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Experiences and opinions of health professional students participating in an opioid use disorder educational event

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Abstract

Introduction: The objectives of this study were to describe health professional students' experiences and opinions about patients with opioid-use disorder (OUD), to summarize evaluation results from an OUD educational event and to compare results by sex, discipline, and clinical experience.

Methods: The OUD educational event lasted 75 minutes and covered the epidemiology of the opioid epidemic, evidence-based prevention and treatment services, stigma, and recommendations on how to improve care. An anonymous pre-event survey collected information on attendees' experiences and opinions about patients with OUD. The postevent survey collected information on the attendees' evaluation of the event.

Results: Forty percent of students reported having a friend or family member who has/had an OUD. A minority (29.1%) reported that they would be uncomfortable working with patients with OUD or would prefer not to interact with patients with OUD (27.7%). Overall, the event evaluation results were very positive, and 85.5% reported that the information would change or influence their clinical practices. The open-ended responses found that the content was informative (n = 36); the attendees liked the inclusion of statistics (n = 19) and that the content was locally focused (n = 13).

Discussion: Health professional students participating in this event had fewer negative opinions of patients with OUD than previous research has found, and this may, in part, be explained by their personal experiences. Overall, health professional students want to learn more about patients with OUD.

Keywords: interprofessional, education, substance use, health professional students, opioids

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Introduction

In 2016, approximately 2.1 million people in the United States had an opioid use disorder (OUD), and only 21% of those people received addiction treatment.[1] In response to the opioid crisis, a 2018 US federal report recommended that all health professionals be trained on screening, identification, and prevention/treatment services for substance use disorders (SUD).[2] It is unknown how many health professional students across all disciplines receive education on SUDs as part of their training.

A 2015 survey of US pharmacy programs found that 94% had curriculum addressing SUDs; however, the mean number of hours (2.7) was less than the 4 hours

recommended by the American Association of Colleges of Pharmacy.[3] A 2017 survey[4] found that all medical schools that responded included content on pain and SUD, and a 2009 survey[5] of dental programs found that 73% addressed SUDs. Despite some health professional programs including SUD education in their curricula, students infrequently learn from a rigorous evidence-based SUD curriculum,[6-8] and the content likely varies across disciplines.

West Virginia (WV) has the highest age-adjusted rate of drug overdose deaths in the United States, and the number of deaths has continued to increase every year over the past decade.[9] West Virginia University (WVU), as a land grant institution, has the mission to improve the lives of WV residents. The WVU Health Sciences Center leadership identified development of standardized SUD education for its health professional programs as a top priority to be addressed through the WVU Office of Interprofessional Education (IPE). The WVU IPE office coordinated the development of a 2-part evidence-based educational event that could be integrated annually to ensure that all health professional students received OUD-specific education. The schools of pharmacy and dentistry made the event mandatory for students, and it was optional for other health professional students.

The purpose of this study is to: (1) Describe health professional students' experiences and opinions about patients with OUD; (2) Summarize the evaluation results from the first session of this 2-part series; and (3) Compare the results by sex, discipline, and clinical experience. The results of this study can be used to inform the development of a standardized OUD curriculum for health professional students.

Methods

The event was part of a 2-semester-long IPE initiative for health professional students. Part 1 of this series was the lecture described herein. The event was 75 minutes long and it included an overview of opioid misuse and OUD that was developed and presented by 1 of the study authors (E.L.W.). The lecture content was based on a grant-funded OUD training for practicing health professionals in Ohio (A. Clark, unpublished data, January 2020). The original content was designed as an introduction for health professionals with limited to no training in SUD. A multidisciplinary advisory committee guided the original training development and an iterative process was used to continuously revise the content based on evaluation feedback from community-based testing. The existing content was tailored to WV by integrating state-specific epidemiological data. The lecture included epidemiology, risk factors, stigma, prevention and treatment services, and recommendations to improve patient care. The content summarizes research that found stigmatizing language reduces patients' quality of care[10,11] and their willingness to seek treatment.[12] The terminology used throughout complied with published recommendations.[13,14] Content on epidemiology, services, and opportunities to improve care was focused specifically on OUD, whereas content on risk factors and stigma pertained to SUDs more broadly.

An anonymous survey was conducted before and after the event in April 2018. The presurvey had 31 items measuring attendees' experiences and opinions about patients with OUD. Respondents were asked to rate their agreement on 31 statements on a 4-point Likert-type scale ranging from strongly agreed to strongly disagreed. Because there is no validated instrument for assessing health professional students' experience and opinions about patients with OUD, all but 5 of the 31 statements were based on existing instruments with demonstrated psychometric properties.

