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Coordinated Entry Systems

Racial Equity Analysis of Assessment Data

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Executive Summary

Nationally, people of color are overrepresented in the homeless population (Jones, 2016; NAEH, 2018a; Carter, 2011). Stakeholders and policymakers are identifying the system-level factors that may be contributing to, reinforcing, and perpetuating these racial inequities. Across the U.S., Continuums of Care (CoCs) are tasked with building and implementing systems to meet the needs of homeless individuals and families, but these community planning bodies have limited resources and scarce housing alternatives. In recognition of the importance of prioritizing individuals and families with the greatest need, the U.S. Department of Housing and Urban Development (HUD) requires that Continuums of Care “establish and operate either a centralized or coordinated assessment system that provides an initial, comprehensive assessment of the needs of individuals and families for housing and services” [24 CFR 578.7(a)(8)].

Stakeholders and providers have raised concerns about the limited evidence of validity and reliability in commonly-used CES assessment tools (e.g., the VI-SPDAT). CoCs and other community stakeholders have reported anecdotal evidence that CES assessments lead to a prioritization of White people for housing resources over Black and Indigenous People/ Person(s) of Color (BIPOC). If prioritization tools are not equitable, CESs are not meeting the needs of the people they serve and may be causing or perpetuating racial inequities at a critical juncture in the homelessness response system.

In partnership with Building Changes and four CoCs, C4 Innovations conducted an analysis designed to examine the potential for CES assessments to perpetuate racial inequities. Our analysis was guided by two research questions:

1. According to CES assessment data, are White people more likely to be prioritized for permanent housing compared to BIPOC?
2. Which subscales of the VI-SPDAT predict vulnerability, and thus housing needs, across racial groups? Are there methods or proxy variables that can be transformed to result in more equitable prioritization?

Our results included the following:

- On average, BIPOC clients receive statistically significantly lower prioritization scores on the VI-SPDAT than their White counterparts;
- According to VI-SPDAT data White individuals are prioritized for Permanent Supportive Housing (PSH) intervention at a higher rate than BIPOC individuals, though this is not true for families;
- Race is a predictor of receiving a high score (i.e., an assessment for Permanent Supportive Housing/ Housing First), where being white was a protective factor for single adults;
- VI-SPDAT subscales do not equitably capture vulnerabilities for BIPOC compared to Whites: race is a predictor of 11/16 subscales, and most subscales are tilted towards capturing vulnerabilities that Whites are more likely to endorse.

Our methodology, findings, and implications are presented herein and are discussed with a racial equity lens and recommendations for communities, future research, and national policy action and transformation.



Introduction

In 2018, over half a million people were homeless in the United States, according to the U.S. Department of Housing and Urban Development (HUD) Annual Point-in-Time (PIT) count (2018a). The accurate number is likely much greater and does not reflect those at the precipice of homelessness who are without stable housing. Under federal policy (24 CFR § 578), Continuums of Care (CoC) around the country aim to build and implement systems to meet the needs of homeless individuals and families through a) outreach, engagement, and assessment, b) shelter, housing, and supportive services, and c) prevention strategies. The majority of CoCs are facing this daunting task with limited resources and scarce housing alternatives. In recognition of the need to prioritize those individuals and families with the greatest need rather than simply “first come, first serve,” HUD requires a “Centralized or Coordinated Assessment System,” also known as Coordinated Entry Systems

(CES) under 24 CFR 578.7(a)(8). HUD also provides guidance that an effective coordinated entry process has the following qualities: 1) ensures that people with the greatest service needs or vulnerability receive priority for any type of housing and homeless assistance available; 2) is low barrier; 3) follows a Housing First and person-centered framework; 4) provides fair and equal access; 5) uses a standardized access and assessment process; and, 6) is inclusive of all subpopulations (HUD, 2015a).

The CES also presents an avenue for policymakers to understand trends and patterns across demographic categories for people experiencing homelessness. Nationally, people identifying as White are underrepresented and non-White — specifically people identifying as African-American/Black, American Indian/Alaskan Native, and multiracial — are overrepresented in the homeless population (Jones, 2016; NAEH, 2018a;

Carter, 2011). Analyses conducted by C4 Innovations through the Supporting Partnerships for Anti-Racist Communities (SPARC) initiative confirmed this finding across its communities of study (Olivet et al., 2018). Furthermore, people of color experiencing homelessness also tended to be overrepresented when compared to those living in deep poverty, thus suggesting poverty alone is insufficient to explain the disparity. According to national data in 2018, Black/African-American people make up 23% of the population in poverty, and 40% of the homeless population (NAEH, 2018b). Given the marked overrepresentation of people of color in the homeless population, stakeholders and policymakers have begun dissecting the system-level factors that may be contributing to, reinforcing, and perpetuating this trend.

