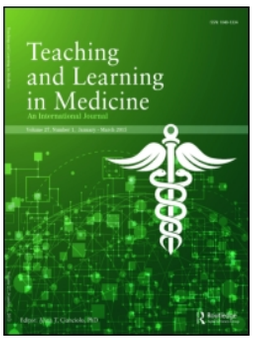

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Homelessness in the Medical Curriculum: An Analysis of Case-Based Learning Content From One Canadian Medical School

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ABSTRACT

Phenomenon: Homelessness is a major public health concern. Given that homeless individuals have high rates of mortality and morbidity, are more likely to be users of the healthcare system, and often report unmet health needs, it is important to examine how homelessness is addressed in medical education. We wanted to examine content and framing of issues related to homelessness in the case-based learning (CBL) curriculum and provide insights about whether medical students are being adequately trained to meet the health needs of homeless individuals through CBL. *Approach*: CBL content at a Canadian medical school that featured content related to homelessness was analyzed. Data were extracted from cases for the following variables: curriculum unit (e.g., professionalism/ethics curriculum or biomedical/clinical curriculum), patient characteristics (e.g., age, sex), and medical and social conditions. A thematic analysis was performed on cases related to homelessness. Discrepancies in analysis were resolved by consensus. *Findings*: Homelessness was mentioned in five (2.6%) of 191 CBL cases in the medical curriculum. Homelessness was significantly more likely to be featured in professionalism/ethics cases than in biomedical/clinical cases ($p = .03$). Homeless patients were portrayed as socially disadvantaged individuals, and medical learners were prompted to discuss ethical issues related to homeless patients in cases. However, homeless individuals were largely voiceless in cases. Homelessness was associated with serious physical and mental health concerns, but students were rarely prompted to address these concerns. *Insights*: The health and social needs of homeless individuals are often overlooked in CBL cases in the medical curriculum. Moreover, stereotypes of homelessness may be reinforced through medical training. There are opportunities for growth in addressing the needs of homeless individuals through medical education.

KEYWORDS
homelessness; medical education; public health

Introduction

Homelessness is a major public health concern. Recent reports suggest that on any given night, approximately 700,000 individuals across the United States and Canada are homeless.[1,2] Homeless individuals face a wide range of health problems and often experience poor health outcomes.[3] They also frequently report unmet needs for health care.[4]

Although unmet needs of these individuals stem from multiple factors, one possible reason has been the lack of training among healthcare professionals and students. What is known from the sparse medical education literature on this topic is cause for concern: Fourth-year medical students have less favorable attitudes toward people who are poor and are less willing to provide care for vulnerable populations compared to 1st-year medical students.[5]

A small number of studies have described attitudes of medical students and physicians toward homeless individuals. One cross-sectional study examined attitudes of 371 medical students, emergency medicine physicians, and residents using the Health Professional Attitudes Toward the Homeless Inventory. The study found that medical students generally had more positive attitudes and beliefs about homeless individuals than emergency medicine faculty and residents.[6] Another survey with 145 medical students found that they were more likely to report being comfortable with providing healthcare to a homeless person with a major mental illness after completing their psychiatry clerkship rotation.[7] Although medical students' attitudes toward homeless individuals have been documented, few studies have examined content related to homelessness in the medical curriculum. More specifically, no studies to date have analyzed what medical students learn about homelessness through

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case-based learning (CBL). Given that homeless individuals have high rates of mortality and morbidity, are more likely to be users of the healthcare system, and often report unmet health needs, it is important to examine how homelessness is addressed in medical education.[3]

The objectives of this study were to analyze content and framing of issues related to homelessness in the CBL curriculum at a Canadian medical school and to provide insights into whether medical students are being adequately trained to meet the health needs of homeless individuals through CBL.

Methods

All CBL cases ($n = 191$) and their associated teaching guides from a Canadian medical school were screened by one researcher (MJT) using a keyword search for the following terms: homeless, housing, street, couch-surfing, shelter, poor, destitute, impoverished, indigent. In terms of characteristics, CBL cases were presented in narrative form as real-life clinical scenarios that featured a patient seeking healthcare advice.[8] CBL cases included approximately 10 to 12 questions and prompted students to engage in discussion which was facilitated by a nonexpert clinician or nonclinician tutor.

