

# Clinicians' Racial Bias Contributing to Disparities in Electroconvulsive Therapy for Patients From Racial-Ethnic Minority Groups

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Patients from racial-ethnic minority groups undergo disparate electroconvulsive therapy (ECT) treatment compared with Caucasian peers. One leading hypothesis is that clinicians may unknowingly display racial bias when considering ECT for patients of color. Studies have consistently shown that patients of color face numerous racially driven, provider-level interpersonal and perceptual biases that contribute to clinicians incorrectly overdiagnosing them as having a psychotic-spectrum illness rather than correctly diagnosing a severe affective disorder. A patient's diagnosis marks the entry to evidence-based service delivery, and ECT is best indicated for severe affective disorders rather than for psychotic disorders. As a consequence of racially influenced clinician misdiagnosis, patients from racial-ethnic minority

groups are underrepresented among those given severe affective diagnoses, which are most indicated for ECT referral. Evidence also suggests that clinicians may use racially biased treatment rationales when considering ECT after they have given a diagnosis of a severe affective or psychotic disorder, thereby producing secondary inequities in ECT referral. Increasing the use of gold-standard treatment algorithms when considering ECT for patients of color is contingent on clinicians transcending the limitations posed by aversive racism to develop culturally unbiased, clinically indicated diagnostic and treatment rationales.

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Black or African American (hereinafter referred to as “Black” patients unless otherwise specified in the source data), Latino, Asian, Native American, and Native Hawaiian patients receive electroconvulsive therapy (ECT) less often than Caucasian peers (1–14). Multiple studies have confirmed that patients from racial-ethnic minority groups, also referred to as patients of color, are less likely to be referred to ECT. One leading theory is that clinicians may be racially biased when considering ECT for patients of color (2, 3, 5–7, 13). The mechanisms underlying this theory are poorly understood. To further explore this idea, here we formulate significant factors and theoretical mechanisms reflecting how racism may influence differential consideration of people from racial-ethnic minority groups with respect to ECT. We also provide suggestions for how to correct and safeguard against these racial biases in clinical encounters.

## FOCUS ON PROVIDER RACISM

Provider racism is certainly not the only factor contributing to the disparate use of ECT for patients of color. Multiple patient- and provider-level hypotheses have been proposed in the literature. It is worthwhile to briefly explore whether racial disparities in ECT may be a by-product of patients of

color, compared with Caucasian patients, having cultural variances in treatment preferences, reduced socioeconomic access to ECT-capable facilities, or differences in the prevalence of the psychiatric disorders for which ECT is most indicated, namely severe affective disorders.

## HIGHLIGHTS

- Racial bias in clinician referral is one of several commonly cited hypotheses for the persistent disparities in the use of electroconvulsive therapy (ECT) for patients from racial-ethnic minority groups.
- Provider-level interpersonal and perceptual racial biases impair diagnostic accuracy and contribute to the misdiagnosis of diseases or disorders among patients of color.
- The overdiagnosis of psychotic disorders and underdiagnosis of severe affective disorders among patients of color results in fewer referrals for ECT treatment for such patients.
- Clinician-level racial bias at least partially promotes existing disparities in ECT delivery to patients from racial-ethnic minority groups through misdiagnosis and influences deviations from evidence-based practices.

Regarding cultural treatment preferences, after clinicians have considered and referred a patient to ECT, the patient must decide whether to accept ECT during conversations about informed consent. One leading patient-level hypothesis is that patients from racial-ethnic minority groups may withhold consent to ECT because of cultural mistrust against ECT and preferences for other treatments (1, 4–6, 8, 13, 15, 16). Therefore, to provide equity in informed consent conversations, clinicians may develop culturally relevant trustworthiness among patients of color by recognizing the validity and appropriateness of their mistrust (17). Nonetheless, clinician referral, which may be influenced by racial bias, remains an independent step preceding the point at which cultural treatment preferences become relevant.