The existing items were modified to be specific to opioid use, and wording was changed to reflect current nomenclature. Seven items measuring perceived discrimination were from a stigma scale[15] that asked what *most people* think about patients with OUD. Fifteen items were from a survey of experience and attitudes among Australian medical students and included general attitudes, confidence, motivation, and role legitimacy.[16] Four items were based on items in the Substance Abuse Attitude Survey[17] and included whether OUD was a treatable illness, OUD patients could only be treated by a specialist, OUD patients were not treatable if they relapsed multiple times, and OUD patients are unpleasant to work with. The presurvey also collected information on the attendees' age, sex, discipline, whether they were a WVU student, their anticipated year of graduation, and whether they were currently working in a clinical care setting.

The postsurvey was administered at the end of the first session and included the following closed-ended questions: importance of SUD education (*not important*, *somewhat important*, *very important*), interest in an online OUD self-guided course (*very uninterested*, *uninterested*, interested, *very interested*), overall presentation rating (*excellent*, *very good*, *good*, *fair*, *poor*), and whether the presentation will change or influence their clinical practices (*no*, *yes*). Two open-ended questions asked what other topics students wanted to learn about. The final section was 3 open-ended items asking what attendees' liked least and most about the presentation as well as whether they had any additional comments or recommendations. The postsurvey was not paired with the presurvey and did not contain an item to identify respondents that were students; hence, responses from all attendees are summarized for the postsurvey.

Descriptive statistics were used to summarize the closed-ended survey responses. A total survey score was calculated by adding the 31 items on experience and opinions about patients with OUD (total score range: 0 to 93); some items were reverse-coded so that a higher score would reflect more positive opinions. *T* tests, chi-square, and Fisher exact were used to determine whether the total score or agreement with individual items varied by the respondent's sex (*male*, *female*), whether the respondent was currently working in a clinical setting (*no*, *yes*), and whether the student was in the school of pharmacy (*no*, *yes*).

The responses to the 5 open-ended questions were collapsed, and a 2-level scheme was developed to categorize the responses. First, the responses were coded as pertaining to (1) content, (2) learn more, (3) event, (4) slides, (5) presenter, and (6) miscellaneous comments. Responses were then subcategorized within these groups, and all of the authors reviewed the coding scheme to ensure agreement. The coding scheme was not mutually exclusive as open-ended responses varied in length and content. Stata MP 15.0 (version 15; StataCorp, College Station, TX) was the statistical software package used to conduct the analysis. Our study was submitted to the WVU Institutional Review Board and exempted as "not human subjects" research.

Results

The presurvey was completed by 140 attendees; the 2 nonstudent respondents were excluded from this analysis. Respondents' ages ranged from 20 to 37 years old; the mean age was 22.8 years old (SD = 3.1). A little over half of the sample was female (52.2%), and the vast majority (90.5%) anticipated graduating in 3 years. Sixty percent (n = 82) were pharmacy students, 35.3% (n = 48) were dentistry students, and 4.3% (n = 6) were "other" students (eg, public health). Approximately half (53.7%) were not currently working in a clinical care setting. Less than a quarter of respondents (21.9%) had experience treating patients with OUD, and 39.9% had a friend or family member who has/had an OUD. The Table displays the percentage of students that agreed with the survey items.

There were statistically significant differences in survey responses by sex, discipline, and patient care experience. Females and students with patient care experience had higher total scores, indicating less biased opinions. The mean total score for females was 53.3 compared to 50.3 for males ($P = .03$). More specifically, 77.8% of males agreed that most employers would not hire someone in recovery compared to 58.6% of females ($P = .02$). Males were also more likely to agree that patients cannot be treated if they have relapsed several times (31.3% vs 14.5%, $P = .02$) and that patients with OUD are unpleasant to work with (47.6% vs 23.1%, $P < .00$); males were less likely to agree that it would be rewarding to work with patients with OUD (65.6% vs 81.5%, $P = .04$).

