M, et al. Multimorbidity in dementia: Current perspectives and future challenges. *Alzheimers Dement.* 2025 Aug;21(8):e70546. doi: 10.1002/alz.70546. PMID: 40755143; PMID: PMC12319240.

#### **Conflicts of Interest Disclosure**

There are no conflicts of interest to declare.

---

---

# When the Calculator Is Biased: Rethinking Cardiometabolic Risk Assessment in Indigenous Health

Aishwarya Rajesh Krishnan<sup>1</sup>

<sup>1</sup> Temerty Faculty of Medicine, University of Toronto, Toronto, ON, Canada

Correspondence: [a.rajeshkrishnan@mail.utoronto.ca](mailto:a.rajeshkrishnan@mail.utoronto.ca)

Date Published: April 30, 2026

DOI: <https://doi.org/10.18192/UOJM.V16iS1.7817>

---

Cardiometabolic disease prevalence is increasing globally, especially as the obesity epidemic continues to rise.<sup>1</sup> Cardiovascular issues and other related conditions are the leading cause of death worldwide.<sup>2</sup> As clinicians, when we assess our patients for their cardiometabolic risk, we review their cardiometabolic risk score using their lab values and demographics, and derive the most effective treatment intervention based on the most likely outcomes.<sup>3,4</sup> Our system has taught us to rely on objective metrics and tools to inform us of our decisions, and as long as it is objective, no undue harm has been inflicted, right?

Unfortunately, not. Many of the widespread cardiometabolic tools employed in day-to-day practice, including Framingham risk scores, Atherosclerotic Cardiovascular Disease (ASCVD) risk equations, or even the new 2023 Predicting Risk of Cardiovascular Disease EVENTS (PREVENT) equations, were generated to standardize clinical practice, yet cardiometabolic risk is not culturally neutral.<sup>5-9</sup> For many Indigenous populations in Canada, cardiometabolic risk is shaped by structural determinants, and with uncritical use of Westernized tools, we risk perpetuating the very disparities they aim to prevent.<sup>9</sup>

Cardiometabolic risk assessment holds a crucial role in preventative medicine. Standardized tools, including the Framingham risk scores, ASCVD risk equations, and PREVENT equations, often derive their results from standardized variables such as age, sex, blood pressure, lipid levels, and diabetes and smoking status.<sup>5-8</sup> While these tools aim to provide objectivity, these equations have been derived from predominantly White, urban, and middle-high income individuals.<sup>5</sup>

The application of cardiometabolic risk scores in Indigenous populations is of concern.<sup>10,11</sup> Many of these tools have not included Indigenous peoples in their study cohort, limiting generalizability.<sup>5</sup> These tools do not consider the social implications of the metrics they include in their formula. For instance, BMI may not capture cardiometabolic risk across populations with varying body composition, nutritional environments, and food insecurity histories.<sup>9-11</sup> HbA1c levels may also be influenced by anemia, chronic stress, and inconsistent access to care, which are factors that often disproportionately affect Indigenous communities, thereby introducing systematic bias into glycemic risk estimation.<sup>12-16</sup>

Standard cardiometabolic risk calculators implicitly assume regular access to follow-up, pharmacotherapy, and other downstream interventions.<sup>6-8</sup> However, many diverse Indigenous communities reside in rural and remote communities. These tools fail to account for these contexts, which could underestimate true cardiovascular risk.<sup>17,18</sup> Underestimation may occur because existing models do not incorporate structural determinants such as chronic stress from systemic racism, food insecurity, or barriers to care continuity, all of which can influence cardiometabolic physiology.<sup>12-14,16</sup> Conversely, overestimation may arise when rigid thresholds derived from non-representative populations are applied to Indigenous communities without contextual calibration, potentially pathologizing populations without corresponding access to preventive interventions or culturally appropriate care pathways.<sup>19</sup> Regardless, misclassification can delay appropriate care and reinforce deficit-based narratives.<sup>18-21</sup>

When we use cardiometabolic risk calculators uncritically

in Indigenous populations, we risk undermining informed decision-making. This can be expanded into the broader concept of ethical tensions observed in cross-cultural care.<sup>22</sup> Indigenous scholars highlight the value of relational and collective health decision-making, rather than individualistic and rigid approaches to care.<sup>23,24</sup> Applying these thresholds without frontline engagement with Indigenous communities risks silencing Indigenous knowledge systems.<sup>25–27</sup>

Cardiometabolic risk assessment reflects deeper colonial assumptions nested in biomedical knowledge. Western medicine embodies a linear trajectory.<sup>28</sup> In comparison, Indigenous conceptions of health and disease are centred upon relationships to land and community with intergenerational well-being.<sup>29</sup> Thus, the prevailing use of cardiometabolic risk frameworks is almost a continuation of colonial patterns which privilege certain forms of knowledge while dismissing others.<sup>30,31</sup>

Nonetheless, we should not reject cardiometabolic risk tools altogether, as it is important to recognize biomedical science development within historical and social contexts. It is when we divorce from those contexts and apply their principles universally that we begin to reproduce inequities. When we define cardiometabolic risk without Indigenous governance, it is another form of epistemic and data extraction, of data interpreted or taken without accountability to the communities which are most affected.<sup>32–34</sup> This includes the extraction of interpretive authority and decision-making power, reinforcing existing inequities in knowledge production and application.

Therefore, addressing these challenges requires a change in direction from uncritical adoption to collaborative redesign of cardiometabolic risk assessment. Indigenous-governed research partnerships are crucial for risk model validation<sup>34–36</sup> These outcomes should include quality of life, functional capacity, and continuity of care.<sup>37,38</sup> Better flexible thresholds will enable improved accuracy of clinical judgement and patient values.<sup>5,20,36–38</sup> Importantly, these partnerships should produce tangible outputs, including community-calibrated risk equations, co-developed clinical guidelines, and decision-support tools that integrate both biomedical and social determinants of health.

