# It is illegal to post this copyrighted PDF on any website. Attitudes Toward Individuals With Mental Illness and Substance Use Disorders Among Resident Physicians

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## ABSTRACT

**Objective:** Resident physicians frequently provide care for individuals diagnosed with mental illness and substance use disorders (SUDs). Clinicians—including psychiatrists and addiction professionals—have been shown to possess negative attitudes toward these individuals, which is concerning since negative attitudes may have an adverse impact on patient engagement, treatment, and outcomes. However, little is known about resident physicians' attitudes toward individuals with mental illness and SUDs. The objective of this study was to examine the attitudes of emergency medicine, internal medicine, and obstetrics-gynecology residents toward individuals with diagnoses of schizophrenia, multiple SUDs, co-occurring schizophrenia and SUDs, and major depressive disorder.

**Methods:** A web-based questionnaire, including demographic information, level of training, and the 11-item Medical Condition Regard Scale (MCRS) for individuals with 4 different diagnoses, which assesses the degree to which clinicians find individuals with a given medical condition to be enjoyable, treatable, and worthy of medical resources, was sent to residents across the United States from May 2016 to April 2017.

**Results:** A total of 411 resident physicians completed the questionnaire. Respondents had more negative attitudes toward individuals with diagnoses of SUDs with and without schizophrenia than toward those individuals with diagnoses of schizophrenia or major depressive disorder alone. Senior residents possessed more negative attitudes toward individuals with SUDs than did junior residents. Emergency medicine residents had more negative attitudes than the other resident physician groups.

**Conclusions:** The attitudes of resident physicians toward individuals with SUDs with and without schizophrenia were negative and were worse among emergency medicine residents and senior residents. Additional research and programmatic work are needed to understand the reasons for these negative attitudes and to develop interventions during residency training to improve them.

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\*Corresponding author: Jonathan D. Avery, MD, Department of Psychiatry, Weill Cornell Medical College, 525 East 68th St, Box 140, New York, NY 10065 (joa9070@med.cornell.edu). **S** ubstance use disorders (SUDs) and their associated health consequences represent a substantial clinical and public health burden. In 2017, an estimated 19.7 million Americans met criteria for an SUD in the past year, including 14.5 million people who had an alcohol use disorder and 7.5 million people who had an illicit drug use disorder.<sup>1</sup> Drug-related deaths have more than doubled since 2000, with current estimates of 1 in 4 deaths attributable to alcohol, tobacco, and illicit or prescription drug use.<sup>2</sup>

Many studies report that physicians fail to adequately screen and diagnose SUDs,<sup>3–8</sup> and when patients are accurately diagnosed, physicians report lacking confidence to further discuss or provide treatment.<sup>3,4,9,10</sup> In addition to feeling unprepared and diffident, studies<sup>3,4,11–13</sup> also suggest that many physicians hold negative attitudes toward individuals with SUDs and pessimistic beliefs about potential benefits of substance use treatment. Providers from a variety of specialties have been shown to view patients with addictive disorders as of lower importance than other patients, poorly motivated, manipulative, and violent.<sup>14,15</sup> These negative attitudes, in turn, are associated with reductions in provider involvement, personalization of patient care, and empathy.<sup>15,16</sup>

Psychiatric disorders can co-occur with SUDs. In 2015, an estimated 8.1 million American adults (3.3% of all adults) had co-occurring mental illness and a SUD, of which 2.3 million (1% of all adults) had co-occurring serious mental illness (bipolar disorder or schizophrenia) and a SUD.<sup>1</sup> Of those with a serious mental illness and SUD, only 7.4% received treatment for both disorders, and 55% received no treatment at all.<sup>1</sup>

Treatment outcomes for patients with both mental illness and SUDs are significantly worse than those for patients treated for either condition alone.<sup>17</sup> Clinicians' negative attitudes appear to have a particularly potent adverse effect on treatment for those with mental illness and SUDs, as they have been shown to decrease help-seeking and worsen psychological and physical distress.<sup>5,15,17-25</sup>

Residents across a variety of nonpsychiatric specialties, including emergency medicine (EM), internal medicine (IM), and obstetrics/gynecology (Ob/Gyn), are called on to take care of individuals with mental illness and SUDs. These disorders (and the medications given for these disorders) increase the risk of developing co-occurring medical conditions, which often are poorly treated as well. Nationwide survey data<sup>26</sup> suggest that EM residents in particular have been increasingly asked to care for these individuals. In 2013, 1 in 8 visits to emergency departments (EDs) in the United States involved mental illness, SUDs, or both, which represents a cumulative increase of 48.5% from 2006 to 2013.<sup>26</sup>

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- Resident physicians often have more negative attitudes toward individuals with diagnoses of substance use disorders (SUDs).
- Hypothesized reasons for negative attitudes toward individuals with SUDs include the perceived lack of skills, resources, and time to adequately care for these individuals; exposure to the "hidden curriculum" of medical training; and reinforcement of negative societal and moralistic attitudes toward these individuals.
- Increased educational activities that directly focus on attitudes toward individuals with SUDS are needed, as even brief interventions directed at attitude have been shown to improve regard for individuals diagnosed with mental illness and SUDs.