Researchers control for possible transcultural differences in prevalence of mental disorders among patient groups by limiting the sample to those with matching diagnoses, and socioeconomic limitations of ECT availability are controlled through sample selection, statistical analysis, or both. For example, one study was conducted with an isolated sample of elderly patients with severe depression hospitalized exclusively at ECT-capable facilities to see what percentage of each diagnostically matched racial-ethnic group underwent ECT (11). Moreover, estimates of diagnoses depend on the cross-cultural accuracy and validity of diagnostic criteria as well as on clinicians' ability to assign diagnoses without bias. Indeed, one study found that using semistructured diagnostic interviews did not eliminate racial diagnostic disparities between routine clinical diagnoses that are more susceptible to clinician bias and gold-standard, more objective research diagnoses for patients of color (18). Many studies examining diagnostic racial disparities have not observed fundamental differences in symptom presentation among races (18–22). Diagnostic discrepancies and disparities are therefore not a product of differences in baseline transcultural prevalence. Moreover, racial disparities in ECT use persist in studies even after diagnosis, clinical severity, and socioeconomic access to ECT-capable facilities in the analysis are controlled for in statistical analyses (1–14).

Therefore, our article's focus on the possible influence of racial bias among providers on ECT service disparities is an independently valid endeavor that does not preclude or detract from explorations of alternative contributing hypotheses (17) not otherwise controlled in studies.

## **PROVIDER RACIAL BIAS AND INTERPERSONAL EFFICACY OF REAL-TIME CLINICAL ENCOUNTERS**

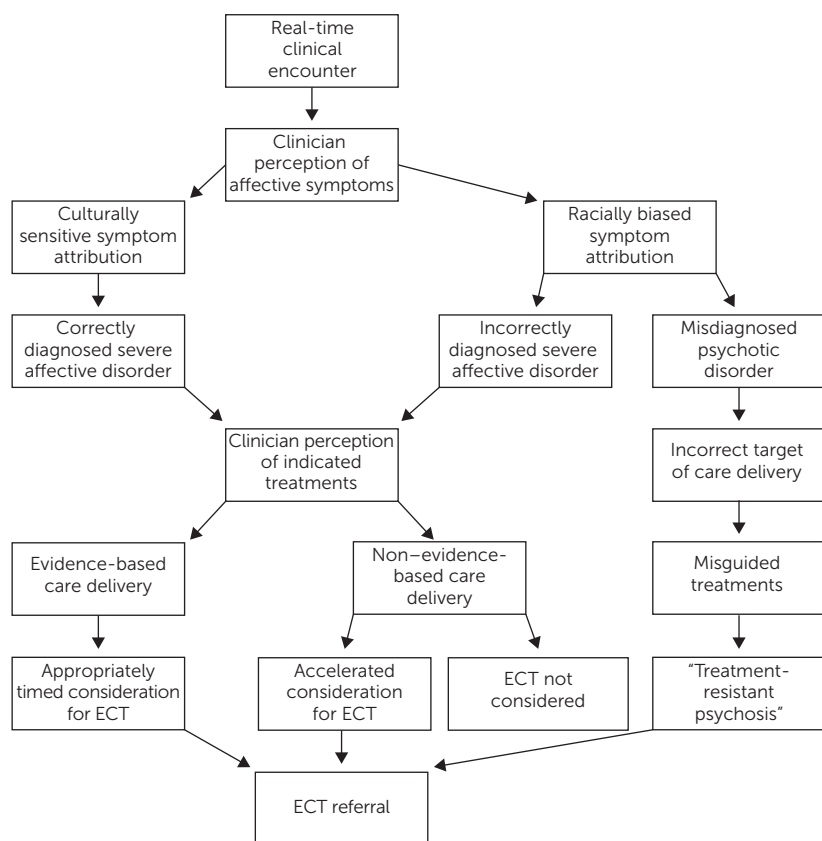
### **Physician Demographic Characteristics**

Evidence-based service delivery of ECT to patients of color begins with provider-level interpersonal efficacy at the very first clinical encounter (Figure 1). Therefore, it is important to briefly remark on the demographic composition of the providers in the following literature review of provider-level interpersonal and racial bias.

Most studies included in this article did not document the race or ethnicity of the clinicians interviewing or evaluating patients. As a proxy, compare U.S. 2010 Census data (23) with the demographic characteristics of all active physicians reported by the Association of American Medical Colleges (24). In medicine, Blacks or African Americans make up 13.4% of the total population compared with 5.0% of all physicians; Latino Americans, 18.5% of the population compared with 5.8% of all physicians; Native Americans, 1.3% of the population compared with 0.3% of all physicians; and Native Hawaiian and Pacific Islanders, 0.2% of the population compared with 0.1% of all physicians. In contrast, Asians are overrepresented in medicine, making up 5.9% of the total population and 17.1% of physicians. The remainder of active physicians are either Caucasian (56.2%) or of unknown or other race-ethnicity (15.5%). The race-ethnicity of the providers studied in the articles included in the present study may be assumed to largely reflect these demographic statistics unless otherwise specified.