Adherence to Indigenous data sovereignty is equally important, including adopting the Ownership, Control, Access, and Possession (OCAP) framework.<sup>39</sup> Risk models

should be generated and implemented in a method to ensure continuity of community governance over data collection and interpretation.<sup>39</sup> By integrating social determinants into risk assessments, we could align preventative care with the realities of Indigenous health.<sup>19,20,24,38</sup>

One approach is the incorporation of structured variables, including food insecurity status, housing instability, or access to primary care, into existing prediction models as modifiers or stratification factors.<sup>38,40</sup> For example, risk calculators could include adjustment coefficients for patients experiencing food insecurity or limited healthcare access, similar to how socioeconomic indices have been incorporated into public health risk models.<sup>3,6,37</sup> Additionally, community-specific calibration of risk thresholds could better align predicted risk with observed outcomes.<sup>40</sup> Finally, risk assessment could be embedded within community-led care models where clinicians interpret risk scores alongside Indigenous health workers.<sup>40</sup>

In conclusion, cardiometabolic risk calculators are not without their biases.<sup>5–8</sup> For Indigenous peoples, widespread use of these standardized frameworks without adaptation exacerbates health disparities under the guise of objectivity.<sup>40,41</sup> Reframing risk as a culturally situated and ethically charged construct allows us to realize the fundamental question: who defines risk, and who bears the consequences when it is wrong? Centring Indigenous leadership, valuing diverse knowledge systems, and embracing structural accountability move cardiometabolic prevention closer to its stated goal: improving health outcomes for all, rather than reinforcing the divides of the past.<sup>38–41</sup>

## REFERENCES

1. Valenzuela PL, Carrera-Bastos P, Castillo-García A, Lieberman DE, Santos-Lozano A, Lucia A. Obesity and the risk of cardiometabolic diseases. *Nat Rev Cardiol.* 2023 Jul 1;20(7):475–94. doi:10.1038/S41569-023-00847-5 PubMed PMID: 36927772.
2. Di Cesare M, McGhie DV, Perel P, Mwangi J, Taylor S, Pervan B, et al. The Heart of the World. *Glob Heart.* 2024;19(1):11. doi:10.5334/GH.1288 PubMed PMID: 38273998.
3. Gurka MJ, Filipp SL, Pearson TA, Deboer MD. Assessing Baseline and Temporal Changes in Cardiometabolic Risk Using Metabolic Syndrome Severity and Common Risk Scores. *Journal of the American Heart Association: Cardiovascular and Cerebrovascular Disease.* 2018 Aug 1;7(16):e009754. doi:10.1161/JAHA.118.009754 PubMed PMID: 30369320.
4. Shen T, Zhao M, Qiao S, Yang Z, Li M, Zhao M, et al.

