Published in final edited form as:

Acad Psychiatry. 2018 June ; 42(3): 438–439. doi:10.1007/s40596-018-0898-2.

Substance Use in Medical Trainees: Current Problems and Future Directions

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To the Editor

Although media coverage has recently drawn the public eye to opiate use within the medical community, those of us within the field are well aware of the profession's long history of substance abuse. Freud explored the use of cocaine for its anti-depressant effects in his early years as a physician, becoming so enamored that he began "collecting the literature for a song of praise to this magical substance" [1]. Similarly, William Halsted, one of the founders of Johns Hopkins Hospital, experimented on himself to investigate the anesthetic effects of cocaine [1]. As a society we have since come to understand substance use disorders (SUD), but we are not paying enough attention to the fact that physicians, and physicians-in-training in particular, are still suffering from the adverse effects of SUD. Therefore, we discuss issues related to trainee substance use here.

Despite the devastating implications of medical trainees engaging in substance use, much less has been written on this topic than on "wellness" in trainees. A medical librarian searched Ovid MEDLINE on July 27, 2017 using controlled vocabulary (MeSH) and free-text terms for combinations of medical students or residents and 1) a set about substance abuse and, 2) a set about wellness concepts. Despite more than twice as many articles about substance abuse than wellness (416,825 vs. 200,730), the ratio inverts when combined with the concept of trainees – only 1,527 articles address substance use issues in all medical trainees, but 2,383 articles were written about trainee wellness. The ratio holds whether articles are about students (923 vs. 1,492) or residents (693 vs. 1,056). It is not clear why there is a discrepancy between these two complementary areas of research, but we suspect that important data can be gathered in this field.

Medical trainee well-being is clearly a topic of interest for educators and policy makers. For example, trainee members of the Accreditation Council for Graduate Medical Education (ACGME) recently identified objectives to promote resident wellness [2]. However, we believe it is not enough to focus simply on student wellness as a whole. Rather, we need to first understand the scope of the current substance use problem and then develop resources tailored to the needs of medical trainees.

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Disclosure

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

Physicians-in-training are taught early on about the dangerous health outcomes associated with substance use, and this is regularly translated into patient education. However, there are few studies addressing the impact of substance use on medical trainees themselves, and what little data do exist concern mostly the anesthesiology community. One retrospective cohort survey of anesthesiology residents found that 7.3% of residents with substance use disorders died over the course of their training, all as a result of substance use [3]. These are preventable deaths that we as community need to prevent.

In addition to the personal costs of substance use, we must also take note of the effects it can have on our patients, as there is evidence that substance use and adverse patient outcomes are linked. For example, in a 2012 study of alcohol dependence in surgeons, 77.7% of medical errors in the three months preceding the survey were committed by surgeons with alcohol use disorder [4]. Given the effect that substance use can have on competent, seasoned physicians, medical trainees are likely even more prone to medical errors if they suffer from substance use disorders.

Considering the demonstrated negative consequences of SUD, what is being done to support trainees who are dealing with or susceptible to them? At our home institution, the beginning weeks of medical school orientation heavily emphasize the support services available. Administrators advise students about how to remain physically and mentally healthy and suggest resources that they can access for medical concerns. However, specific information regarding help with substance issues is not emphasized to the same extent.

We believe there is much room for improvement in this area. Extrapolating from data regarding substance use among the general public in the United States, which reveals that 20.2 million American adults (8.4%) have an SUD [5], approximately 8 students in a class of 100 could have an issue with substance use. To help these individuals, it is imperative to provide information to trainees at the beginning of medical school or residency and to remind them about available resources throughout the course of their training. For instance, administrators can advertise Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) meetings to students and residents and take steps to ensure the confidentiality and accessibility of these meetings. For students who seek out individualized substance use counseling, institutions can offer guidance in finding clinicians who are not affiliated with their academic centers and who will not be acting in a supervising capacity, thereby preventing future conflicts of interest when trainees are being evaluated. We suggest each medical school develop resources and regularly disseminate information about where trainees can go for SUD help themselves, and identify individuals that students can contact if they are aware of a colleague experiencing a problem.

We recognize that these can be difficult questions to ask of ourselves, but we would be remiss in avoiding such conversations for fear of repercussions or exposing our vulnerabilities. Ultimately, trainees with SUD will likely become practicing physicians and, if the appropriate interventions are implemented, they can be helped before it is too late. We hope that starting this conversation will lead to further research and interventions, will improve trainee well-being, and will prevent harm to patients.

Acknowledgments

CH and WA are both supported by an NIH Medical Scientist Training Program Training Grant T32GM007205.

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