### **Interpersonal Effects of Provider Racial Bias and Aversive Racism During Real-Time Encounters**

It is important to introduce the concept of aversive racism when discussing clinician racial bias and its implications for ECT service delivery and clinical decision making. "Aversive racism" describes instances in which providers explicitly oppose racism yet are directly observed or determined by tests to display verbal, nonverbal, implicit, or decision-making prejudice when treating patients from racial-ethnic minority groups (25–28). That is, individuals who display aversive racist behaviors do not think they harbor racial bias even though their behaviors indicate that they do. One study found that Black patients rated experiences with providers whose behavior met the definition of aversive racism as the least satisfactory (26). A separate study examined low-income Black patients' encounters with 13 non-Black primary care physicians, 11 of whom were Asian. It found that non-Black physicians who met the criteria of displaying aversive racist behavior (namely, low explicit bias with high implicit bias) showed significantly less positive affect and more negative affect and were less engaged with Black patients when these patients reported having experienced discrimination before (27). It is remarkable that the racially biased interpersonal deficits of non-Black physicians in this study were distinctly pronounced among physicians with aversive racism even compared with physicians who more openly acknowledged their racial bias with correspondingly high implicit racial bias. Leading racial theorists have suggested that individuals who exhibit aversive racism may internally justify unacknowledged prejudiced behavior toward Black patients by preferentially focusing on less obviously racially influenced associated factors (25, 28). In this light, the authors of the interpersonal communication study discussed above theorize that non-Black, aversively racist physicians may respond to the reserved affect of Black patients who had experienced previous discrimination by feeling justified and

**FIGURE 1. Clinician racial bias introducing potential misdiagnosis and downstream racial disparities into electroconvulsive therapy (ECT) consideration and referral**

liberated to use their own poorer interpersonal communication (27).

A brief literature review lent additional evidence that clinicians' negative perception of patients of color diminishes their interpersonal effectiveness in care delivery. A 2017 review of 42 articles concluded that clinicians experience unconscious bias similar to that in the general population and that such bias potentiates diagnostic and treatment disparities (29). According to a 2018 literature review, of seven studies examining patient-provider encounters, all found that providers with stronger implicit bias had poorer communication with their patients (30). Multiple studies have also replicated the observation that providers may believe that Black patients are less intelligent, more likely to abuse drugs and to engage in risky behavior, less likely to adhere to treatment, and less deserving of having a personal connection with a provider than Caucasian patients, even after controlling for sex, age, income, and education (31–34). One study found that physicians' communication style was more contentious and less patient centered with Black patients than with Caucasian or Hispanic patients when the physicians subjectively perceived that Black patients were themselves more contentious, less effective in communicating, and less satisfied with their care (32). Post hoc analysis in that study did not substantiate baseline differences in patient demographic characteristics but found that Asian physicians

were particularly prone to view African Americans as poor communicators. Similarly, in a different study, clinicians with higher levels of implicit bias used more dominant, less patient-centered dialogue with Black patients, and Black patients responded by showing less positive affect, feeling less respected, and having less confidence in providers (33).

### Safeguarding Against Provider Interpersonal Racial Bias in Clinical Encounters

Aversive racism fosters a reluctance to acknowledge instances in which psychiatry's endorsed priorities of equality are not manifest in one's personal practice. Clinicians are undoubtedly opposed to racial discrimination and strive to provide objectivity and parity in the delivery of care to all their patients, regardless of race or ethnicity. Nonetheless, the ever-growing body of literature on disparities provides evidence that clinicians are struggling to achieve these goals. Clinicians must consider and directly face postulated barriers to the participation of patients of color in ECT that arise from providers' problematic perceptions and attitudes. For clinicians across the entire field of mental health, this will likely entail a new

commitment to bridge the gaps and awareness of their own contribution to this problem. Clinician racial bias is a readily modifiable intervention target to address the health care disparities experienced by people of color. Clinicians fully control whether they take accountability for racism both in their own behavior and in the academic literature (35).