- Management of cardiometabolic risk factors in cardiovascular high-risk populations with varying cognitive levels. *Aging Clin Exp Res.* 2025 Dec 1;38(1):8. doi:10.1007/S40520-025-03241-Y PubMed PMID: 41460429.
5. Wilson PWF, D'Agostino RB, Levy D, Belanger AM, Silbershatz H, Kannel WB. Prediction of coronary heart disease using risk factor categories. *Circulation.* 1998 May 12;97(18):1837-47. doi:10.1161/01.CIR.97.18.1837 PubMed PMID: 9603539.
  6. Mahmood SS, Levy D, Vasan RS, Wang TJ. The Framingham Heart Study and the Epidemiology of Cardiovascular Diseases: A Historical Perspective. *Lancet.* 2013;383(9921):999. doi:10.1016/S0140-6736(13)61752-3 PubMed PMID: 24084292.
  7. Anderson TS, Wilson LM, Sussman JB. Atherosclerotic Cardiovascular Disease Risk Estimates Using the Predicting Risk of Cardiovascular Disease Events Equations. *JAMA Intern Med.* 2024 Aug 5;184(8):963. doi:10.1001/JAMAINTERNMED.2024.1302 PubMed PMID: 38856978.
  8. Abdul Jabbar A Bin, Inam M, Butt N, Khan SS, Sheikh S, Khoja A, et al. Predicting Risk of Cardiovascular Disease EVENTS (PREVENT) Equations: What Clinicians Need to Know? *Curr Atheroscler Rep.* 2025 Dec 1;27(1). doi:10.1007/S11883-025-01320-Z PubMed PMID: 40690117.
  9. Tanasescu MD, Rosu AM, Minca A, Rosu AL, Grigorie MM, Timofte D, et al. Beyond BMI: Rethinking Obesity Metrics and Cardiovascular Risk in the Era of Precision Medicine. *Diagnosics.* 2025 Dec 1;15(23):3025. doi:10.3390/DIAGNOSTICS15233025 PubMed PMID: 41374408.
  10. Te Vazquez J, Feng SN, Orr CJ, Berkowitz SA. Food Insecurity and Cardiometabolic Conditions: a Review of Recent Research. *Curr Nutr Rep.* 2021 Dec 1;10(4):243. doi:10.1007/S13668-021-00364-2 PubMed PMID: 34152581.
  11. Miguel E da S, Lopes SO, Araújo SP, Priore SE, Alfenas R de CG, Hermsdorff HHM. Association between food insecurity and cardiometabolic risk in adults and the elderly: A systematic review. *J Glob Health.* 2020 Dec 1;10(2):020402. doi:10.7189/JOGH.10.020402 PubMed PMID: 33110569.
  12. Katwal PC, Jirjees S, Htun ZM, Aldawudi I, Khan S. The Effect of Anemia and the Goal of Optimal HbA1c Control in Diabetes and Non-Diabetes. *Cureus.* 2020 Jun 4;12(6):e8431. doi:10.7759/CUREUS.8431 PubMed PMID: 32642346.
  13. Christy AL, Manjrekar PA, Babu RP, Hegde A, Rukmini MS. Influence of Iron Deficiency Anemia on Hemoglobin A1C Levels in Diabetic Individuals with Controlled Plasma Glucose Levels. *Iran Biomed J.* 2014;18(2):88. doi:10.6091/IBJ.1257.2014 PubMed PMID: 24518549.
  14. Walker RJ, Garacci E, Campbell JA, Egede LE. The Influence of Daily Stress on Glycemic Control and Mortality in Adults with Diabetes. *J Behav Med.* 2019 Oct 1;43(5):723. doi:10.1007/S10865-019-00109-1 PubMed PMID: 31617047.
  15. Pérez-Fernández A, Fernández-Berrocal P, Gutiérrez-Cobo MJ. The relationship between well-being and HbA1c in adults with type 1 diabetes: A systematic review. *J Diabetes.* 2023 Feb 1;15(2):152. doi:10.1111/1753-0407.13357 PubMed PMID: 36796311.
  16. Schultz A, Nguyen T, Sinclair M, Fransoo R, McGibbon E. Historical and Continued Colonial Impacts on Heart Health of Indigenous Peoples in Canada: What's Reconciliation Got to Do With It? *CJC Open.* 2021 Dec 1;3(12 Suppl):S149. doi:10.1016/J.CJCO.2021.09.010 PubMed PMID: 34993444.
  17. Vervoort D, Kimmaliardjuk DM, Ross HJ, Fremes SE, Ouzounian M, Mashford-Pringle A. Access to Cardiovascular Care for Indigenous Peoples in Canada: A Rapid Review. *CJC Open.* 2022 Sep 1;4(9):782. doi:10.1016/J.CJCO.2022.05.010 PubMed PMID: 36148252.
  18. Lucero AA, Lambrick DM, Faulkner JA, Fryer S, Tarrant MA, Poudevigne M, et al. Modifiable Cardiovascular Disease Risk Factors among Indigenous Populations. *Adv Prev Med.* 2014;2014:547018. doi:10.1155/2014/547018 PubMed PMID: 24649368.
  19. Clarke-Grant D. Healthcare Access for Indigenous Communities in Rural Canada: A Narrative Review and Interdisciplinary Framework for Action. *Intergovernmental Research and Policy Journal.* 2025 Jun 29. doi:10.24095/HPCDP.44.4.01 PubMed PMID: 38597804.
  20. Stanley LR, Swaim RC, Kaholokula JK, Kelly KJ, Belcourt A, Allen J. The Imperative for Research to Promote Health Equity in Indigenous Communities. *Prev Sci.* 2020 Jan 1;21(Suppl 1):13. doi:10.1007/S11121-017-0850-9 PubMed PMID: 29110278.
  21. Bullen J, Hill-Wall T, Anderson K, Brown A, Bracknell C, Newnham EA, et al. From Deficit to Strength-Based Aboriginal Health Research—Moving toward Flourishing. *Int J Environ Res Public Health.* 2023 Apr 1;20(7):5395. doi:10.3390/IJERPH20075395 PubMed PMID: 37048008.
  22. Howard M, Tan KL, Jayasekara R. Exploring Ethical, Cultural, and Transnational Competence Among International Healthcare Management Students: An Australian Perspective. *J Healthc Leadersh.* 2025;17:97. doi:10.2147/JHL.S506361 PubMed PMID: 40093562.
  23. Neill A, Montesanti S, Bill L, Verstraeten BSE, Bell RC, Oster RT, et al. Aligning Indigenous and Western Concepts of Health Resource Decision Making in a Western Canadian First Nations Context. *Appl Health Econ Health Policy.* 2025 Jan 1;24(1):163. doi:10.1007/S40258-025-01004-4 PubMed PMID: 40975841.
  24. Quelch J, Aden M, Toombs E, Sanders C, Sinoway C, Mushquash C, et al. Understanding the circle of care: Indigenous service providers' perspectives on health and well-being. *AlterNative: An International Journal of Indigenous Peoples.* 2025 Mar 1;21(1):3-10. doi:10.1177/11771801251319274
  25. Nguyen NH, Subhan FB, Williams K, Chan CB. Barriers and Mitigating Strategies to Healthcare Access in Indigenous Communities of Canada: A Narrative Review. *Healthcare.* 2020 Jun 1;8(2):112. doi:10.3390/HEALTHCARE8020112 PubMed PMID: 32357396.
  26. Billan J, Starblanket D, Anderson S, Legare M, Hagel MC, Oakes N, et al. Ethical research engagement with Indigenous communities. *J Rehabil Assist Technol Eng.* 2020 Jan;7:2055668320922706. doi:10.1177/2055668320922706 PubMed PMID: 32612848.
  27. Kennedy A, Sehgal A, Szabo J, McGowan K, Lindstrom G, Roach P, et al. Indigenous strengths-based approaches to healthcare and health professions education – Recognising the value of Elders' teachings. *Health Educ J.* 2022 Jun 1;81(4):423. doi:10.1177/00178969221088921 PubMed PMID: 35531386.
  28. Mir A El, Sousa EB de, Mesina-Estarrón I, Celi LA, Hani M, Benjelloun M, et al. Moving beyond the empty cell: The threat of decontextualized healthcare data. *PLOS Digital Health.* 2026 Jan 13;5(1):e0001194. doi:10.1371/JOURNAL.PDIG.0001194 PubMed PMID: 41528993.
  29. Biles BJ, Serova N, Stanbrook G, Brady B, Kingsley J, Topp SM, et al. What is Indigenous cultural health and wellbeing? A narrative review. *Lancet Reg Health West Pac.* 2024 Nov 1;52:101220. doi:10.1016/J.LANWPC.2024.101220 PubMed PMID: 39664592.
  30. Wispelwey B, Tanous O, Asi Y, Hammoudeh W, Mills D. Because its power remains naturalized: introducing the settler colonial determinants of health. *Front Public Health.* 2023;11:1137428. doi:10.3389/FPUH.2023.1137428 PubMed PMID: 37533522.
  31. Agbonlahor O, DeJarnett N, Hart JL, Bhatnagar A, McLeish AC, Walker KL. Racial/Ethnic Discrimination and Cardiometabolic Diseases: A Systematic Review. *J Racial Ethn Health Disparities.* 2024 Apr 1;11(2):783-807. doi:10.1007/S40615-023-01561-1 PubMed PMID: 36976513.
  32. Anderson M. Indigenous health research and reconciliation. *CMAJ: Canadian Medical Association Journal.* 2019 Aug 26;191(34):E930. doi:10.1503/CMAJ.190989 PubMed PMID: 31451523.
  33. Biles BJ, Serova N, Stanbrook G, Brady B, Kingsley J, Topp SM, et al. What is Indigenous cultural health and wellbeing? A narrative review. *Lancet Reg Health West Pac.* 2024 Nov 1;52:101220. doi:10.1016/J.LANWPC.2024.101220 PubMed PMID: 39664592.