To date, little research has been done on the attitudes of resident physicians toward individuals diagnosed with SUDs and schizophrenia.<sup>11,18,21,22</sup> Several studies<sup>9-11,19,21</sup> have shown that clinicians in general possess negative attitudes toward these individuals and feel that they have inadequate training to care for them. In addition, several studies<sup>18,27,28</sup> among physicians in training have demonstrated that attitudes toward individuals diagnosed with only SUDs appear to be more negative than those toward individuals diagnosed with other disorders; furthermore, these attitudes may worsen over time. One study9 of medical student and resident attitudes toward individuals with diagnoses of SUDs found that satisfaction from caring for these individuals diminished over years in training, while the belief that individuals with SUDs overutilize health care resources increased over that period. These attitudes are consistent with those found in studies<sup>13,24</sup> of other clinicians, which have shown that attitudes toward individuals who use substances, especially those who use drugs, are more negative than are attitudes toward individuals with mental illnesses.

The goal of this study was to expand on existing knowledge by examining the attitudes of EM, IM, and Ob/Gyn residents toward individuals with diagnoses of schizophrenia, multiple SUDs, and major depressive disorder (MDD), as well as toward those with a diagnosis of co-occurring schizophrenia and SUDs. We hypothesized that attitudes toward individuals with multiple SUDs and co-occurring SUDs and schizophrenia would be more negative than attitudes toward other individuals, and the attitudes toward individuals with SUDs would be more negative among senior residents when compared to their junior colleagues. As has been done in similar studies, MDD was expected to serve as a control condition, with the hypothesis that attitudes toward individuals with MDD would remain constant over the duration of training.<sup>11,18</sup>

### METHODS

The Weill Cornell Medical College Institutional Review Board approved the study. A questionnaire was programmed into an internet-based format using a web-based survey tool (SurveyMonkey.com, LLC, http://www.surveymonkey.com). The questionnaire was sent to all program directors of EM, IM, and Ob/Gyn residency training programs across the United States, reflecting geographic diversity and a range of program sizes, from May 2016 to April 2017. Program directors were asked to disseminate the questionnaire to their residents with instructions that accessing the survey indicated consent to participate. No incentives were provided.

The questionnaire comprised 2 sections: (1) demographic, which included information about level of training, and (2) the 11-item Medical Condition Regard Scale (MCRS)<sup>29</sup> for individuals with 4 different diagnoses, which is designed to assess the degree to which clinicians find individuals with a given medical condition to be enjoyable, treatable, and worthy of medical resources. The MCRS is a valid and reliable 11-item instrument graded on a 6-point Likert scale. Consistent with the use of the MCRS in other studies, higher scores on the MCRS indicate higher report of enjoyment, perceived treatability, and belief in the utility of medical resources for a given condition. These measures are used as a proxy for attitude. The 4 diagnoses were schizophrenia, multiple SUDs, co-occurring schizophrenia and multiple SUDs, and MDD, which was the control diagnosis.

Respondents' age, sex, specialty, and year in training were described as n (%) and compared between postgraduate year (PGY) groups by  $\chi^2$ /Fisher exact tests. Survey answers regarding each patient population were also described as n (%). Survey answers were subsequently converted to numeric values after reverse scoring questions 1, 2, 4, 9, and 11 for each patient population and described as mean, median, minimum, and maximum. Higher scores represented better attitudes. To compare differences in attitudes between PGY levels, independent 2-sample t tests were used to assess total MCRS scores for each patient population between PGY levels 1 and 2 (junior residents) versus levels 3 or greater (senior residents). Total attitude scores were calculated as the average of the 11 individual survey answers pertaining to each patient population. Four multivariable linear regression models were then constructed (1 for each patient population) to analyze the relationship of PGY levels to total MCRS scores, controlling for age, sex, and specialty. Subsequently, total attitude scores between the 4 different patient populations were analyzed by repeated-measures analysis of variance (ANOVA) with post hoc tests using Bonferroni adjustment. Similarly, we performed the same analyses stratified by the 2 PGY groups (junior and senior residents). Lastly, we explored differences in total scores between specialty groups within each patient population (EM vs IM vs Ob/Gyn) by ANOVA. All P values were 2-sided with statistical significance evaluated at the .05 a (after Bonferroni adjustment where appropriate). Analyses were performed in R version 3.4.0 (The R Foundation, Vienna, Austria).