In the context of aversive racism, reducing provider-level ECT referral bias requires a willingness to openly acknowledge and self-reflect on one's own biased racial beliefs, beginning with one's first clinical encounter with patients of color. Are we gauging our professional interactions on the basis of our interpretations of patients' behavior toward us (31–33). Are we making assumptions about honesty and mistrust among patients of color (36). Is their guarded demeanor reflecting their psychiatric symptomatology or our own interpersonal racial bias (26, 27, 30, 33). As many studies have concluded, the patient-provider dynamic is certainly bidirectional. However, health care providers, rather than patients, are tasked with upholding medical ethics through unbiased professionalism and clinical rationales. Thus, it is providers' responsibility to hold themselves and each other accountable for their behavior toward and decision making with respect to patients of color. Let us not gauge our own behavior on the basis of our subjective and fallible interpretation of patients' reactions. This is particularly salient given that patients of color have a historical and

sociocultural context that gives them due reason to mistrust, a suggestion that is as stigmatized in popular media as is ECT (17).

## **DIAGNOSIS (OR MISDIAGNOSIS) AS THE ENTRY POINT TO ECT SERVICE DELIVERY**

### **Provider Interpersonal Racial Bias and Its Influence on Symptom Attribution and Misdiagnosis**

The interpersonal efficacy of clinical encounters determines the cultural validity of diagnoses assigned to patients of color, and these diagnoses mark the entry point to service delivery for ECT. ECT is best indicated for severe instances of affective disorders such as mania (37, 38) rather than for psychotic disorders such as schizophrenia (37–40). Yet, a 2014 literature review of psychiatric diagnoses since the 1980s found that Black and Latino patients were diagnosed as having psychotic disorders, namely, schizophrenia, three to four times more often than were Caucasian patients (41). Indeed, race correlates most with a diagnosis of schizophrenia even after controlling for all other demographic variables (42, 43). Overrepresentation among those diagnosed as having psychotic-spectrum illnesses is generally mirrored by underrepresentation among those diagnosed as having severe affective disorders. In contrast, one study found that Latinos were disproportionately given a diagnosis of depression despite greater self-reported psychotic symptoms (44). In short, patients of color are cumulatively underrepresented among the severe affective diagnoses most indicated for ECT, and in studies that have examined Black and Latino patients, provider bias appears to drive these misdiagnoses (18, 21, 22).

Provider-level racial bias and accompanying poor interpersonal communication may influence patients of color erroneously being given a diagnosis of psychotic-spectrum illnesses rather than an accurate diagnosis of severe affective disorders (18–20, 36, 45–49). For example, one study found that clinicians tend to believe that African American patients are less honest and less trustworthy than their Caucasian counterparts during psychiatric diagnostic interviews. This perceived dishonesty was the strongest and only consistent mediator between race and a diagnosis of schizophrenia even after controlling for less arbitrary sociodemographic and clinical factors (36). Clinicians may also mistake culturally normative expressions of mistrust as indicating clinical paranoia, although paranoia and mistrust have been shown to be qualitatively and quantitatively distinct (47, 48). Consequently, Black patients, especially Black males, are disproportionately diagnosed as having pathological paranoia and paranoid schizophrenia (19, 45–48).

Providers show racially influenced patterns of symptom attribution that also contribute to schizophrenia overdiagnosis among Black patients (18–20, 36, 49). Providers more often subjectively perceive negative symptoms of psychosis such as flatness of affect, impoverished speech, lethargy, apathy, and social withdrawal among Black than among Caucasian patients (18, 19, 49). Non-African American

clinicians may be particularly vulnerable to misperceiving negative symptoms of psychosis among African American patients (50). In addition, first-rank symptoms such as auditory hallucinations and delusions are arbitrarily observed more frequently among African Americans and are used to support a schizophrenia diagnosis (18–20, 36, 49). African American clinicians possibly more often commit racially biased symptom attribution by diagnosing a psychotic-spectrum disorder when evaluating hallucinations among African American patients (50). Finally, clinicians tend to minimize the relevance of affective symptoms to African American patients' primary psychopathology, especially to African American men, even if affective symptoms are accurately detected (18, 20). These factors combine to divert diagnoses of Black patients toward psychotic-spectrum disorders and further away from the severe affective disorders best indicated for ECT.

### **Safeguarding Against Provider Racial Bias in Symptom Attribution and Diagnosis**

As mentioned above, Black and African American, Latino, and Indigenous people remain greatly underrepresented among medical professionals. In response, medical schools are continuously working to recruit and train a more diverse physician workforce. Representation of minority communities in medicine increases as this workforce graduates into junior faculty and board-certified physician roles. Thus, the current physician workforce is more diverse than ever before.