- 
- 
34. Garba I, Sterling R, Plevel R, Carson W, Cordova-Marks FM, Cummins J, et al. Indigenous Peoples and research: self-determination in research governance. *Front Res Metr Anal.* 2023;8:1272318. doi:10.3389/FRMA.2023.1272318/FULL
  35. Melro CM, Gilfoyle M, Ballantyne C, Augustine L, Brass G, Rabbitskin N, et al. Engaging Indigenous partners in health service transformation: a framework for sustained engagement built on trust. *Res Involv Engagem.* 2025 Dec 1;11(1):47. doi:10.1186/S40900-025-00721-3 PubMed PMID: 40361206.
  36. Wieman N, Malhotra U. “Two eyed seeing”—embracing both Indigenous and western perspectives in healthcare. *The BMJ.* 2023;383:p2614. doi:10.1136/BMJ.P2614 PubMed PMID: 37957017.
  37. Rosolova H, Nussbaumerova B. Cardio-metabolic risk prediction should be superior to cardiovascular risk assessment in primary prevention of cardiovascular diseases. *EPMA J.* 2011 Mar;2(1):15. doi:10.1007/S13167-011-0066-1 PubMed PMID: 23199124.
  38. Marques MDC, Pires R, Perdigão M, Sousa L, Fonseca C, Pinho LG, et al. Patient-Centered Care for Patients with Cardiometabolic Diseases: An Integrative Review. *J Pers Med.* 2021 Dec 1;11(12):1289. doi:10.3390/JPM11121289 PubMed PMID: 34945763.
  39. Mashford-Pringle A, Pavagadhi K. Using OCAP and IQ as Frameworks to Address a History of Trauma in Indigenous Health Research. *AMA J Ethics.* 2020 Oct 1;22(10):E868–73. doi:10.1001/AMAJETHICS.2020.868 PubMed PMID: 33103649.
  40. Sehgal A, Henderson R, Murry A, Crowshoe L, Barnabe C. Advancing health equity for Indigenous peoples in Canada: development of a patient complexity assessment framework. *BMC Primary Care.* 2024 Dec 1;25(1):144. doi:10.1186/S12875-024-02362-Z PubMed PMID: 38684966.
  41. Lafontaine A. Indigenous health disparities: a challenge and an opportunity. *Canadian Journal of Surgery.* 2018 Oct 1;61(5):300. doi:10.1503/CJS.011718 PubMed PMID: 30246975.

#### **Conflicts of Interest Disclosure**

There are no conflicts of interest to declare.

**Concours national d'écriture  
d'articles commentaires du  
JMUO 2025 (volet francophone)**

# Médicaliser la pauvreté : quand le système de santé canadien compense l'échec des politiques sociales

Yanis Amroun<sup>1</sup>

<sup>1</sup> Faculté de médecine, Université d'Ottawa, Ottawa, ON, Canada

Correspondance: [yamro054@uottawa.ca](mailto:yamro054@uottawa.ca)

Date publiée: Avril 30, 2026

DOI: <https://doi.org/10.18192/UOJM.V16iS1.7785>

## Introduction

Au Canada, les inégalités sociales de santé constituent l'un des déterminants les plus puissants de la morbidité et de la mortalité. Selon Statistique Canada, les Canadiens appartenant au quintile de revenu le plus faible présentent des taux significativement plus élevés de maladies chroniques, de troubles de santé mentale et de mortalité prématurée comparativement aux groupes à revenu élevé.<sup>1,2</sup> Il est estimé que les déterminants sociaux, incluant le revenu, le logement, l'éducation et la sécurité alimentaire, expliquent jusqu'à 50% des résultats de santé observés dans la population.<sup>3</sup>

Face à cette réalité, le système de santé canadien a progressivement intégré ces déterminants dans la pratique clinique. Toutefois, cette reconnaissance s'est accompagnée d'un phénomène plus préoccupant : la médicalisation de la détresse sociale. De plus en plus, la pauvreté, l'itinérance et l'insécurité économique sont abordées comme des problèmes cliniques nécessitant diagnostics, prescriptions et suivis médicaux, plutôt que comme des enjeux politiques et structurels. Bien qu'animée par des intentions altruistes, cette approche risque de déplacer la responsabilité collective vers les cliniciens, de surcharger le système de santé et de perpétuer les inégalités qu'elle prétend réduire.

## La médicalisation : d'un concept sociologique à une réalité canadienne

La médicalisation est définie comme le processus par lequel des problèmes sociaux ou moraux sont redéfinis en termes médicaux et traités par des interventions cliniques.<sup>4</sup> Initialement décrite par Illich et Conrad, cette notion visait à dénoncer l'expansion du pouvoir médical au détriment de réponses sociales et politiques.<sup>5</sup>

Au Canada, ce phénomène s'est transformé. Les déterminants sociaux de la santé sont désormais au cœur des cadres conceptuels de santé publique, notamment ceux de l'Agence de la santé publique du Canada et de l'Organisation mondiale de la Santé.<sup>3,6</sup> Toutefois, leur intégration dans les soins primaires s'est faite sans un renforcement parallèle des politiques sociales, créant un déséquilibre où les cliniciens deviennent les principaux gestionnaires des conséquences de la pauvreté.

## Quand la pauvreté devient une condition clinique

Dans la pratique quotidienne, cette médicalisation se manifeste de façon concrète. L'accès à des prestations d'invalidité, à des logements subventionnés ou à des programmes de soutien repose souvent sur la présence d'un diagnostic médical ou psychiatrique documenté.<sup>7</sup> Ainsi, la détresse sociale doit être traduite en langage clinique pour devenir administrativement légitime.