Once case exemplars were identified, three researchers read the text of all CBL cases that featured content related to homelessness ($n = 5$). Data were extracted from text narratives for the following variables: curriculum unit (e.g., professionalism/ethics curriculum or biomedical/clinical curriculum), patient characteristics (e.g., age, sex), and medical and social conditions.

The researchers conducted a thematic analysis of all relevant CBL cases. A thematic analysis is a qualitative method that allows researchers to identify, analyze, and report patterns within a given set of data. Our analysis was based on Braun and Clarke's six-step approach to conducting thematic analyses, which involves (a) becoming familiar with the data, (b) generating initial codes, (c) searching for themes, (d) reviewing themes, (e) defining and naming themes, and (f) producing the report. As Braun and Clarke indicated, "It minimally organises and describes your data set in (rich) detail. However, frequently it goes further than this, and interprets various aspects of the research topic."[9(p79)]

The researchers approached each CBL case with several initial questions to guide the analytical process: (a) Why has the issue of homelessness been introduced into the case (e.g., Is homelessness central to the case or a shorthand way of establishing a disadvantaged state)? (b) What is the "framing" of the issue of homelessness (i.e., Is it presented as the result of individual vulnerabilities and/or structural factors)? (c) What characteristics/behaviors are stated or implied about the homeless person? Each researcher independently annotated and analyzed all relevant cases. Following this, the research team discussed emerging themes and summarized the findings through a preliminary report, which was subsequently revised. Discrepancies in the analysis were resolved through discussion in order to reach a consensus.

We used descriptive statistics to summarize quantitative variables. The proportion of cases that featured content related to homelessness between the professionalism/ethics and the biomedical/clinical curriculum was compared using Fisher's exact test. Statistical tests were two-tailed, and a p value lower than .05 was considered as statistically significant. Statistical analyses were performed on SPSS (v.20).

Results

General characteristics

Homelessness was mentioned in five (2.6%) of 191 CBL cases in this particular curriculum. One homeless individual was featured in each of the five cases that mentioned homelessness. Homeless individuals were included in four of 58 (7%) cases in the professionalism/ethics curriculum and in one of 133 (0.8%) cases in the biomedical/clinical curriculum. This difference was statistically significant ($p = .03$). Four of the five (80%) homeless individuals included in cases were men. The average age of homeless individuals featured in cases was 35 years.

Thematic analysis

Social disadvantage and vulnerability. Homeless individuals were presented as socially disadvantaged persons in cases. They were portrayed as not being able to afford basic necessities like housing, food, or drug prescriptions. These individuals were described as living a "hard life" and experiencing many challenging situations such as unemployment. For example, one case highlighted how the homeless patient had difficulties finding a job because employers were reluctant to hire someone without a permanent address.

Social disadvantage was occasionally illustrated in cases that featured ethical situations. In one scenario focused on principles of allocating medical resources (e.g., blood products), the homeless patient had the lowest socioeconomic status among the individuals included in the scenario. In contrast, the patient with the highest socioeconomic status was described as the premier of the province (a position analogous to the governor of

a U.S. state). Students discussed how different individuals would be treated if ethical principles (i.e., rewarding social usefulness) were applied. The scenario seemed to imply that the social usefulness of the homeless individual was extremely low.

In another case that focused on ethical dilemmas regarding patient confidentiality, the homeless patient was the subject of a joke by a medical resident. Students were prompted to discuss why the medical resident's jokes were inappropriate and how derogatory humor focused on socially disadvantaged individuals (i.e., the homeless patient) was "oppressive" and could reinforce "social superiority" of healthcare professionals. In this particular scenario, the medical resident also instructs the student to examine a large tumor in a patient who is "totally out of it." The resident justifies this physical exam as a rare learning opportunity and cites that the patient won't remember the situation. The case encouraged medical students to discuss why the medical resident's actions were unethical. The case concluded by asking medical students to consider how the patient's privacy and confidentiality could be maintained during clinical encounters.