Although the representation in medicine of people from racial-ethnic minority groups is slowly increasing, the overwhelming majority of physicians caring for Black and Latino patients do not share the cultural background of these patients. Aversive racism may dissuade medical providers from more privileged demographic backgrounds from recognizing instances in which they are viewing patients' psychiatric symptomatology through racially biased lenses. Therefore, a critical step toward correctly diagnosing mental disorders among patients of color is to practice humility and curiosity about how culture affects symptomatology and how to best attribute symptoms to affective versus psychotic diagnoses. Recognizing one's own limitations creates opportunities to consult the literature on academic racial disparities, ask patients clarifying questions, and seek supervision from colleagues from racial-ethnic minority groups. Moreover, clinicians should consciously assign affective symptoms to patients of color with unbiased clinical relevance. They should pause and deliberate how mood symptoms may best inform diagnoses and be aware that a diagnosis steers service delivery toward or away from ECT.

## **PROVIDER RACIAL BIAS AND MISDIAGNOSIS INFLUENCING ECT RACIAL DISPARITIES**

### **Incorrect Targets of Care Delivery**

ECT has more robust evidence for use in the treatment of affective disorders with acute symptoms such as mania or



severe depression (37, 38) than of uncomplicated psychotic disorders (37–40). Thus, clinicians' overdiagnosis of psychotic disorders and underdiagnosis of severe affective disorders among patients of color unintentionally provides these patients with diagnoses considered to be less indicated for ECT. A cascade of the wrong diagnosis leading to delivery of the wrong service may introduce racial disparities in consideration and referral for ECT.

Racially biased symptom attribution and resultant diagnosis may affect evidence-based service delivery of ECT. Providers operating with an unacknowledged cultural bias may possibly perceive patients of color as exhibiting negative symptoms of psychosis rather than severe depression (18, 49). Symptoms such as lethargy, apathy, and reduced conversational engagement may be perceived as severe depression in the case of Caucasian patients yet viewed as psychosis with negative features (18, 49) or contentiousness (32) in the case of patients from racial-ethnic minority groups. ECT is even less indicated for negative symptoms of psychosis (40). Therefore, any racially influenced symptom attribution favoring negative symptoms over depression may again discourage clinicians from attempting to provide evidence-based psychosis treatment by recommending ECT.

Mislabeling patients as having psychosis rather than depression triggers an erroneous treatment algorithm favoring antipsychotics over antidepressants. Baseline mood symptoms, regardless of diagnostic label, are less likely to remit with this treatment. ECT is indicated for severe or refractory psychosis (40); thus, some patients may receive an ECT referral for treatment-resistant psychosis. Indeed, an examination of Texas ECT data from 1998 through 2013 revealed that patients of color were significantly more likely than Caucasian patients to receive ECT when diagnosed as having schizophrenia than when diagnosed as having depression. The rates were four times higher for Black patients and two times higher for Latino, Asian, Native Hawaiian, and Native American patients (1). However, patients of color, specifically Black patients, remain underrepresented among recipients of ECT for psychosis (3). Moreover, it is noteworthy that an ECT referral for patients with a misdiagnosis may reflect a double hit of poor service delivery if treatment-resistant psychosis is targeted without adequate first-line medication trials for mood symptoms. The right treatment for the wrong problem is no better than the wrong treatment for the right problem.

### **Racially Biased Clinical Rationale Deviating From Evidence-Based Practices for ECT**

Clinician bias may cause a detour of the delivery of evidence-based treatment practice with ECT to patients of color even after they are given a diagnosis of an affective disorder. Patients from racial-ethnic minority groups who are diagnosed as having an affective disorder are more likely to be considered for ECT with psychotic features as the target symptoms (4, 7, 15, 51). For example, one study found that Black patients

were more than twice as likely as Caucasian patients to receive ECT for severe depression with psychotic features (7). Moreover, a case series of 12 Chinese patients who underwent ECT reported that all were diagnosed as having delusions, and eight were diagnosed as having an affective disorder (15).

ECT has the most robust efficacy for older adults with severe depression (52), yet data spanning 1993–2013 replicate findings that Black and Hispanic patients consistently underwent ECT at a younger age than did Caucasians (1, 3, 4). A separate study also found that Black patients with major depression had a similar age of first onset as Caucasian patients. Yet there were fewer instances of Black patients' depression not responding to evidence-based medication trials, and these patients had experienced fewer lifetime episodes of depression before ECT referral than did Caucasian patients (7). If ECT is considered in the treatment cascade for major depression, these findings suggest that patients of color possibly receive accelerated, less evidence-based ECT referrals.