Des études nord-américaines démontrent que les diagnostics de dépression, d'anxiété et de troubles somatoformes sont fréquemment utilisés comme substituts à une reconnaissance directe de la pauvreté.<sup>8</sup> Au Canada, cette dynamique contribue à une hausse marquée de la prescription de psychotropes, particulièrement chez les populations à faible revenu.<sup>9</sup> Or, ces interventions, bien que parfois nécessaires, n'agissent pas sur les causes structurelles de la souffrance et peuvent exposer les patients à des effets indésirables sans bénéfice durable.

## Une réponse inefficace et coûteuse pour le système de santé

La médicalisation de la pauvreté a des conséquences systémiques importantes. Les patients vivant dans la précarité

utilisent davantage les services d'urgence et connaissent des hospitalisations répétées, non pas en raison de pathologies médicales complexes, mais en raison de conditions sociales non résolues.<sup>10</sup> Ces hospitalisations évitables représentent un coût substantiel pour le système de santé canadien, déjà sous pression.

Par ailleurs, confier au système de santé la gestion de problèmes sociaux crée une illusion d'intervention gouvernementale. Comme l'ont souligné plusieurs analyses publiées dans le *Canadian Medical Association Journal*, cette approche permet aux décideurs politiques de détourner l'attention des réformes structurelles nécessaires en matière de logement, de revenu et de protection sociale.<sup>11,12</sup>

### Le fardeau moral et professionnel des cliniciens

Les professionnels de la santé se retrouvent au cœur de cette contradiction. D'une part, ils sont éthiquement tenus de reconnaître l'impact de la pauvreté sur la santé; d'autre part, ils disposent de peu d'outils efficaces pour y répondre.<sup>13</sup> Cette dissonance contribue à l'épuisement professionnel, particulièrement en soins primaires, où les médecins rapportent un sentiment croissant d'impuissance face à des besoins sociaux qu'ils ne peuvent satisfaire.<sup>14</sup> Former les cliniciens à dépister les déterminants sociaux est une étape nécessaire, mais insuffisante. Sans mécanismes intersectoriels solides et sans politiques publiques ambitieuses, cette formation risque de transformer l'empathie clinique en frustration chronique pour les professionnels de la santé.

### Démédicaliser la pauvreté sans nier ses effets sur la santé

La solution ne réside pas dans l'abandon de l'approche sociale en médecine, mais dans une démedicalisation stratégique des problèmes sociaux. Les données canadiennes démontrent que des interventions structurelles — telles que le logement stable, les transferts de revenus et l'accès universel aux services sociaux — améliorent significativement les indicateurs de santé et réduisent l'utilisation des services médicaux.<sup>15,16,17</sup>

Certaines initiatives canadiennes illustrent concrètement l'efficacité d'approches non médicales pour réduire les impacts de la pauvreté sur la santé. Le programme *Ontario Works* et le *Ontario Disability Support Program (ODSP)* offrent un soutien financier aux personnes à faible reve-

nu ou en situation de handicap, contribuant à améliorer la stabilité économique et, indirectement, les résultats de santé.<sup>17</sup> De même, des interventions en sécurité du revenu, comme les crédits d'impôt et les prestations gouvernementales analysés dans la littérature canadienne, ont été associées à une diminution des hospitalisations et de la mortalité, ainsi qu'à une amélioration de la santé mentale.<sup>16</sup> En parallèle de ces mesures, une meilleure intégration entre le système de santé et les services sociaux, notamment par des mécanismes formels de référence vers des ressources non médicales, contribuerait à recentrer les soins sur leur rôle clinique tout en assurant une prise en charge plus globale des patients.

Le système de santé doit jouer un rôle de soutien et de plaidoyer, plutôt que de substitution aux politiques sociales. Cela implique un réinvestissement massif dans le logement abordable, la sécurité du revenu et les services communautaires, tout en protégeant les cliniciens contre une expansion indue de leur rôle.

### Conclusion

La médicalisation de la pauvreté au Canada est le symptôme d'un déséquilibre structurel profond. En tentant de traiter médicalement des problèmes sociaux, le système de santé absorbe les conséquences de décisions politiques tout en s'éloignant de sa mission première. La pauvreté n'est pas une maladie, et la traiter comme telle ne peut qu'entretenir la crise actuelle. Recentrer la responsabilité sur des politiques sociales robustes est essentiel pour améliorer durablement la santé des Canadiens et préserver l'intégrité du système de soins.

### RÉFÉRENCES

1. Statistique Canada. *Inégalités de santé selon le revenu au Canada* [Internet].
2. Statistique Canada. *Portrait de la santé des Canadiens selon le statut socioéconomique* [Internet].
3. Agence de la santé publique du Canada. *Déterminants sociaux de la santé* [Internet].
4. Conrad P. *The medicalization of society*. Johns Hopkins University Press; 2007.
5. Illich I. *Medical Nemesis*. Pantheon Books; 1976.
6. World Health Organization. *Social determinants of health* [Internet].
7. Hansen H, Metzl J. *Structural competency in mental health and medicine*. Springer; 2019.
8. Hansen H et al. Pathologizing poverty: New forms of diagnosis. *Soc Sci Med*. 2014.
9. Morgan SG, et al. Psychotropic drug use in low-income

- populations. *CMAJ*. 2018.
10. Doran KM et al. Homelessness and emergency department use. *JAMA*. 2013.
  11. Andermann A. Taking action on the social determinants of health. *CMAJ*. 2016.
  12. Boothe K, et al. Health systems and social policy in Canada. *Health Policy*. 2020.
  13. Wilkinson R, Marmot M. *Social determinants of health*. Oxford University Press; 2003.
  14. Canadian Medical Association. *Physician burnout in Canada* [Internet].
  15. Mikkonen J, Raphael D. *Social determinants of health: The Canadian facts*. 2010.
  16. Pottie K et al. Income security interventions and health outcomes. *CMAJ*. 2020.
  17. Ontario Ministry of Health. *Health equity and poverty reduction* [Internet].

#### **Conflicts of Interest Disclosure**

There are no conflicts of interest to declare.

