

Understanding the Knowledge, Attitudes, and Practices of UCLA Medical Students Regarding Patients with Substance Use Disorder to Assess Curriculum Needs

Limi Ahmed MPH^{1,2}

Timothy Fong MD, Clinical Professor of Psychiatry^{1,3}

1. UCLA David Geffen School of Medicine 2. UCLA Fielding School of Public Health 3. Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA

Background

Substance use disorder (SUD) is a mental health condition that is included in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). About 48.7 million people of the age 12 years and older suffered from a SUD in the year 2022 (Substance Abuse and Mental Health Services Administration, 2022). SUD is a serious public health issue that requires a multidisciplinary approach to prevention and treatment. Throughout their training, medical students will encounter patients with substance use disorder. Therefore, it is important to ensure medical students have a robust exposure to substance use training, both theoretically and clinically to better serve their patients.

Objectives

- Evaluate medical students' knowledge, attitudes, and practices regarding patients with substance use disorder and assess their clinical readiness.
- Identify potential gaps in the current substance use disorder curriculum at UCLA.
- Offer recommendations for curriculum adjustments based on data analysis and literature review.

Methods

To assess medical student competencies as it relates to SUD, we created a knowledge, attitudes and practices (KAP) survey. For the knowledge questions, students were asked questions that included content from the pre-clinical curriculum at the David Geffen SOM at UCLA as well as general substance use related topics that are listed as relevant to the practice of medicine in the USMLE content outline. Based on the level of knowledge expected of medical students, questions regarding attitudes and practices were created. The questions included competencies that are expected of medical students of varying years to assess for gaps that may stem from different parts of a medical school curriculum. The goal was to disseminate this survey to as many medical students as possible, but with a focus on students at UCLA, since it is this curriculum that we are assessing and providing recommendations for. Having a comparison group of medical students from outside UCLA provided an opportunity to assess UCLA student responses, relative to their peers.