Voicelessness and decontextualization. Homeless individuals featured in case scenarios were largely voiceless. Only two cases featured homeless patients who spoke two to three short sentences. The patients never spoke about their medical symptoms or conditions. This observation stands in sharp contrast to the majority of cases in our sample in which the main characters often spoke about their symptoms to the healthcare providers. Among all case scenarios analyzed in the study, one case featured dialogue between a homeless individual and a medical student.

The representation of homeless individuals was limited. Details of the individual's emotions, cultural factors, social support, and life course were lacking from cases. The only case related to homelessness in the biomedical/clinical curriculum featured an individual who had a drug-resistant infection. The case focused on the individual's medical condition and challenges with securing employment. In another case, the homeless individual was described largely in terms of his health and social problems. The homeless individual's grandmother, who was the main character, spoke in the case. She expressed concern for her grandson and described problems with his neglectful behavior. One case did describe details of the patient's life, including how he used to go lobster fishing with his father and how he lost his job during the onset of schizophrenia. One other case described how the patient moved with her family to Canada as a young child. The scenario described the patient's "ongoing challenges" of managing disease and mentioned her goal of "living independently."

Poor physical and mental health. In cases, homeless individuals presented with serious physical health concerns including methicillin-resistant Staphylococcus aureus, advanced gangrene of both feet requiring amputation, a large testicular tumor, and hepatitis C. In one ethics scenario, students discussed how the homeless patient's condition would affect decisions regarding allocation of medical resources. Because the homeless individual in this particular case had the most severe health condition (e.g., advanced gangrene), he would have been allocated to life-saving intervention first if a prioritarian principle (i.e., "sickest first") was applied.

Homelessness was associated with mental illness and drug abuse in the scenarios. Specifically, two of the five (40%) homeless individuals had schizophrenia, of which one had previously attempted suicide. Two out of five (40%) homeless individuals were described as abusing alcohol or drugs.

Met and unmet needs. Although homeless individuals in case scenarios were described as having serious physical and mental health concerns, the cases rarely prompted students to discuss how the needs of homeless individuals could be addressed. On several occasions, the case described the effect of homelessness on the individual (e.g., not being able to secure employment). Only one case that featured an individual with mental health concerns offered strategies to comprehensively address their health and social needs. The case listed the patient's needs, followed by a list of healthcare professionals who were responsible for addressing unmet needs. The physician was listed as being responsible for monitoring psychiatric symptoms, administrating medication, recognizing side effects, and writing a letter for the patient to access a special diet allowance. The case also listed occupational therapists and community case managers as being responsible for addressing the patient's other health and social needs, including help with managing finances, securing employment, and planning meals. Students were not prompted to explore these needs further, and there was no discussion about how medical students or physicians could help patients access services related to housing, food, or employment. This contrasts with other cases where medical students are prompted to discuss how to help patients access support services.

Self-neglect and social undesirability. Across cases, the extreme health and social conditions that homeless individuals presented with seemed to imply self-neglect, and

the characters often exhibited socially undesirable behaviors. For example, one case featured a homeless man with advanced gangrene of both feet, requiring amputation. In a second case, the individual's poor health and social situation were directly attributed to her own inability to care for herself. The case provided this explanation: "Previous attempts at independent living have failed on multiple occasions, due to poor medication adherence, poor hygiene, inability to hold a job and failure to pay bills." When this character was offered assistance, she was initially unreceptive and aggressive, saying, "Look, I'm fine now and I want to get out of here!" The healthcare team subsequently helped her gain entry into a housing program. In another case scenario, the homeless individual expressed his dislike of hospitals and flushed antibiotics down the toilet. In this particular case, students were prompted to discuss how this individual's actions contributed to the spread of antimicrobial resistance. The associated teaching guide explained that the man's decision to dispose of the antibiotics was "not a good idea" and explained, "antibiotics which, if disposed of into the environment, might lead to further development of antimicrobial resistant bacteria." The only case in the curriculum that was specifically focused on the social determinants of health featured a homeless individual who lived periodically with a family member. The case described the individual as having "dropped out of high school and moved out of the house when he was 16 after years of conflict and problems with the family. He has had ongoing problems with alcohol and drug abuse since his early teens." His family members were tired of helping him out, as he was seen as a burden to them. The grandmother in the case spoke about her grandson:

> Last time we took them into our home it was awful. He don't do nothing, expects us to wait on him all the time and he's always flying off the handle. … He's not moving back in with us again. We're tired of bailing him out.

