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# Disparities between Indigenous American and White Client Outcomes in Outpatient Treatment for Substance Use Disorder

## Abstract

Indigenous Americans consistently experience disparities in accessing and receiving care for substance use disorder, but what do we know about these differences? The long reported and alarming rates of substance use disorders among Indigenous Americans in the United States point to the need for research regarding potential differences in treatment outcomes between Indigenous Americans and other racial and ethnic groups. The Center for Practice Transformation (CPT) at the University of Minnesota partnered with NUWAY® to investigate differences between Indigenous American and White clients at the time of their admission to services and at discharge. Results indicate that the differences present when clients are admitted to treatment are not present at the time of discharge, indicating that treatment services are associated with reduction in disparities among Indigenous Americans with substance use disorders.

## Background

Indigenous Americans are more likely to report Substance Use Disorder (SUD) and require treatment compared to other racial and ethnic groups in the United States<sup>4</sup>. 17.5% of Indigenous Americans have needed treatment for drug and alcohol use compared to 9.3% for people of other races and ethnicities<sup>6</sup>. It is well documented that historical trauma and social injustice is associated with high rates of SUD among Indigenous Americans. Many barriers exist for Indigenous Americans when it comes to accessing treatment including limited resources, stigma, and fear of legal consequences<sup>4</sup>.

Research focusing on racial and ethnic disparities in SUD treatment outcomes is limited, especially those investigating comparative outcomes for White and Indigenous Americans. Existing literature emphasizes culturally tailored evidence-based care<sup>5,7</sup> and the problems with evaluating the efficacy of culturally based SUD treatments<sup>2</sup>. However, it

does not focus on potential disparities in outcomes of the Indigenous American population particularly relating to SUD treatment. A review of SUD research with Indigenous American populations underlines the importance of understanding factors that contribute to positive treatment outcomes<sup>3,7</sup>, which may be addressed by first understanding reported socioeconomic and psychosocial differences that exist in current SUD client populations.

The present study was conducted as part of an ongoing larger study of outcomes at NUWAY®, a large non-profit organization in the Midwest serving individuals recovering from substance use disorders and co-occurring mental illnesses. NUWAY® integrates a sober housing experience into treatment programming with their Recovery in Supportive Environments (R.I.S.E.) model which is unique to the agency. The data collected includes racial data on all clients at the organization, making it possible to investigate differences in self-reported outcomes between groups based on racial identity. This study was conducted to uncover any differences between people identifying as Indigenous American or White at the time of their admission to treatment and at the time of their discharge from care.

## Methods

Clients receiving intensive outpatient services at NUWAY® are given the option to enroll in the study at the time of their admission. Electronic surveys completed at admission included demographic questions as well as measures of substance use, recovery capital, depression, and anxiety. Additional demographic information as well as days in treatment were gathered using the electronic health record at NUWAY®. At the time of their discharge, participants were invited to complete another survey including additional questions about their care and the above-mentioned measures. CPT research staff distributed surveys upon client completion. Data was collected at discharge regardless of whether a person had completed the program successfully or not.

### Disparities between Black and White Clients

**+** disparity present      **-** no disparity present

	Substance Use	Days Sober	Days in Care	Comorbid Mental Health	Coping	Self-Care	Relationships	Material Resources	Outlook on Life	Recovery Importance	Depression	Anxiety	Food Insecurity
<b>Intake</b>	+	+	N/A	-	+	-	-	+	-	+	-	-	+
<b>Discharge</b>	-	-	+	-	-	-	-	-	-	-	-	-	-

To compare the survey results for White and Indigenous American clients, data subsets were created in IBM Statistical Package for Social Sciences (SPSS) to compare responses from only Indigenous American and White Clients. Survey responses from clients identifying as mixed-race or biracial (e.g., Indigenous American and White) were included in the Indigenous American client sample. Mann-Whitney tests were conducted to determine if there are any significant differences in outcomes between the two client groups.

## Results

From August of 2019 to August of 2021, data was collected from a total of 5,707 clients; 3,086 of whom identified as White and 329 identifying as Indigenous American ( $n = 3,415$ ). Approximately 74% of study participants identified as White and 8% Indigenous American. Participants were allowed to select more than one choice representing race.

### Differences at Intake

Of the metrics measured, six of the twelve were statistically significantly different between Indigenous American and White clients at the beginning of their care at NUWAY®. Analysis of intake survey data provided by clients indicated that Indigenous American and White clients differed significantly in their substance use ( $U = 269,815, p = 0$ ), coping ( $U = 276,286, p = 0$ ), material resources ( $U = 262,833, p = 0.039$ ), recovery importance ( $U = 223,399.50, p = 0.034$ ), food insecurity ( $U = 24,940.50, p = 0.001$ ), and days sober ( $U = 18,252, p = 0.008$ ). Indigenous Americans reported more days sober at intake than White clients. However, Indigenous American clients reported more problems with substance use, material resources, recovery importance, and food insecurity than White clients. There were no significant differences observed in comorbid mental health conditions, self-care, relationships, outlook on life, depression, or anxiety.

### Differences at Discharge

None of the observed differences at intake remained statistically significantly different among Indigenous American and White clients at discharge from care at NUWAY®. Analysis indicated that the two groups differed significantly only in the additional metric, days in care ( $U = 421,318, p = 0$ ) at the time of their discharge but had no other significant group differences.

## Discussion

The literature on substance use treatment outcome disparities among Indigenous Americans is relatively sparse. Though existing research focuses on culturally adapted treatments to (better) align treatment with cultural and spiritual support, there seems to be less emphasis on comparing outcomes with other racial/cultural groups. This study shows that intensive outpatient programming such as that offered at NUWAY® is associated with amelioration of disparities Indigenous American clients reported at intake such as higher substance use, more difficulty coping, fewer material resources, viewing recovery as less important, and higher food insecurity. Though NUWAY® does not provide culturally specific treatment for Indigenous American clients, these findings suggest that their integrated sober housing support may well contribute to the dissolution of disparities by the time they are discharged from care.

Interestingly, Indigenous American clients reported more days sober compared to White clients at NUWAY®. To better understand factors contributing to those Indigenous American clients who are sober longer than White clients at the time of their admission to outpatient programming. This finding should be examined further in future research.

Results of this study indicate Indigenous American clients are spending less time in treatment compared to their White counterparts. It is difficult to parse factors that may be contributing to this finding, and it is not necessarily a negative outcome, although longer treatment stays are typically associated with positive outcomes. Future research can use additional data to unpack this finding and better understand the implications that length of treatment has on the Indigenous American population.

Prior research has shown that treatment at NUWAY® improved outcomes for all participants<sup>1</sup>. These results demonstrate that providing clients with services addressing recovery capital is an important factor in supporting recovery. Connecting clients to resources and services within the community that aim to improve social connection and long-term wellbeing can support individuals in their recovery process across more areas than solely substance use. Given the sparsity of data investigating treatment outcomes among Indigenous Americans in the United States, further research is required to better understand correlates of effective treatment and improvements that agencies can make to better serve their Indigenous American clients receiving care for SUD.

## Limitations

The primary limitation of this study concerns the sample size of clients identifying as Indigenous American who have completed the discharge survey. Intake survey data that was collected as of August 2021, was collected from 223 clients identifying as Indigenous America. With this sample size, the authors can be reasonably confident that we have enough statistical power to test for the presence of group differences in outcomes. At discharge, the Indigenous American sample consisted of only 60 individuals limiting the statistical power of the analysis.

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