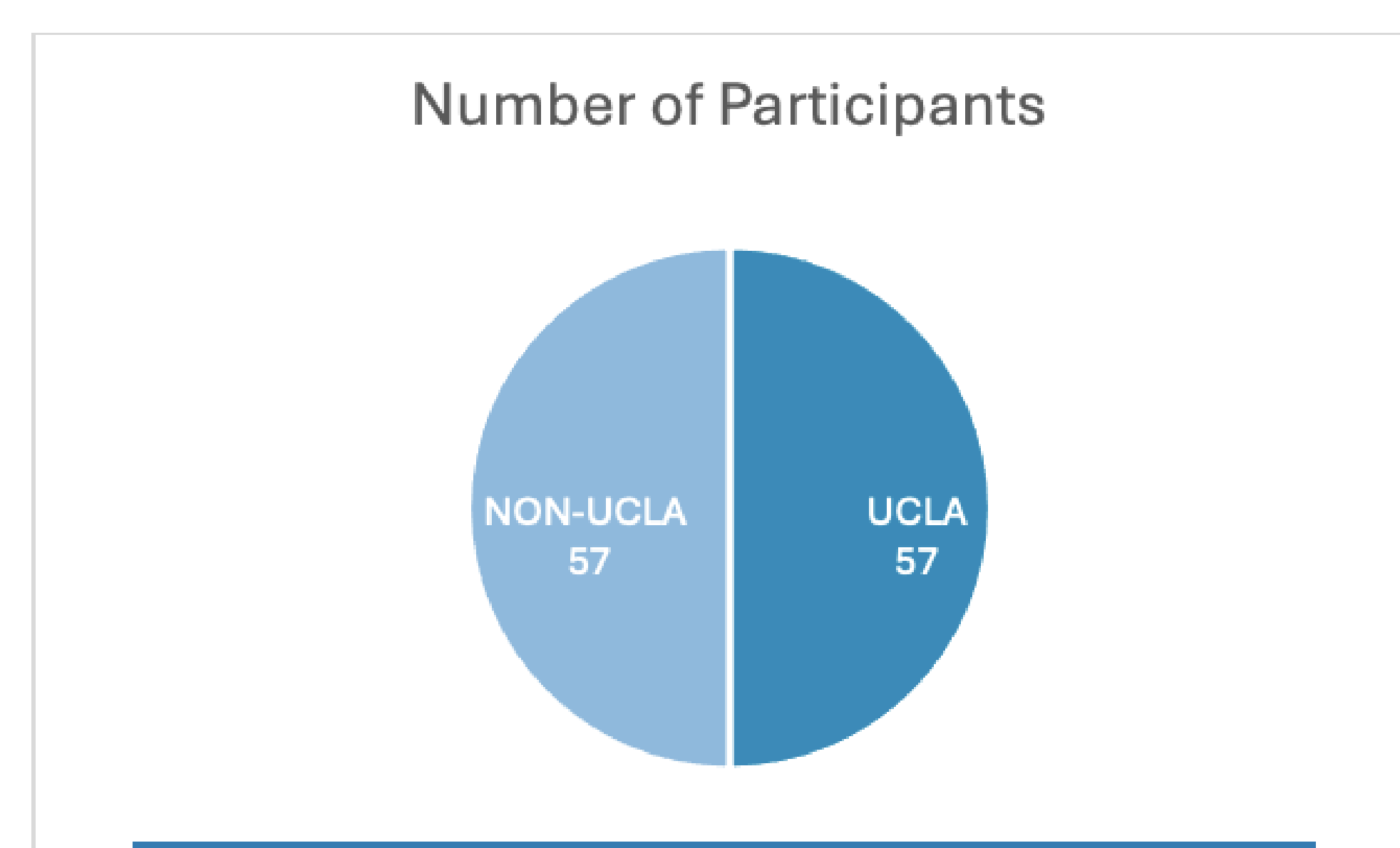


Figure 1. Number of Participants from UCLA and non-UCLA Medical Schools

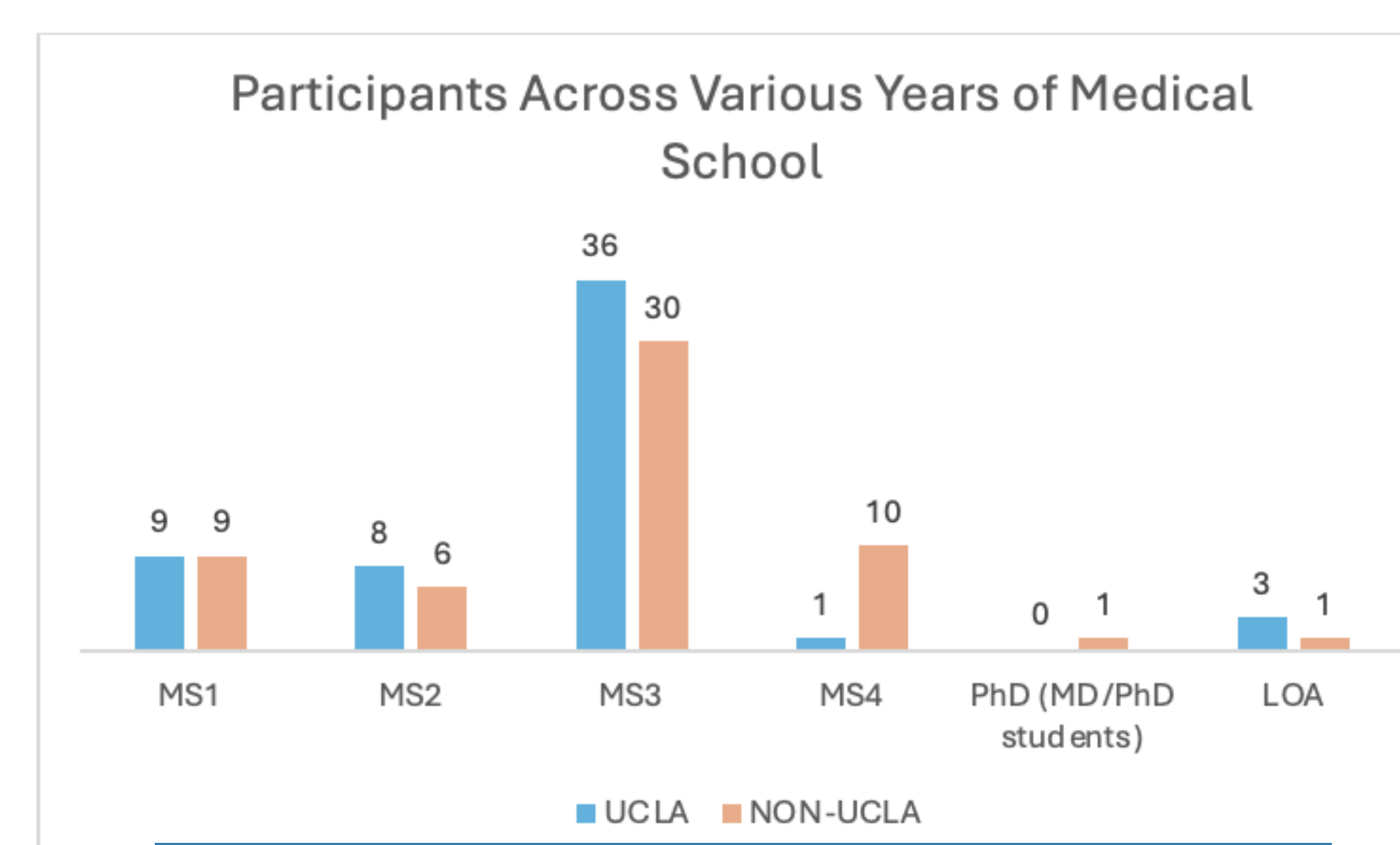


Figure 2. Number of Participants Across Various Years of Medical School

Question	Agree (%)		Disagree (%)		Don't Know (%)	
	UCLA	Non-UCLA	UCLA	Non-UCLA	UCLA	Non-UCLA
Substance use disorder is a DSM-5 classified mental disorder.	47 (82%)	51 (89%)	2 (4%)	1 (2%)	8 (14%)	5 (9%)
Substance use can induce psychiatric conditions or symptoms.	57 (100%)	57 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
There are 11 DSM-5 diagnostic criteria for diagnosing and classifying substance use disorders.	20 (35%)	15 (26%)	1 (2%)	2 (4%)	36 (63%)	40 (70%)
Alcohol is a stimulant.	5 (9%)	4 (7%)	51 (89%)	53 (93%)	1 (2%)	0 (0%)
Opioid intoxication leads to tachycardia, hypertension and pupillary dilation.	7 (12%)	12 (21%)	50 (88%)	43 (75%)	0 (0%)	2 (4%)
Cocaine withdrawal is life threatening.	16 (28%)	27 (47%)	34 (60%)	25 (44%)	7 (12%)	5 (9%)

Note: The correct answer for each question is indicated in bold.

Table 1. Responses to Knowledge Questions from UCLA and non-UCLA Medical Students