The case prompted medical students to discuss the social determinants of health, but the individual was presented in a way that seemed to suggest that his experience of homelessness was mostly due to personal behaviors.

Discussion

To the authors' knowledge, this is the first study of its kind to explore how homelessness is being addressed in case-based medical curriculum. The findings from this study suggest both positive and negative features related to the ways in which issues of homelessness are addressed in undergraduate medical education curriculum. On a positive note, content related to homelessness does appear in the curriculum. The prevalence of homelessness among individuals included in cases was comparable to the prevalence of homelessness in the general population.[1,2] The ratio of male-to-female individuals who were homeless in cases was also similar to the ratio observed in homeless populations.[3] Homeless individuals in cases also presented with serious physical and mental health conditions, which is consistent with studies that have described the health of homeless populations.[3]

Homeless individuals were portrayed in cases as socially disadvantaged and experiencing difficult life circumstances such as unemployment. They were often included in cases as examples of low social status and vulnerability. For example, one case asked students to consider ethical principles such as rewarding social usefulness by comparing a homeless individual alongside a provincial premier, implying that the social usefulness of the homeless individual was extremely low. They were also featured in somewhat dramatic ethical situations related to confidentiality, derogatory humor, and allocation of scarce medical resources. These particular ethical scenarios highlighted how students should not exploit vulnerable patients.

More important, homeless individuals included in cases were largely voiceless, and cases lacked details about the individual's social context. This voicelessness and decontextualization of vulnerable patients is at odds with the goals of CBL and patient-centered medical education.[10] However, one case that described details of the patient's life, including how he lost his job at the onset of schizophrenia, helped to humanize the patient featured in the case. Despite the serious physical and mental health concerns that were presented in cases, cases rarely prompted students to discuss health concerns in the context of homelessness as cases related to homelessness were significantly less likely to be included in the biomedical/clinical curriculum. One case did provide an extensive list of the patient's health and social needs and listed healthcare professionals who were responsible for addressing these needs. However, physicians were presented as being responsible only for managing symptoms and medications. Social workers and community case managers were listed as being responsible for other health and social needs. These findings invite reflection on what medical students learn about different roles and responsibilities of healthcare professionals. This dichotomization between "medical" needs that the physician is responsible for and "social" needs that allied health professionals are responsible for could potentially reinforce misguided ideas about patient care. Medical students may be taught implicitly that addressing these "social"

needs is not their responsibility, and subsequently the needs of individuals who are homeless may be overlooked.

Moreover, experiences of homelessness included in cases were associated with stereotypes such as individuals living with schizophrenia or exhibiting self-neglect and destructive personal behaviors. Of interest, two of the three (66%) cases in the medical curriculum that featured a patient with schizophrenia were also homeless. Studies suggest that the average prevalence of schizophrenia in homeless populations is 11%; thus, the association between homelessness and schizophrenia appears to be exaggerated in the case-based curriculum.[11] In addition, homeless individuals could be seen by medical students as less desirable patients because they were presented in cases as displaying negative attitudes or actions (e.g., dislike of hospitals). Their homeless status and poor health were generally attributed to negative personal behaviors rather than familial or societal factors. This association between negative behaviors and socially disadvantaged characters in curricular content could potentially contribute to students' less favorable attitudes toward vulnerable populations over time.[5]

Medical education is an opportune time to educate about health needs of homeless individuals and positively influence learners' attitudes toward vulnerable populations.[12] As homeless individuals frequently report unmet health needs,[4] these findings have important implications for medical educators and authors of cases. Cases are meant to mirror real-life practice,[8] and the current analysis suggests that medical students may not be adequately prepared to meet the needs of individuals experiencing homelessness.

