Evaluating and implementing an opportunity for diversity and inclusion in case-based learning

Évaluation et mise en œuvre d'un procédé visant à introduire la diversité et l'inclusion dans l'apprentissage par les cas

Sylvie Bowden,[1] Abirami Kirubarajan,[1] Amira Balbaa,[2] Inna Berditchevskaia,[3] Sarah Freeman,[4] Natalie Klostermann,[5] Mariam Naguib,[6] Bochra Kurabi,[1] Marcus Law,[1] Jana Lazor[1]

[1]MD Program, Temerty Faculty of Medicine, University of Toronto, Ontario, Canada; [2]University of Alberta, Alberta, Canada; [3]McMaster University Department of Medicine, Ontario, Canada; [4] University of Toronto Department of Obstetrics and Gynaecology, Ontario, Canada; [5]McMaster University Department of Family Medicine, Ontario, Canada; [6]McGill University, Quebec, Canada

Correspondence to: Abirami Kirubarajan, 1 Kings College Circle, M5S 1A8; phone: 1-647-272-3655; email: abi.kirubarajan@mail.utoronto.ca

Implication Statement

Problem-based learning (PBL) and case-based learning (CBL) often mention social identities only if this information is directly relevant to diagnosis, which can inadvertently perpetuate stereotypes in trainee learning. Using a student-developed resource entitled "Portraying Social Identities in Medical Curriculum: A Primer," we analyzed cases for social identities, identified gaps, and proposed changes, including use of a validated name bank to reflect diversity as represented by local census data. Through this innovation, suggestions were provided to represent the social determinants of health in CBL cases. Other medical schools can use our innovation to improve the social diversity of their medical curriculums.

Énoncé des implications de la recherche

Bien souvent, l'apprentissage par résolution de problèmes (ARP) et l'apprentissage par les cas (APC) ne touchent aux identités sociales que si ce type d'information contribue directement au diagnostic, ce qui peut involontairement perpétuer les stéréotypes dans l'apprentissage des étudiants. À l'aide d'une ressource élaborée par les étudiants, intitulée « Portraying Social Identities in Medical Curriculum : A Primer » (la représentation des identités sociales dans les programmes d'études médicales : une introduction), nous avons analysé des cas d'identités sociales, identifié des lacunes et proposé des changements, notamment l'utilisation d'une banque de noms validée reflétant la diversité qui ressort des données du recensement local. Grâce à cette innovation, des suggestions ont été faites pour représenter les déterminants sociaux de la santé dans les cas étudiés dans l'APC. Nous invitons les facultés de médecine à se servir de notre ressource pour mieux rendre compte de la diversité sociale dans leurs programmes d'études.

Introduction

Many medical schools use case-based learning (CBL) or problem-based learning (PBL) modules as a key teaching modality in pre-clerkship.[1] The modules portray fictional patient narratives to teach students relevant clinical and scientific content. However, previous research has raised the concern that these fictional patients may not adequately represent diverse social identities, such as race, socioeconomic status, or sexual orientation.[2-5] Medical students have previously perceived that social identities are usually mentioned only if that knowledge is a relevant risk factor that directly affects the diagnosis.[3] For example, a fictional patient's race or ethnicity may be mentioned if their background is a genetic risk factor for a specific disease.[3] This is contrary to the clinical reality in which a patient carries their social identity independent of their disease. As such, these cases may be portrayed

unrealistically and may contribute to stereotyping populations in clinical practice. Medical students may not be adequately prepared to engage with patients of diverse social identities, particularly related to gender/sexual identity or race.[2-5]

Our team of University of Toronto medical students and faculty supporters saw CBL cases as an opportunity to highlight social contexts to represent our city's multicultural and socially diverse population. By improving the diversity of social identities represented in our curriculum's CBL, we saw an opportunity to normalize patient diversity and prepare medical students for diversity in clinical practice.