# Médecines moderne et traditionnelle en santé mentale : ennemies jurées ou pratiques complémentaires?

Yasmine Zemni<sup>1</sup>

<sup>1</sup> Faculté de médecine, Université d'Ottawa, Ottawa, ON, Canada

Correspondance: [yzemn037@uottawa.ca](mailto:yzemn037@uottawa.ca)

Date publiée: Avril 30, 2026

DOI: <https://doi.org/10.18192/UOJM.V16iS1.7810>

Nous assistons à une popularisation spectaculaire des thérapies dites alternatives et complémentaires, spécialement dans le traitement de troubles de santé mentale. Plus de 50% des patients américains souffrant de dépression ou d'anxiété y font appel alors que ce nombre s'élèverait à 70% chez les patients canadiens.<sup>1,2</sup>

Ces méthodes incluent, entre autres, des thérapies à base de plantes, de massages, de musicothérapie, d'aromathérapie et bien plus.<sup>3</sup> Ces dernières co-existeraient en appui aux thérapies conventionnelles fondées sur des preuves scientifiques, chez des patients qui choisiraient de faire appel à des moyens complémentaires à ce qui leur est proposé par leur fournisseur de soins.<sup>4</sup> Mais quelles sont les origines de certaines de ces thérapies, souvent perçues comme dépassées, dangereuses ou du moins inutiles?

C'est dans cette optique que j'ai choisi de me pencher sur la médecine médiévale arabo-musulmane, l'une des nombreuses médecines traditionnelles ayant forgé nos pratiques contemporaines, particulièrement en santé mentale. Cette médecine, ayant atteint son apogée entre les V<sup>ème</sup> et XV<sup>ème</sup> siècles, se situe au carrefour de la médecine gréco-romaine, des traditions arabes et des enseignements coraniques et prophétiques. Averroès et Avicenne figuraient parmi les pionniers de cette médecine qui se voulait intégrative, en revisitant, entre autres, la théorie des humeurs et en la conjuguant aux savoirs arabo-musulmans.

On a vu émerger des Bîmâristâns, hôpitaux de l'époque, dont le premier avait ouvert ses portes en l'an 707 à

Damas.<sup>5</sup> Ces institutions comportaient des ailes dédiées à la santé mentale, ornées de plantes, d'oiseaux et de fontaines dans le but de distraire le patient de ses pensées négatives.<sup>5</sup> Le philosophe persan et pionnier de la psychothérapie Abu Zayd Al-Balkhi affirmait déjà, au IX<sup>ème</sup> siècle, que « l'entourage, le logement, la situation de vie, le niveau d'activité physique et le régime alimentaire d'un individu pouvaient avoir un impact sur son bien-être mental ». <sup>6</sup> (Traduction libre) Les médecins de la civilisation arabo-musulmane auront contribué à déstigmatiser la maladie mentale à l'époque, reconnaissant son étiologie physiologique et multifactorielle, plutôt que de l'associer à des châtiments divins ou surnaturels. Le fameux traité sur la mélancolie d'Ishaq Ibn Imran, médecin arabe du IX<sup>ème</sup> siècle, insiste sur la nature médicale de ces troubles et nie catégoriquement toute explication surnaturelle. On voyait alors naître de multiples thérapies, soignant ces troubles que l'on percevait finalement comme des maladies à part entière.

Pour des raisons de méthodologie, on peut catégoriser certaines de ces pratiques en trois groupes: les thérapies environnementales et comportementales, les thérapies spirituelles et les thérapies bio-pharmacologiques.

Penchons-nous sur ces thérapies environnementales et comportementales, que l'on voit renaître aujourd'hui. Celles-ci incluent la musicothérapie, prônée par Ibn Imrane et Al Kindy, sous forme de musique instrumentale, de jeu de luth, de chants ou de récitations coraniques. Les patients y étaient exposés dans les cours des Bîmâristâns où jouaient des musiciens.<sup>7</sup>

On y pratiquait aussi l'aromathérapie, thérapie des senseurs retrouvant sa popularité aujourd'hui. Selon Al-Muwafiq, exposer ses patients à des odeurs agréables venait renforcer le cœur et le cerveau et on lui associait le pouvoir d'équilibrer les effets de la bile jaune et ainsi exercer un effet relaxant.<sup>8,9</sup>

Selon les enseignements d'Al-Balkhi, convaincu de l'interdépendance du corps et de l'esprit, les patients étaient aussi encouragés à pratiquer des activités physiques.

De plus, la période médiévale arabo-musulmane a vu naître les thérapies du divertissement et du rire, avec pour volonté de distraire le patient et de susciter en lui des émotions positives.<sup>10</sup> Les patients se promenaient en nature, jouaient des jeux de société, faisaient de la poterie et de la peinture, pratiquaient la calligraphie et se livraient à des interactions sociales encouragées par les médecins.

Quoique ces thérapies n'aient pas toutes fait l'objet d'études concernant leur efficacité et leur pertinence dans le traitement des troubles de santé mentale, elles demeurent néanmoins présentes dans la culture populaire. L'activité physique, désignant aujourd'hui divers sports et activités de remise en forme, est reconnue dans le traitement des symptômes anxio-dépressifs.<sup>11</sup> Des études ont aussi démontré la pertinence de la musicothérapie en complémentarité au traitement standard de la dépression pour la gestion des symptômes durant les trois premiers mois de la maladie.<sup>12</sup> L'aromathérapie fait également l'objet de plusieurs études et pourrait même avoir des effets anxiolytiques.<sup>13</sup>

Ces thérapies sont souvent associées à une amélioration de la progression clinique chez certains patients et sont appuyées par plusieurs études. Alors, même si, au XXI<sup>ème</sup> siècle, nous ne cherchons plus à expulser la bile jaune de chez nos patients, nous pouvons tout de même reconnaître le délicat équilibre entre la médecine traditionnelle et la médecine conventionnelle.