This study highlights potential areas for curriculum reform, including the need to educate learners about comprehensive strategies to meet the health and social needs of this population through CBL. In addition to the traditional responsibilities of diagnosis and treatment for health conditions, medical students could also receive more training on the social determinants of health and health advocacy through CBL and other avenues during medical training. Educating learners around referrals to allied health professionals and community organizations would help ensure patients are adequately supported. Discussion in cases could also revolve around barriers for homeless and vulnerably housed populations in accessing healthcare,[13] structural factors (e.g., housing market, government policies) that contribute to homelessness, and significant cost-savings for the healthcare system in addressing homelessness. Medical trainees can also be encouraged to reflect on themes related to marginalization, potential biases, and overcoming stigmatizing beliefs when caring for vulnerable patients.[7] Making unwarranted assumptions or treating persons based on stereotypes could lead to cognitive errors in medical decision making and result in devastating consequences.[14] Medical schools could also offer service-learning opportunities and clinical electives centered on caring for marginalized populations. Ultimately, fostering empathy and enhancing medical education through didactic and practical strategies will help to address health needs of vulnerable populations.

Limitations

The study was conducted at a single institution. Although our insights may not be generalizable, we offer insight for others with case-based curricula regarding how cases might best be used to critically address the issue of homelessness. Although homelessness may have been included in other instances in the curriculum, such as didactic lectures as well as formal or informal discussion with physician tutors, only the content of CBL cases was analyzed. Therefore, these findings may not be generalizable to the broader medical curriculum or to content related to homelessness that is featured at other institutions.

Conclusion

Homeless patients are portrayed as socially disadvantaged individuals, and medical learners are prompted to discuss ethical issues related to homeless patients in CBL cases. Homelessness is associated with serious physical and mental health concerns. However, the health and social needs of homeless individuals are often overlooked in the case-based medical curriculum. Moreover, stereotypes of homelessness may be reinforced through CBL. There are opportunities for growth in addressing the needs of homeless individuals through medical education.

References

1. The 2012 Point-in-Time Estimates of Homelessness (2012 Annual Homelessness Assessment Report). Washington, DC: U.S. Department of Housing and Urban Development, 2012.
2. Gaetz S, Donaldson J, Richter T, Gulliver T. *The state of homelessness in Canada 2013*. Toronto: Canadian Homelessness Research Network Press, 2013. Available at: http://www.homelesshub.ca/ResourceFiles/SOHC2103.pdf
3. Hwang SW. Homelessness and health. *Canadian Medical Associaton Journal* 2001;164:229–33.
4. Argintaru N, Chambers C, Gogosis E, Farrell S, Palepu A, Klodawsky F, et al. A cross-sectional observational study of unmet health needs among homeless and vulberably

housed adults in three Canadian cities. *BMC Public Health* 2013;13:577.
5. Crandall SJ, Volk RJ, Loemker V. Medical students' attitudes toward providing care for the underserved: Are we training socially responsible physicians? *Journal of the American Medical Association* 1993;269:2519–23.
6. Fine AG, Zhang T, Hwang SW. Attitudes towards homeless people among emergency department teachers and learners: A cross-sectional study of medical students and emergency physicians. *BMC Medical Education* 2013;13: 112.
7. Morrison A, Roman B, Borges N. Psychiatry and emergency medicine: Medical student and physician attitudes toward homeless persons. *Academic Psychiatry* 2012; 36:211–5.
8. Williams B. Case-based learning—A review of the literature: Is there scope for this educational paradigm in prehospital education? *Emergency Medicine Journal* 2005;22: 577–8
9. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology* 2006;3:77–101.
10. MacLeod A. Six ways problem-based learning cases can sabotage patient-centered medical education. *Academic Medicine* 2011;86:818–25.
11. Folsom D, Jeste DV. Schizophrenia in homeless persons: A systematic review of the literature. *Acta Psychiatrica Scandinavica* 2002;105:404–13.
12. Wear D, Kuczewski MG. Perspective: Medical students' perceptions of the poor: What impact can medical education have? *Academic Medicine* 2008;83:639–45.
13. Olah ME, Gaisano G, Hwang SW. The effect of socioeconomic status on access to primary care: An audit study. *Canadian Medical Association Journal* 2013;185: E263–9.
14. Burgess D, van Ryn M, Dovidio J, Saha S. Reducing racial bias among health care providers: Lessons from social-cognitive psychology. *Journal of General Internal Medicine* 2007;22:882–7.