



Medical Student–Led Initiative to Incorporate Harm Reduction into Medical School Curriculum

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To the Editor:

The USA remains in the midst of an unprecedented and escalating overdose crisis, with over 100,000 overdose deaths in 2021 alone [1]. Harm Reduction has played a vital role in combatting the overdose crisis and encompasses several strategies to reduce overdose death risk [2]. Ultimately, Harm Reduction aims to reduce negative consequences associated with substance use. Harm Reduction interventions include providing access to sterile syringes, naloxone (medication to reverse opioid overdose) distribution, fentanyl test strip (used to detect the presence of fentanyl in substances) distribution, and supporting people who use substances (PWUS) with options beyond abstinence. Upholding respect for PWUS and their rights is foundational to the conceptual and practical frameworks of Harm Reduction, serving as a countermeasure to the stigma PWUS consistently face. Provider attitudes and knowledge on the management of substance use disorder (SUD) is an important determinant of health for PWUS, who represent a uniquely vulnerable population [3].

Providing overdose education and naloxone to first responders, at-risk patients, and relatives has been shown to decrease opioid overdose death rates [4]. Although few reports of overdose prevention, recognition, and response (OPRR) training for medical students exist, to the authors' knowledge, there have been no studies highlighting the inclusion of other Harm Reduction principles into an OPRR training [5]. Integrating Harm Reduction into healthcare

may provide physicians with the tools to better understand OPRR in addition to the barriers that PWUS face in accessing healthcare, offering an important avenue to addressing the overdose crisis.

To address the need for an increased understanding of OPRR and the negative outcomes experienced by PWUS due to stigma, our group of medical students developed a course for incoming medical students at the David Geffen School of Medicine at UCLA (DGSOM). In August 2022, we partnered with community organizers and hosted a lecture introducing the principles of Harm Reduction and OPRR training for the incoming class of medical students. The inclusion of this course into curriculum was a direct result of student advocacy.

We worked with the Assistant Dean for Curricular Affairs at DGSOM to develop the course and incorporate it as a mandatory lecture in the first month of medical school curriculum for first year medical students at DGSOM. This first month, entitled Basecamp, introduces incoming students to the profession of medicine and to social and structural determinants of health. Our course consists of a one-hour lecture by our community partner, the Director of Outreach at a local SUD treatment center, including an introduction to Harm Reduction and an OPRR training. This is followed by a thirty-minute guided discussion led by student facilitators and local Harm Reduction service providers. The discussion was intended for space to critically reflect on potential internalized bias, attitudes, language, and the myriad of stigmatizing ways in which PWUS can be viewed. All interested students received nasal naloxone (Narcan) and fentanyl test strips following the course.

Students were administered an anonymous online pre-test and post-test survey assessing OPRR knowledge and a general course evaluation. Oral consent was obtained and participation in the survey was voluntary and did not affect students' grades. This study was IRB exempt by the UCLA Institutional Review Board. The OPRR assessment

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was comprised of three categories and fifteen total statements assessing knowledge on how to prevent, recognize, and respond to an overdose; “Which of the following factors increase the risk of an opioid overdose?”, “Which of the following are indicators of an opioid overdose?”, and “Which of the following should be done when managing an opioid overdose?”. Within each category, there were five statements with Yes/No/I don’t know options. Finally, students were asked if they thought future classes should receive this training, open-ended feedback on the course, and how they would like to see Harm Reduction further incorporated into the curriculum.

Of 185 students in the class, 108 completed the pre- and post-test survey (58.4% response rate). In the pre-test survey, students correctly answered questions regarding overdose prevention 81.8% of the time, compared to 93.6% correct in the post-test survey (2 proportion *Z* test; $p < 0.001$). Regarding overdose recognition, students correctly answered 61.2% of the questions in the pre-test survey compared to 78.3% in the post-test ($p < 0.001$). Finally, for overdose response knowledge, students correctly answered 78.6% of the questions in the pre-test survey, compared to 95.7% in the post-test survey ($p < 0.001$).

When students were asked if they thought future classes should receive this training, almost all (97.5%) said yes, with (2.4%) declining to answer. In the feedback section, multiple students requested hands-on experience with nasal naloxone administration and fentanyl test strip utilization, case studies, and a further understanding of how Harm Reduction principles can be incorporated into medical practice. Various students also noted an interest in longitudinal training on SUD treatment and Harm Reduction, and a deeper discussion on policy and advocacy on Harm Reduction in their community and nationwide.

This preliminary data reveals that a short course introducing first year medical students to OPRR and Harm Reduction has the capacity to improve medical students’ knowledge of OPRR and was well received by the class. Most students believed that future classes should receive the training and many requested additional trainings on Harm Reduction and naloxone administration. At a time of unprecedented overdose death rates in this country, it is critical to prepare future physicians to participate in overdose prevention efforts with

their patients. We argue that incorporating OPRR and Harm Reduction into early medical school curricula offers a promising avenue to do so.

We note several limitations to our findings. Our course and pre- and post-tests were administered to a single class at a single medical school, and the generalizability of our findings is unknown. Additionally, we tested students immediately after the course, and we are uncertain on whether medical students will retain this knowledge.

In the future, we hope to reassess these student’s knowledge on OPRR further in their medical education. We are currently working with faculty to further incorporate Harm Reduction curriculum throughout all four years of medical school.

Declarations

Disclosures On behalf of all authors, the corresponding author states that there is no conflict of interest.

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