Innovation

We used an existing student-developed framework—Portraying Social Identities in Medical Curriculum: A Primer[6]—to analyze each CBL case to determine whether 14 social identities (gender identity, sexual orientation, housing status, mental health, physical ability, Indigeneity, access to healthcare, neurodiversity, ethnicity, socioeconomic status, immigration status, age, and access to healthcare) were either mentioned or addressed. A total of 68 cases across two pre-clerkship courses were reviewed by two independent medical students. Across the 68 cases, 11/14 identities were addressed, and 14/14 were mentioned at least once (Figure 1). The ethnic origins of the names for the fictional healthcare providers and patients in the cases were also analyzed. Names of non-European origin were used for 27% of providers and 17% of patients, though recent census data show that over 50% of Toronto's population are of non-European descent.[7]
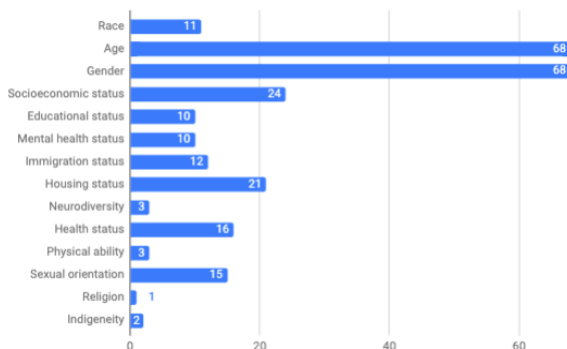

Figure 1. Representation of social identities in the case-based learning curriculum

Outcomes

We generated a list of proposed changes to the CBL modules to mention and address all 14 social identities. Additional discussion questions, resources, and information were added to generate discussion regarding under-represented communities and normalize information regarding under-represented social identities. We also created a name bank to include 300 representative names for a diverse list of ethnicities as a resource for consideration in naming the fictional patients and providers in cases. These names were compiled from the local census and through consultation with community members and peers who self-identified from common ethnic origins represented in the city.

The faculty supported the students' work and collaborated with them to incorporate the suggestions. Of the list of changes to the CBL patient modules (52 total), 22 (42%) were incorporated immediately, 18 (35%) were to be reviewed and incorporated for the following academic year, and 12 (23%) were not included. Reasons for not addressing the proposed changes included the need to make major changes to the case, or that the suggested concepts were addressed elsewhere in the curriculum. Examples of changes that may be incorporated in future years include further discussion of how a patient's social identity could affect their medical care and highlighting opportunities for physician advocacy for underserved populations. Developing a close alliance with a faculty mentor who provided guidance, facilitated a channel of communication with other faculty, and advocated for student representation in curriculum development was key to success.

Next Steps

Future work should formally evaluate student and faculty feedback on the changes and systematically evaluate social diversity in other areas of the curriculum such as lectures and simulated patients. Future research should also measure how the innovation may impact student perceptions of social diversity. Other medical schools may wish to adapt this initiative to improve the social diversity of their medical curriculums.

References

1. Cavanagh A, Vanstone M, Ritz S. Problems of problem-based learning: Towards transformative critical pedagogy in medical education. *Perspect. Med. Educ*. 2019 Feb;8(1):38-42. https://doi.org/10.1007/s40037-018-0489-7

2. Teal CR, Gill AC, Green AR, Crandall S. Helping medical learners recognise and manage unconscious bias toward certain patient groups. *Med. ed*. 2012 Jan;46(1):80-8.MacLeod A. https://doi.org/10.1097/ACM.0b013e31821db670

3. Mosley MP, Tasfia N, Serna K, Camacho-Rivera M, Frye V. Thinking with two brains: student perspectives on the presentation of race in preclinical medical education. *Med. Ed*. 2020 Dec 23. https://doi.org/10.1111/medu.14443

4. Ly A, Crowshoe L. 'Stereotypes are reality': addressing stereotyping in Canadian Aboriginal medical education. *Med. Ed*. 2015 Jun;49(6):612-22. https://doi.org/10.1111/medu.12725

5. Greene MZ, France K, Kreider EF, et al. Comparing medical, dental, and nursing students' preparedness to address lesbian, gay, bisexual, transgender, and queer health. *PLoS One*. 2018 Sep 20;13(9):e0204104. https://doi.org/10.1371/journal.pone.0204104

6. University of Toronto MD Program Office of Faculty Development. *Portraying social identities in medical curriculum: a primer*. https://ofd.med.utoronto.ca/sites/default/files/assets/ofd-resource/document/Portraying%20Social%20Identities%20-%20FINAL.pdf

7. Statistics Canada. *2016 Census profile*. Statistics Canada Catalogue no. 98-316-X2016001. 2016. Ottawa. Released February 8, 2017.