



# Outcomes After Implementation of Addiction Medicine Course for Second Year Medical Students

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## INTRODUCTION

Substance Use Disorders (SUDs) are treatable, chronic diseases characterized by a pattern of use of a substance leading to impairments in health, social function, and control over substance use<sup>1</sup>. According to the 2020 National Survey on Drug Use and Health, 40.3 million people aged 12 or older met criteria for a SUD<sup>2</sup>.

2021 survey results showed that only 55% of 3<sup>rd</sup>- and 4<sup>th</sup>-year medical students felt they know enough about the causes of addiction, and only 41% felt comfortable counseling patients with SUD<sup>2</sup>.

The median number of hours of content discussing SUD in medical schools is seven hours<sup>2</sup>.

Highlighting the question:

*Can implementation of an addiction medicine elective help prepare second year medical students to recognize addiction as a disease and prepare students to feel comfortable?*

## METHODS

### Course Structure:

Addiction Medicine elective course that convened once a week for two hours. Each session consisted of lectures, testimony from individuals in recovery from SUD, Narcan training, and a community experience, *i.e.*, attending an AA or NA meeting or volunteering at a harm-reduction organization (Figure 2). There were no quizzes or exams, but attendance was mandatory. Students were required to submit a 'reflection' paper for completion of the course. Students who participated received 1 course credit that will appear on their transcript.

### Enrollment Criteria:

Students were required to be in good academic standing to enroll in the course. They had to self-enroll on a first-come first-serve basis. The course was capped at 50 students.

### Course Evaluation:

Students were given a pre- and post- survey assessing their understanding of SUD, and their comfort level in talking to patients about their substance use. The survey questions were in the following format: "As a medical student I..." and were asked to give a 'True' or 'False' response; completion was not compulsory.

### Data Analysis:

All statistical analyses were performed in Microsoft® Excel ® using the Chi-Squared test function.