# RESULTS

Characteristics of respondents are summarized in Table 1. A total of 411 residents completed the survey, with

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Table 1. Characteristics of 411 Respondents		
Characteristic	n (%)	
Age, y		
18 to 34	358 (87)	
35 to 54	53 (13)	
Sex		
Female	242 (59)	
Male	169 (41)	
Specialty		
Emergency medicine	149 (36)	
Internal medicine	138 (34)	
Obstetrics and gynecology	124 (30)	
Postgraduate year in training		
1	132 (32)	
2	114 (28)	
3	122 (30)	
≥4	43 (10)	

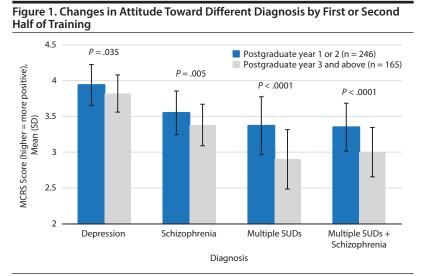
approximately equal participation from each specialty (EM: n = 149, 36%; IM: n = 138, 34%; and Ob/Gyn: n = 124, 30%). Most participants were younger than age 35 years (87%). More women participated (n = 242, 59%) than men (n = 169, 41%). More junior residents participated (PGY1/PGY2, n = 246, 60%) than senior residents (PGY3 and greater, n = 165, 40%). No significant differences between the junior and senior resident training groups were found based on sex or specialty.

Attitudes toward individuals with SUDs (whether alone or co-occurring with schizophrenia) were worse with increased years of training, as reflected by declining MCRS scores (Figure 1). For junior residents, the mean MCRS total score for individuals with SUDs alone was 3.37 compared with 2.90 for senior residents (P<.0001). Lower scores reflected decreased enjoyment of caring for these individuals and decreased belief that their conditions are treatable and deserving of medical resources. Similarly, the mean MCRS total score for individuals with both schizophrenia and SUDs among junior residents (P<.0001). MCRS scores toward individuals with schizophrenia and individuals with MDD were also lower with increased years of training,

weh although not to the extent observed in the SUDs and schizophrenia and SUDs alone populations. For individuals with schizophrenia, junior residents had a mean MCRS total score of 3.55 and senior residents had a mean score of 3.38 (P=.005). For individuals with MDD, junior residents had a mean MCRS total score of 3.94 and senior residents had a mean score of 3.82 (P=.035). Of note, examination of individual item scales on the MCRS for individuals with multiple SUDS and co-occurring schizophrenia and multiple SUDs revealed that attitudes of junior and senior residents did not differ in response to the statement, "Patients like this are a waste of medical dollars." After controlling for age, sex, and specialty in multivariable modeling, senior residents still demonstrated significantly worse mean attitudes than junior residents within each patient group.

MCRS scores for individuals with SUDs (whether alone or co-occurring with schizophrenia) were lower than MCRS scores for individuals with MDD or schizophrenia. The mean MCRS total scores in response to individuals with schizophrenia, SUDs alone, SUDs and schizophrenia, and MDD were 3.55, 3.37, 3.35, and 3.94, respectively (P<.0001), among junior residents and 3.38, 2.90, 3.00, and 3.82, respectively (P<.0001), among senior residents. All post hoc pairwise comparisons between MCRS total scores for individuals with SUDs (alone or co-occurring with schizophrenia) and MCRS total scores for individuals with schizophrenia or MDD were significant, both within the junior resident training group and the senior resident training group.

When comparing resident attitudes by specialty, EM residents' scores were consistently lower than IM and Ob/ Gyn residents' attitudes across all diagnostic groups. EM residents' mean MCRS total scores for individuals with schizophrenia, SUDs alone, SUDs and schizophrenia, and MDD were 3.35, 3.02, 3.08, and 3.74, respectively, compared with 3.64, 3.19, 3.29, and 4.01, respectively, for IM residents and 3.46, 3.36, 3.28, and 3.93, respectively, for Ob/Gyn residents.



Abbreviations: MCRS = Medical Condition Regard Scale, SUD = substance use disorder.

# Avery et al **It is illegal to post this copyrighted PDF on any website.** DISCUSSION

Resident physicians had more negative attitudes toward individuals with diagnoses of SUDs with and without schizophrenia compared to attitudes toward individuals with diagnoses of schizophrenia or MDD alone. Senior residents reported more negative attitudes toward individuals with SUDs than did junior residents. These results are important given the known effect of clinician attitude on patient outcomes and experience.<sup>15,16,18,21,22</sup> EM residents reported more negative attitudes than did IM and Ob/Gyn residents across all diagnostic categories studied.