No studies have explored how race may affect clinicians' decision-making process with respect to whether to refer patients from racial-ethnic minority groups with severe affective disorders for ECT. However, similar to their underrepresentation among those receiving an advanced psychiatric intervention such as ECT, patients of color are underrepresented among those receiving intervention for advanced heart failure. In identical patient vignettes that differed only by patient race, that is, Black or Caucasian, a 2019 study asked health care professionals to determine whether they would offer an advanced heart failure intervention (53). Black patients were less favored for a heart transplant than were White patients. When providers explained their rationale, racial bias was evident at each step of the decision-making process. Consistent with process theories of aversive racism (25, 28), providers in this study were reluctant to directly discuss race; rather, they exhibited patterns of selectively emphasizing or deemphasizing multiple nonracial factors. For example, providers chose particular racially based physiological concerns to justify their decision, were more likely to view Black patients as sicker, were more likely to question the appropriateness and timeliness of previous treatments for Black patients, and were more likely to discuss Black patients' trust and perceived adherence as a barrier to advanced treatment.

Considering aversive racism in the context of this study and racial disparities in ECT, we propose that clinicians perhaps are reluctant to consider racial bias while unknowingly attributing increased illness severity and overestimated depressive symptoms to patients of color when accelerating ECT referral. Alternatively, fewer antidepressant trials before ECT referral may reflect clinicians' behavior of differentially questioning the appropriateness of previous psychiatric interventions to patients of color. Last, it is possible that accelerated ECT referrals for patients of color may reflect racial bias taking the form of deviation from evidence-based treatment guidelines in the decision-making process for these patients. We note that the exact

mechanisms underlying fewer failed medication trials, fewer previous episodes of psychiatric illness, and younger age at the time of undergoing ECT for patients of color are unknown.

### **Safeguarding Against Provider Racial Bias in Consideration of and Referral to ECT**

Several steps are needed to correct clinicians' racial bias and aversive racism that lead to racial disparities in ECT use. Identifying racial bias requires a conscious effort on the part of the clinician to self-reflect on the aspects he or she is emphasizing or deemphasizing in clinical decision making. For example, patients of color are consistently younger when undergoing ECT (1, 3, 4), may have experienced fewer prior episodes of psychiatric illness prior to ECT (7), and may have undergone fewer medication trials before ECT referral (7). Clinicians should not justify aversive racial assumptions and stereotypes, as has been documented in research on physicians' rationales for advanced cardiovascular care (53), by using confirmation, selection, or recall bias to construct "objective," nonracial, physiological, psychosocial, or past treatment factors to support disparate clinical rationales (25, 28, 53).

A final step toward reducing inequalities in ECT referral is a willingness to change. Aversive racism renders instances of cultural misunderstanding and racially biased decision making very challenging to identify and to self-reflect upon. Nonetheless, patients of color given a diagnosis of schizophrenia may in truth have a severe affective disorder that warrants ECT earlier in treatment. In contrast, younger patients of color for whom clinicians might be considering ECT may have been misdiagnosed as having treatment-resistant psychosis and may be in need for a first-line medication trial for mood symptoms rather than psychotic symptoms. Clinicians must incorporate their newfound knowledge into clinical practice by educating themselves on cultural competency and what racial disparities look like as they unfold in clinical practice. A willingness to change may involve taking the initiative to document diagnostic discrepancies, change the diagnoses of patients in medical records as needed, and perhaps reconsider the rationale for whether a patient of color is appropriately suited for ECT.

### **CONCLUSIONS**

Although several theories seek to explain the persistent racial disparities in ECT treatment, racially influenced referral bias is one prominent and probable provider-level factor. Evidence has suggested that both aversive and acknowledged forms of racism among clinicians likely influence cultural diagnostic validity and accuracy, largely through clinician-level interpersonal communication and perceptual deficits, while also influencing how closely decision-making rationales adhere to evidence-based standards for ECT. Increasing use of gold-standard treatment algorithms for ECT with patients of color is contingent on clinicians' ability and

willingness to transcend aversive racism to cultivate culturally unbiased, clinically indicated diagnostic and treatment rationales. Clinicians promote equity by openly identifying and safeguarding against racial bias in clinical encounters.

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