## RESULTS

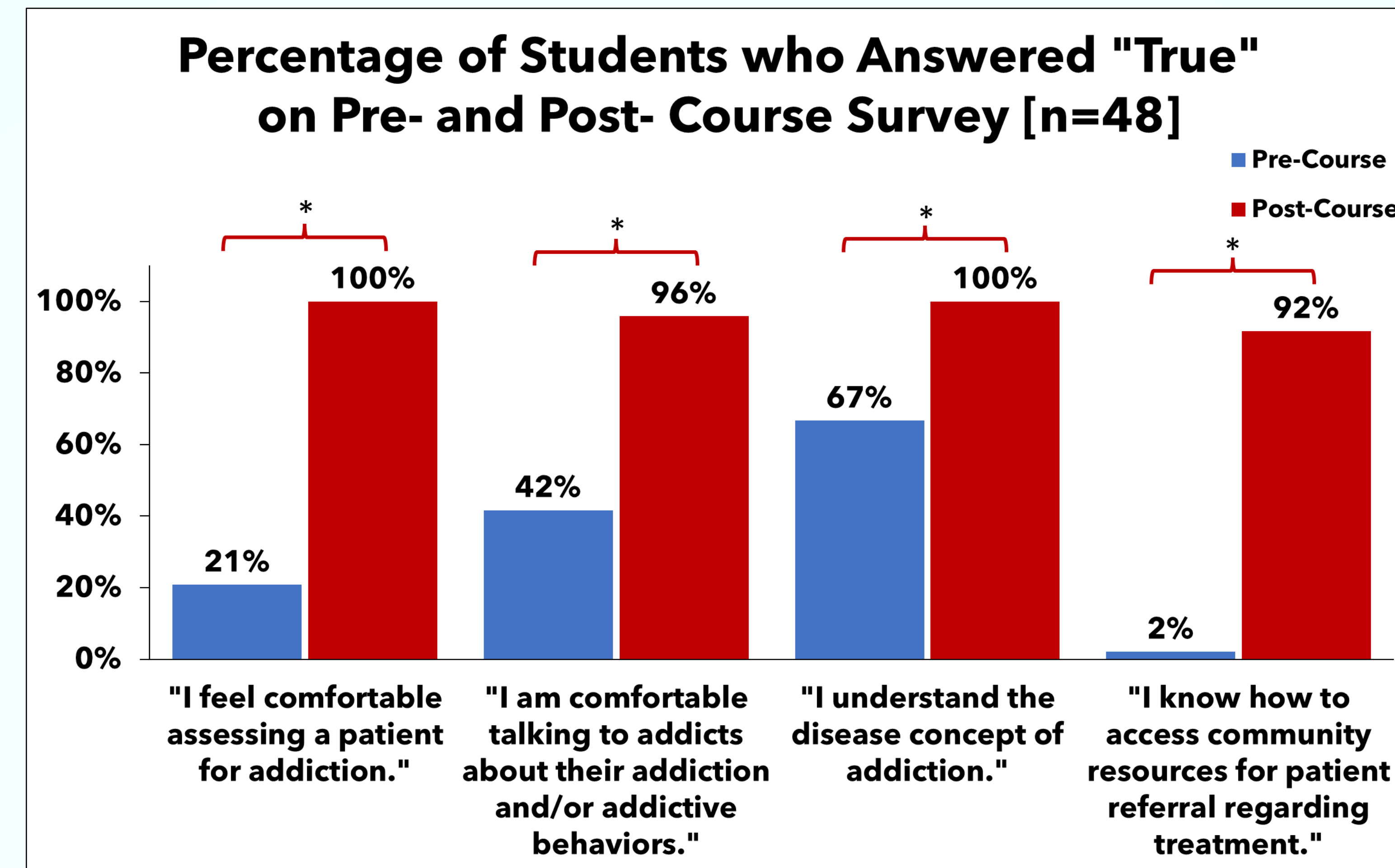


Figure 1: Pre- and Post- Course survey responses (\*=p<0.01)

### Demographics:

A total of 50 students enrolled in the Addiction Medicine elective in the Spring Term of 2022. The course was initially piloted on the Philadelphia (46) and South Georgia (4) campuses

### Survey Results:

Forty-eight of 50 students responded to the survey. At the beginning of the course, 66% recognized the concept of addiction as a disease which improved to 100% in post-survey results. We found that 20% stated prior to the course that they felt comfortable in assessing a patient for addiction which increased to 100% at the end. Only 41% of students reported feeling comfortable talking to their patients about their addiction prior to the course which rose to 95% after 6 weeks. Lastly, on Day 1 of the course, only 2% reported knowing how to access community resources for referral regarding treatment or 12-step programs; after week 6, 91% indicated that they

WEEK	LECTURE	TESTIMONIAL
1	Neural Plasticity and Reward Pathway	Testimonial
2	SUD and Co-occurring mental health disorders	Testimonial
3	Medications, Policy, and Access	Narcan Training
4	Non-pharmacologic approaches to treatment	Testimonial
5	Community Experience	N/A
6	Physician Panel	Community Experience Debrief

Figure 2: Course Schedule

## DISCUSSION

### Conclusions:

Pre- and post-surveys given during this addiction medicine elective showed promising results for the efficacy of educating medical students about SUD. This course has demonstrated similar results to other medical school curricular initiative that focused on SUD learning objectives provided to students at different stages in their clinical training<sup>3</sup>.

### Limitations:

The results of this pilot course may be bias toward students interested in pursuing addiction medicine, as students had to elect to enroll themselves in the course.

Implementation of this curriculum was driven by the students, which might not be feasible in all medical schools. and may depend on the organization's financial status and available workforce.

### Future Directions:

*This course illustrates a need for incorporating SUD content into M1 and M2 didactic coursework, especially Primary Care Skills, where becoming comfortable with obtaining pertinent history can be used for screening and early detection. Understanding these disorders, their incidence, implications and available treatment options is critical for all medical students who as physicians need to provide compassionate care to patients suffering with SUD.*

## REFERENCES

1. Substance Use Disorders (2022). Centers for Disease Control and Prevention. Accessed April 12, 2023 <https://www.cdc.gov/dotw/substance-use-disorders/index.html>.
2. Gamez, S., Njike, V., Bethune, D., Brown, P., Button, D., Gondy, K., ... & Hawk, K. (2021). 220 An Exploratory Study of Medical Students' Knowledge, Attitudes, and Perceptions of Treating Patients With Addiction. *Annals of Emergency Medicine*, 78(4), S89.
3. Hostetter K, Thakkar B, Edwards C, Martin CE. Addiction curriculum design for medical students. *Clin Teach*. 2022;19(1):29-35. doi:10.1111/tct.13438

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