We hypothesize that repeat negative experiences in caring for individuals diagnosed with SUDs with and without co-occurring schizophrenia may play a large role in the development of these negative attitudes and in the worsening of these attitudes over time.<sup>21</sup> The hypothesized reasons for this shift are many including the perceived lack of skills, resources (such as evidence-based medications for opioid use disorder), and time to adequately care for these individuals' SUDs and their co-occurring medical conditions; exposure to the "hidden curriculum" of medical training, whereby trainees observe unprofessional behavior or negative attitudes of peers and role models during the "cynical" training years<sup>30</sup>; and reinforcement of negative societal and moralistic attitudes toward individuals with SUDs (eg, fear, disappointment, or viewing SUD as "moral failing").6,18,22

Resident physicians may be especially prone to developing negative attitudes toward patients with SUDs because of the way in which they encounter them-most commonly in the ED or in inpatient medical settings where patients often present in an acutely intoxicated or withdrawing state. These patients may exhibit alterations in sensorium, disinhibition, erratic behavior, or even violence and aggression. Treatment of unpredictable patients can be particularly challenging for residents, arousing strong negative reactions and feelings of fear or helplessness.<sup>15</sup> Further, it is important to consider that residents who work in acute care settings most frequently encounter the most severely ill substance-using patients and may have limited exposure to patients who recover and successfully rebuild their lives through treatment. Longitudinal care of patients in recovery helps to negate stigmatizing attitudes.<sup>11,22</sup> The importance of longitudinal care is strongly supported by our finding of more negative attitudes among EM residents compared to their peers in IM and Ob/Gyn given the high rates of ED utilization in this population<sup>26</sup> and lack of opportunity to engage with these patients in noncrisis settings and observe improvement over a short or long period of time.

An unexpected finding of the study was the small but significant worsening of attitudes toward individuals with MDD. This change might reflect the realization of senior residents that individuals with MDD have many co-occurring psychiatric and medical disorders and are often more difficult to treat than expected.<sup>18</sup> It may also to the residents themselves as they progress in training.<sup>18</sup>

Consistent with previous work,<sup>18</sup> this study is limited by the low survey response rate and by the nature of selfreport. It is unknown whether the IM, EM, and Ob/Gyn residents who chose to take the survey generalize to the full population of residents in their respective specialties. We used the MCRS to assess attitudes, bearing in mind that there are probably thoughts and attitudes, both positive and negative, that it does not detect.<sup>18</sup> The study warrants replication on a larger scale. Further research might identify trainees with particularly stigmatizing attitudes toward individuals with SUDs; factors that contribute to the development and intensification of such attitudes could be explored further.<sup>18</sup> The impact of clinicians' attitudes on patient care and treatment outcomes needs to be clarified in future work as well.<sup>18</sup>

Other future directions include identifying strategies to improve attitudes. Despite the significant public health problem of substance misuse and the benefits of treatment, there is minimal education on addiction medicine during medical school and residency. Most formalized training in addiction medicine occurs in the context of psychiatry didactics and clerkships during medical school, with the average US medical school devoting only 12 hours of curricular time to SUDs.<sup>31</sup> Moreover, formal education regarding SUDs may prioritize scientific knowledge such as the neurologic circuits associated with addiction, with relatively little emphasis on the attitudes (eg, respect, compassion, integrity) and treatment skills (eg, screening, brief intervention, and referral to treatment; motivational interviewing; medication-assisted treatments) necessary for the care of patients with substance use.<sup>31</sup> Beyond medical school, no medical specialties other than psychiatry have Accreditation Council for Graduate Medical Education (ACGME) requirements for substance or addiction training during residency, although more and more addiction medicine fellowships are being formed and are now ACGME accredited.<sup>32</sup> Ideally, increased educational activities would directly focus on attitudes toward individuals with SUDs, as even very brief interventions directed at attitude have been shown to improve regard for individuals diagnosed with mental illness and SUDs.14,19,20 Additional potential strategies to improve residents' attitudes include more exposure to patients in recovery and greater mentorship from senior clinicians.<sup>18,21,22</sup>

# CONCLUSION

Resident physicians possess negative attitudes toward individuals with SUDs with and without schizophrenia. Of particular concern is that these attitudes are worse among senior residents. Repeat negative experiences may play a large role in the development and exacerbation of these attitudes.<sup>18</sup> Future work is needed to better understand these attitudes and to develop interventions to improve them.<sup>18</sup>

# Attitudes Toward Mental Illness and Substance Use

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