Similarly, respondents with patient care experience had higher total scores (53.4 vs 49.9, $P = .01$). Respondents with patient care experience were more likely to agree that most people thought patients with OUD could not be trusted (98.4% vs 87.5%, $P = .02$) but less likely to agree that they had the right to ask patients about their use of heroin (72.1% vs 87.3%, $P = .03$) or nonmedical use of prescription opioids (83.6% vs 95.8%, $P = .04$). Pharmacy students were less likely to agree that most people think patients with OUD were equally intelligent (8.6% vs 26.4%, $P = .01$), less likely to agree that they have the right to ask patients about heroin use (72.0% vs 92.3%, $P < .00$), less likely to feel prepared to screen for nonmedical use of prescription opioids (32.9% vs 62.0%, $P < .00$), and more likely to agree that treating patients with OUD is part of their job (80.0% vs 63.5%, $P = .04$).

The postsurvey evaluation was completed by 143 attendees. On the postsurvey evaluation, all of the respondents reported that it was very important (89.5%) or somewhat important (10.5%) to educate students on SUDs. Sixty-nine percent reported being somewhat or very interested in an online self-guided course. Eighty percent reported that the presentation overall was very good or excellent. Importantly, 85.5% (n = 118) reported that the presentation would change or influence their clinical practice. The open-ended postevent survey responses (see the Figure) were overwhelmingly positive and reflected that the attendees wanted to learn more about OUD. For example:

> "It really showed how to interact and treat patients with an opioid abuse issue, and I think everyone should have to know how to act in a situation like that. It is a major issue in the state of WV, and we will more than likely have this experience in our profession."

> "I feel like this is something we all need to continue to learn about, especially with the issue in our state currently."

Some of the attendees (n = 5) reported that the event changed their motivation to get involved, for example,

> "Gave me a new perspective on the topic and interested to get involved."

> "It makes me want to try to make a difference even more."

Students recognize the importance of OUD education, and they are motivated to learn more. Negative comments on

TABLE: Students' experience and opinions about patients with opioid use disorders (OUD), preintervention (n = 138)

Statements	Percentage Agree or Strongly Agree
Experience	
I have experience treating patients with OUD	21.9
I have a family member or friend who has/had an OUD	39.9
I have interacted with drug-seeking patients	48.2
Perceived community stigma	
Most people believe that individuals with an OUD cannot be trusted	92.0
Most people believe that individuals with an OUD are dangerous	78.8
Many people are afraid of individuals with an OUD	78.1
Most people look down on individuals with an OUD after they receive treatment	70.6
Most employers will not hire someone in recovery from an OUD	67.2
Most people would not date or marry someone in recovery from an OUD	58.8
Most people think that individuals with an OUD are just as intelligent as the average person	15.4
Opinions about OUD treatment	
OUD is a treatable illness	94.1
Patients with an OUD should only be treated by specialists	51.1
A drug history is unlikely to be useful as patients generally try to hide their drug use	38.5
I feel that methadone treatment is merely supplying a drug to drug addicts	25.8
When patients with an OUD relapse several times, they probably cannot be treated	22.6
Treatments for patients with OUD are rarely successful	20.2
Patients cannot recover from an OUD	2.2
Opinions about working with OUD patients	
In general, it would be rewarding to work with patients with OUD	72.9
Patients with OUD are unpleasant to work with	35.1
I prefer not to interact with OUD patients	27.7
I can't understand why patients with OUD keep using heroin and/or abusing prescription opioids	22.8
I believe I would often feel uncomfortable when working with patients with OUD	29.1
I couldn't imagine working with patients with OUD as a career	23.5
Role expectations/training	
I feel that I have the right to ask patients about their *nonmedical use of prescription opioids*	89.7
I feel as a future/current health care provider, I will be able to appropriately advise my patients about *heroin* and its effects	88.2
It is part of my job to *refer* patients with OUD for services	88.0
I feel as a future/current health care provider, I will be able to appropriately advise my patients about *nonmedical use of prescription opioids* and its effects	87.5
It is part of my job to *identify* patients with OUD	82.0
I feel that I have the right to ask patients about their use of *heroin*	80.2
It is part of my job to *treat* patients with OUD	73.1
My clinical training has prepared me to screen patients for nonmedical use of prescription opioids or heroin	43.5

the event were that it occurred at a bad time (n = 13), that it was not interactive (n = 10), it was mandatory (n = 6), and the presentation was too fast (n = 3).

Discussion

The majority of students reported that the event was important to their understanding of OUD and would change how they care for patients with OUD. A little more than half of the respondents reported being interested in learning more about OUD; specifically, they wanted to learn more about patient assessment, management, treatment, and referral information.

