

Rays of Change: Commentary on Potential Interventions for Skin Cancer Prevention in Ontario Medical Education



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ABSTRACT

This commentary addresses the rising incidence of skin cancer in Ontario and the underrepresentation of Skin of Colour (SOC) populations from sun-protection advocacy. It proposes the installation of sunscreen dispensers in medical schools to promote sun safety habits and awareness among future healthcare providers. The initiative aims to normalize sunscreen use across all skin types, with educational infographics including SOC needs. Despite potential barriers such as cost and community resistance, the involvement of healthcare professionals and students could drive long-term change in sun-protective behaviors and improve population health outcomes.

RÉSUMÉ

Ce commentaire aborde l'augmentation de l'incidence du cancer de la peau en Ontario et la sous-représentation des populations à peau foncée (Skin of Colour, SOC) dans la promotion de la protection solaire. Il propose l'installation de distributeurs de crème solaire dans les écoles de médecine afin de promouvoir les habitudes de protection solaire et la sensibilisation auprès des futurs professionnels de santé. L'initiative vise à normaliser l'usage de la crème solaire pour tous les types de peau, en intégrant des infographies éducatives adaptées aux besoins des populations SOC. Malgré les obstacles potentiels tels que le coût et la résistance communautaire, l'implication des professionnels de santé et des étudiants pourrait favoriser un changement à long terme des comportements de protection solaire et améliorer les résultats de santé publique.

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

CONCERN #1: HIGH SKIN CANCER INCIDENCE IN ONTARIO

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

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

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

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

Although SOC populations have a lower skin cancer incidence, diagnoses often occur at advanced stages with increased morbidity and mortality.¹³ Sunscreen advocacy is lower in SOC individuals, contributing to delayed diag-

noses.¹⁴⁻¹⁶ Societal ideals perpetuate misconceptions, with little representation of dark skin tones in sun-safety literature.^{17,18} However, self-reported sunburn history challenges stereotypes, as 34-66% of Black respondents reported sunburn occurrences.¹⁹ Native American respondents reported sunburn experiences (87%), with 9% attributing their lack of sunscreen use to believing that SOC populations cannot develop skin cancer.²⁰

RECOMMENDATIONS FOR IMPROVEMENT

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

Existing sunscreen dispensers in Canada

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

Potential barriers

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

Overcoming barriers

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

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

making sunscreen dispenser programs more feasible and scalable. In this way, medical professionals play a critical role in advancing skin cancer prevention through practical, data-driven initiatives.

Physician roles

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

CONCLUSION

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

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Conflicts of Interest Disclosure

There are no conflicts of interest to declare.