Question	Agree (%)		Neither Agree or Disagree (%)		Disagree (%)	
	UCLA	Non-UCLA	UCLA	Non-UCLA	UCLA	Non-UCLA
My preclinical curriculum has equipped me to manage patients with substance use disorder. n=48 for UCLA, n=52 for non-UCLA	9 (19%)	17 (33%)	19 (39%)	21 (40%)	20 (42%)	14 (27%)
My clerkship rotations have adequately prepared me to manage patients with substance use disorder. n=48 for UCLA, n=39 for non-UCLA	27 (36%)	20 (51%)	11 (23%)	11 (28%)	10 (21%)	8 (21%)
My fourth-year rotations have equipped me to care for patients with substance use disorder. n=2 for UCLA, n=9 for non-UCLA	1 (50%)	2 (22%)	1 (50%)	5 (56%)	0 (0%)	2 (22%)
I am confident in my ability to complete a thorough substance use history with patients. n=57 for both UCLA & non-UCLA	24 (42%)	29 (51%)	22 (39%)	10 (17%)	11 (19%)	18 (32%)
I have a general understanding of the different signs and symptoms of stimulant vs. depressant use. n=57 for both UCLA & non-UCLA	49 (86%)	43 (75%)	5 (9%)	6 (11%)	3 (5%)	8 (14%)
Currently, I do not feel equipped to manage a patient with substance use disorder in a clinical setting. n=57 for both UCLA & non-UCLA	17 (30%)	26 (46%)	19 (33%)	13 (23%)	21 (37%)	18 (31%)

Note: The total number of observations includes all answers except "N/A"

Table 2. Responses to Attitudes Questions from UCLA and non-UCLA Medical Students

Question	Yes		No	
	UCLA	Non-UCLA	UCLA	Non-UCLA
Do you periodically review lecture materials or utilize third-party resources concerning substance use? n=49 for UCLA, n=52 for non-UCLA	25 (51%)	25 (48%)	24 (49%)	27 (52%)
During your clinical rotations, have you been tasked with caring for a patient diagnosed with substance use disorder? n=48 for UCLA, n=41 for non-UCLA	46 (96%)	37 (90%)	2 (4%)	4 (10%)
Have you utilized motivational interviewing techniques with patients who had substance use disorder? n=46 for UCLA, n=40 for non-UCLA	39 (85%)	29 (73%)	7 (15%)	11 (27%)
Have you worked with patients with substance use disorder during a volunteering experience? (e.g. Mobile Clinic, Student Run Homeless Clinic, etc.) n=53 for UCLA, n=46 for non-UCLA	39 (74%)	30 (65%)	14 (26%)	16 (35%)
Have you previously reviewed the DSM-5 criteria for substance use disorder? n=57 for both UCLA & non-UCLA	23 (40%)	24 (42%)	34 (60%)	33 (58%)
In your clinical experiences, have you had the opportunity to collaborate with psychiatry or other specialist teams when managing patients with substance use disorder? n=49 for UCLA, n=42 for non-UCLA	35 (71%)	30 (71%)	14 (29%)	12 (29%)

Note: The total number of observations includes all answers except "N/A"

Table 3. Responses to Practices Questions from UCLA and non-UCLA Medical Students

Results

- 57 out of 114 survey participants were UCLA medical students.
- We received the most responses from MS3s, with 36 from UCLA and 30 from non-UCLA medical schools.
- When asked six knowledge questions, 54% of UCLA and 42% of non-UCLA students answered five or more questions correctly.
- Concerning attitudes, 42% of UCLA respondents (n=48) felt their preclinical curriculum did not prepare them for managing substance use disorder patients, in contrast to 27% of non-UCLA students (n=52).
- Regarding clerkships, 21% of both UCLA (n=48) and non-UCLA (n=39) medical students felt their clerkship rotations did not prepare them to manage patients with SUD.
- Currently, 37% of UCLA medical students and 32% of non-UCLA medical students feel prepared to clinically manage patients with substance use disorder.

Conclusion

- Medical schools have a crucial role in training students to conduct thorough substance use history exams, utilize motivational interviewing, and engage in shared decision-making with patients.
- Based on students' responses, the preclinical and clerkship years are potential areas for inclusion of additional substance use disorder curriculum.
- Integration of standardized patients with SUD in the preclinical curriculum and providing clinical experiences with MAT (medication assisted treatment) providers in the clerkship year are just a few ways to enhance competency in treating SUD.
- This study provides valuable insight and serves as a preliminary analysis, highlighting trends and areas of interest, but further research and data analysis is necessary to determine statistical significance.