Les données actuelles sont sans équivoque et documentent une augmentation de la prévalence de ces thérapies complémentaires, avec plus de 50% des patients qui affirment que la combinaison de ces méthodes avec la médecine conventionnelle leur permettrait d'obtenir de meilleurs résultats.<sup>14</sup> Il est ainsi primordial que la communauté médicale adopte cette complémentarité dans son approche aux

traitements de troubles de santé mentale, en suivant l'exemple de certaines institutions hospitalières canadiennes.<sup>15</sup>

Malgré les avancées récentes, certains patients demeurent réticents de révéler à leurs fournisseurs de soins de santé qu'ils font appel à ces thérapies complémentaires.<sup>16</sup> En tant que professionnels de la santé, il est essentiel que nous nous informions sur ces méthodes par l'intermédiaire, entre autres, de formations, de lectures, d'initiatives de recherche et de dialogue avec les patients. Il s'agit de scruter les origines, les risques et les bénéfices de ces méthodes afin de réduire la stigmatisation et mieux comprendre nos patients. Il est de notre rôle de les épauler dans leur cheminement thérapeutique, de pratiquer une médecine fondée sur les faits et de bâtir un environnement sain permettant le dialogue.

Ces thérapies peuvent certainement co-exister avec la médecine conventionnelle dans un encadrement adéquat. Dans le meilleur intérêt des patients, il est de notre responsabilité de faire preuve d'ouverture lors de nos interactions avec ces derniers, de se monter curieux envers ces méthodes non-conventionnelles et de contribuer à la recherche afin de documenter la pertinence clinique, les risques et les effets secondaires, bâtissant ainsi des relations de confiance et de partenariat avec nos patients.

## RÉFÉRENCES

1. Kessler RC, Soukup J, Davis RB, Foster DF, Wilkey SA, Van Rompay MI, et al. The use of complementary and alternative therapies to treat anxiety and depression in the United States. *Am J Psychiatry*. 2001;158(2):289-294.
2. Ravindran AV, da Silva TL. Complementary and alternative therapies as add-on to pharmacotherapy for mood and anxiety disorders: a systematic review. *J Affect Disord*. 2001;66(1):1-8.
3. Wemrell M, Olsson A, Landgren K. The use of complementary and alternative medicine (CAM) in psychiatric units in Sweden. *Issues Ment Health Nurs*. 2020;41(10):946-957.
4. Clossey L, DiLauro MD, Edwards JP, Hu C, Pazaki H, Monge A, Smart K. Complementary and alternative medicine (CAM) use among mental health consumers. *Community Ment Health J*. 2023;59(8):1549-1559.
5. Ammar S. Histoire de la psychiatrie maghrébine. Université de Tunis; 2003.
6. Tahira S. The treatment of psychiatric disorders during medieval Islamic period. *Soul*. Dow University of Health Sciences; 2022.
7. Sidik R, Kamaruzaman AF, Abdullah MJ. Music therapy in medicine of Islamic civilisation. *Music in Health and Diseases*. 2021.
8. Lewicki T. Les sources arabes concernant l'ambre jaune de la Baltique. *Archaeologica Polona*. 1984;23:125.
9. Amad A, Thomas P. Histoire de la maladie mentale dans le Moyen-Orient médiéval. *Annales médico-psychologique*,

- Revue psychiatrique. 2011.
10. Besson F. La mélancolie dans la médecine arabe médiévale, compte rendu de la conférence de Pauline Koetschet. Les clés du Moyen-Orient. 2018.
  11. Al-Busafi SA, et al. Complementary and alternative medicine in psychiatry: recent evidence and clinical implications. 2023.
  12. Cohen D, Maxwell E. Music Therapy for Depression [Internet]. American Family Physician Journal; 2020; 101(5): 273-274. Disponible via <https://www.aafp.org/pubs/afp/issues/2020/0301/p273.html>
  13. Sivamaruthi BS, Chaiyavat C, Suganthy N, et al. Effect of lavender essential oil-based aromatherapy on anxiety: an overview of recent randomized controlled trials. Curr Pharm Des. 2024.
  14. Clossey L, DiLauro MD, Edwards JP, Hu C, Pazaki H, Monge A, Smart K. Complementary and Alternative Medicine (CAM) Use Among Mental Health Consumers. Community Ment Health J. 2023 Nov;59(8):1549-1559.
  15. Elash A. Move into hospital sector another sign of complementary medicine's growing popularity. CMAJ. 1997 Dec 1;157(11):1589-92.
  16. Clossey L, DiLauro MD, Edwards JP, et al. Complementary and alternative medicine (CAM) use among mental health consumers. 2023.

#### Remerciements

Je tiens à remercier Dre Kim Girouard, PhD pour son mentorat dans le travail de recherche en médecine médiévale arabo-musulmane sous-jacent cet article et Dre Céline Fresne, MD pour son appui dans la rédaction.

#### Conflicts of Interest Disclosure

There are no conflicts of interest to declare.

# Exposition solaire en construction: Un risque occupational sous estimé au Canada

Seyyon Satkunanathan<sup>1</sup>, Thusanth Thuraisingam\*

<sup>1</sup> Faculté de médecine, Université d'Ottawa, Ottawa, ON, Canada

\* Superviseur de l'auteur principal

Correspondance: [seyyonnathan@gmail.com](mailto:seyyonnathan@gmail.com)

Date publiée: Avril 30, 2026

DOI: <https://doi.org/10.18192/UOJM.V16iS1.7837>

Les travailleurs de la construction figurent parmi les groupes professionnels les plus exposés aux rayonnements ultraviolets (UV) au Canada. Pourtant, malgré un risque bien établi de cancers cutanés liés à l'exposition solaire cumulative, la sécurité solaire demeure largement marginalisée dans les politiques de santé et sécurité en milieu de travail. Cette omission est particulièrement pré-occupante dans le secteur de la construction, où les conditions de travail, les normes culturelles et les contraintes organisationnelles contribuent à une exposition prolongée et souvent non protégée.

Les rayonnements UV sont classés comme cancérigènes certains pour l'humain par le Centre international de recherche sur le cancer (CIRC).<sup>1</sup> Contrairement à d'autres agents cancérigènes présents sur les chantiers, comme l'amiante ou la silice cristalline, l'exposition solaire est souvent perçue comme un risque environnemental inévitable plutôt qu'un danger professionnel évitable. Les travailleurs de la construction passent fréquemment plusieurs heures par jour à l'extérieur, particulièrement durant les mois estivaux, avec une exposition maximale aux UV lors des heures de pointe.