Student opinions of patients with OUD were overall less biased than have been reported elsewhere[16,18,19]; perhaps

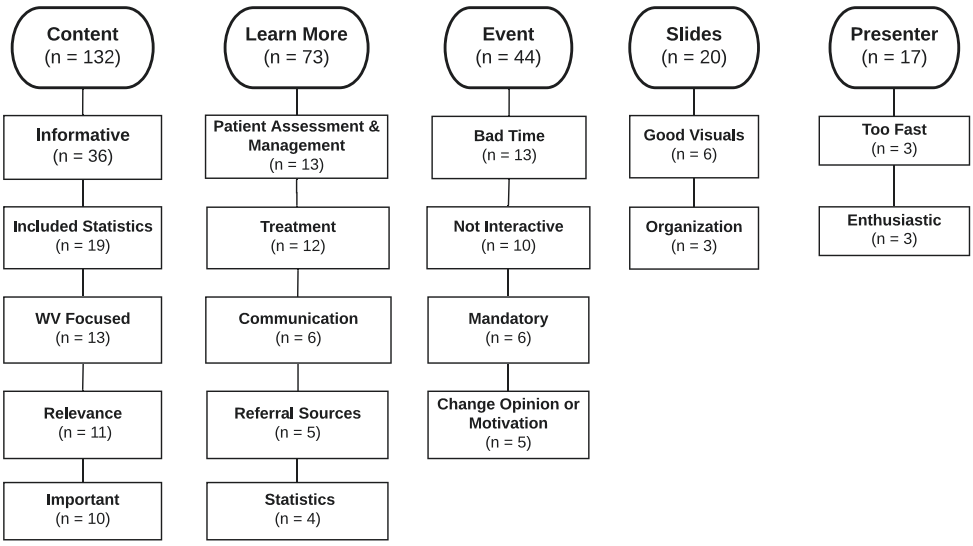

FIGURE: Postintervention summary of open-ended responses (WV = West Virginia)

this is because 40% reported knowing someone personally with an OUD. However, research[19,20] suggests that 34% to 51% of medical interns have a family or friend with an SUD. It is concerning that the majority of respondents agreed that most people believe that patients with OUD cannot be trusted, they are dangerous, and that they are looked down upon even after receiving treatment. The wording of the questions prohibit a distinction between the respondents' *personal opinions* and *perceived opinion of community members*. Nevertheless, it emphasizes the importance of differentiating SUD symptoms from individual character traits in health professional education. Addressing negative opinions and attitudes toward patients with SUD in health professional education is critical because research suggests that it is associated with worse treatment outcomes.[21] Additional research is needed to further understand discipline differences in opinions regarding patients with OUD and how educational training can be modified appropriately.

Although studies evaluating SUD or OUD training for health professional students have methodological differences that preclude direct comparison, there are similarities across these studies. An evaluation of SUD curriculum for internal medicine residents found that the majority felt responsible for screening (88%) and counseling patients about (74%) drug problems.[19] In this study, 82% of respondents felt that it was their responsibility to identify patients with OUD, and 73% felt that it was part of their job to treat patients with OUD. Further, the majority of students report that SUD training increases their confidence in treating these conditions,[19] and 85% of the respondents in this study reported that the OUD event would change their clinical practice. Health professional students feel a responsibility for identifying and treating SUD patients, and not surprisingly, they want to be prepared to do such.

There are several limitations to this study that are worth noting. Importantly, the IPE event was not mandatory for all health professional students, and it is unknown whether this resulted in a positive response bias. Health professional students in WV may be more aware of the devastating health consequences of the opioid epidemic because of those in their immediate social networks that have been impacted and overall greater attention to the crisis in the media. The total number of attendees was not captured, and hence, an overall survey response rate could not be calculated. Change in knowledge was not assessed before and after the event; further, the long-term impact of the event was not assessed. And finally, the event was primarily attended by pharmacy and dental students. It is unknown whether the results can be generalized to other health professional students at the university.

Conclusion

West Virginia has had the highest rate of drug overdose death in the country,[9] and although there are medications that are effective at treating OUD,[22] WV does not have capacity to meet the demand for such treatment.[23] Expansion of health professional student training on OUD is a critical component to reducing the unmet need for services. Health professional students who participated in this event held fewer negative opinions of patients with OUD than previous research has found, and they want to learn more about patients with OUD. Ongoing evaluation of OUD IPE events may inform the continued refinement and development of content as well as inform how to tailor content to address discipline differences in knowledge and experience. Future research is needed to

determine whether integration of OUD content into IPE events is associated with implementation of OUD content into standardized curriculum.

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