Au Canada, environ 1,5 million de travailleurs sont régulièrement exposés aux UV solaires dans le cadre de leur emploi, et une proportion importante de ceux-ci œuvrent dans le secteur de la construction.<sup>2</sup> Malgré cette réalité, l'exposition solaire n'est pas systématiquement intégrée aux cadres réglementaires provinciaux de santé et sécurité au travail. Cette absence de reconnaissance formelle contribue à une prévention fragmentée, reposant principalement sur la responsabilité individuelle des travailleurs plutôt que sur des mesures structurelles imposées par les employeurs.

Les conséquences cliniques de cette exposition chronique sont bien documentées. L'exposition cumulative aux UV est fortement associée aux carcinomes cutanés non mélanocytaires, qui représentent la majorité des cancers diagnostiqués chez les travailleurs extérieurs, incluant ceux de la construction.<sup>3</sup> Certaines études suggèrent également que ces travailleurs peuvent développer des lésions cutanées à un âge plus précoce et avec une sévérité accrue, reflétant une charge d'exposition élevée dès le début de la carrière. Pourtant, les cancers cutanés liés au travail demeurent rarement reconnus comme maladies professionnelles, limitant l'accès aux mécanismes de compensation et aux interventions préventives ciblées.

Un obstacle majeur à la prévention réside dans la culture du milieu de la construction. Plusieurs études qualitatives démontrent que les travailleurs normalisent l'exposition solaire comme faisant partie intégrante du travail physique à l'extérieur et sous-estiment les risques à long terme.<sup>4</sup> Cette perception est renforcée par des normes valorisant la productivité, l'endurance et le travail continu, parfois au détriment de la santé personnelle. Dans ce contexte, les messages de prévention axés uniquement sur le comportement individuel, tels que l'application de crème solaire, sont insuffisants et peu durables.

Une approche efficace de sécurité solaire en construction doit s'inscrire dans le cadre plus large de la santé et sécurité au travail, en s'appuyant sur la hiérarchie des mesures de contrôle des risques. Les mesures administratives, comme l'adaptation des horaires pour réduire le travail durant les heures de pic UV, devraient être encouragées lorsque possible. Les contrôles environnementaux, incluant l'accès à des zones d'ombre temporaires sur les chantiers, sont souvent négligés mais réalisables.

L'équipement de protection individuelle, notamment les vêtements à manches longues, les chapeaux à large bord adaptés au port du casque et les lunettes filtrant les UV, devrait être intégré aux normes de sécurité au même titre que les autres équipements obligatoires.<sup>5</sup> La crème solaire, bien qu'utile, ne devrait jamais constituer la seule mesure de protection.

Des enjeux d'équité sont également au cœur de cette problématique. Les travailleurs saisonniers, migrants et autochtones sont surreprésentés dans certains segments de la construction et peuvent faire face à des barrières linguistiques, économiques ou structurelles limitant l'accès à l'information et aux mesures de protection. L'absence de politiques claires de la part des employeurs accentue ces vulnérabilités et contribue à des inégalités évitables en santé.

À l'échelle internationale, certains pays ont commencé à reconnaître l'exposition solaire comme un risque occupationnel légitime dans le secteur de la construction. En Australie, par exemple, des lignes directrices nationales encadrent explicitement la protection solaire en milieu de travail extérieur, et certains cancers cutanés peuvent être reconnus comme maladies professionnelles.<sup>6</sup> Le Canada pourrait s'inspirer de ces modèles afin de renforcer ses cadres réglementaires, améliorer la surveillance épidémiologique et promouvoir une culture de prévention proactive sur les chantiers.

Enfin, les cliniciens ont un rôle clé à jouer. L'évaluation clinique devrait inclure une anamnèse détaillée de l'exposition professionnelle aux UV, particulièrement chez les travailleurs de la construction présentant des lésions suspectes ou des antécédents de travail extérieur prolongé. Une meilleure reconnaissance du lien entre travail et maladie pourrait favoriser une prévention plus efficace et soutenir l'évolution des politiques publiques.

En conclusion, l'exposition solaire chez les travailleurs de la construction constitue un risque occupationnel évitable mais encore largement sous-estimé au Canada. Intégrer pleinement la sécurité solaire dans les normes de santé et sécurité du secteur de la construction est essentiel pour réduire la charge des cancers cutanés, améliorer l'équité en santé et reconnaître la responsabilité collective de protéger ceux qui bâtissent nos infrastructures.

## RÉFÉRENCES

1. International Agency for Research on Cancer. Radiation. Volume 100D. A review of human carcinogens. Lyon : IARC ; 2012.
2. Centre canadien d'hygiène et de sécurité au travail. Exposition au soleil : travailleurs en plein air [Internet]. Hamilton (ON) : CCHST ; 2022 [cité le 24 avril 2026]. Disponible : [https://www.ccohs.ca/topics/hazards/physical/sun\\_exposure/](https://www.ccohs.ca/topics/hazards/physical/sun_exposure/)
3. Lucas R, McMichael T, Smith W, Armstrong B. Solar ultraviolet radiation: global burden of disease from solar ultraviolet radiation. Genève: Organisation mondiale de la Santé ; 2019.
4. Horsham C, Auster J, Sendall MC, Stoneham M, Youl P, Crane P, Janda M. Interventions to decrease skin cancer risk in outdoor workers : update to a systematic review. BMC Res Notes. 2014 ;7 :10.
5. Organisation mondiale de la Santé. Protecting workers from ultraviolet radiation. Genève : OMS ; 2017.
6. Safe Work Australia. Guide on managing the risks of working in the sun [Internet]. Canberra : Safe Work Australia ; 2020 [cité le 24 avril 2026]. Disponible : <https://www.safeworkaustralia.gov.au/system/files/documents/2009/guide-managing-sun-risks.pdf>

## Conflicts of Interest Disclosure

There are no conflicts of interest to declare.