The CES is a major component of every CoC's plan to reduce current homelessness response systems. This approach ensures that all people experiencing homelessness have fair and equal access to services while prioritizing those with greatest need or vulnerability. Every CES utilizes a screening tool to assess for service need or vulnerability, using indicators known to contribute to homelessness such as physical and behavioral health, socioeconomic status, and barriers to housing; this generates a score that prioritizes clients for various housing interventions. HUD does not explicitly endorse any specific tool, yet provides characteristics that an assessment tool should meet in order to be compliant (HUD, 2014).

The VI-SPDAT

Since its release in 2014, the Vulnerability Index–Service Prioritization Decision Assistance Tool (VI-SPDAT), developed by OrgCode and Community Solutions as a coordinated entry triage tool, has been positioned as the most HUD-compliant and effective, subsequently growing in popularity among CoCs. The VI-SPDAT merged two existing tools—the VI as a pre-screening tool and the SPDAT as an in-depth assessment—to provide a less intensive and more accessible approach for frontline agencies. Following its administration with an individual or family, wherein the client is asked to self-report a number of risk factors, including length of

homelessness, various medical conditions, substance use and mental health, and “daily functioning,” the tool scores vulnerability on a scale of 0-17. A score of 0-3 will result in a recommendation for “no housing intervention,” a score of 4-7 will result in a recommendation for Rapid Re-Housing, and a score of 8 or more will result in a recommendation for Permanent Supportive Housing/Housing First and a score of 8 or more will result in a recommendation for Permanent Supportive Housing/Housing First, according to the single adult VI-SPDAT scoring summary recommendations.

Reliability and validity The VI-SPDAT's reputation as an evidence-informed tool that met HUD criteria of validity, reliability, inclusivity and transparency among other factors, propelled its reach across the country (OrgCode Consulting, n.d.). However, since its release in 2014 and through multiple iterations, stakeholders and providers working in the homelessness sector have raised concerns about the VI-SPDAT tools, generally falling into three broad categories: the limited evidence of the VI-SPDAT's validity and reliability in assessing vulnerability; the accuracy of self-reporting mental and behavioral health challenges; and other implementation or fidelity concerns. Both researchers and practitioners have raised issue with the extremely limited degree of reliability and validity testing conducted on the VI-SPDAT (Brown, 2018; King, 2018; Thomas, 2019). The developers do not claim it to be “evidence-based,” but “evidence informed,” and a HUD report released in 2015 cautioned CoCs regarding the limited evidence backing this and other tools (HUD, 2015b).

Further, although VI-SPDAT tools are in use in more than 40 states across the U.S. and internationally, the tool has never been formally validated with a nationally representative sample, and very few peer-reviewed studies on its measurement characteristics have been published. Those studies that have been published suggest issues regarding model fit, latent variable associations, and test-retest and inter-rater reliability. Internal reliability has mixed results (Brown, 2018). By definition, the assessment is measuring vulnerability; however, the outcome of the assessment is a suggested intervention such as rapid rehousing or permanent supportive housing. There is no indication of a relationship between vulnerability

score and one's ability to sustain a particular housing intervention (Brown, 2018). In addition, the tool is not designed to address the resources a client may need to maintain their current housing or otherwise improve their situation; which is a deficit-based approach. The total score exhibits a degree of power for predicting re-entry into homelessness, although housing intervention type more so in that interventions utilizing short-term subsidies (also known as Rapid Rehousing) are more likely to result in re-entry into homelessness than long-term or permanent subsidies (Brown, 2018). Moreover, when VI-SPDAT results were tested for an association with validated mental and behavioral health scales, such as the PCL-5, Addiction Severity Index, and the Modified Colorado Symptom Index, only very weak correlations were identified (Thomas, 2019).

Self-reporting Any instrument that includes self-reporting is implicitly challenged by response bias, especially where sensitive information is concerned. The VI-SPDAT asks respondents to report on mental and behavioral health conditions, substance use, trauma, and other risk factors. Endorsing problems in such areas will contribute to a higher score and thus priority in receiving housing or other services. Researchers and practitioners alike have suggested that the tool's accuracy is particularly hampered in this area. Respondents are likely to underreport, which will "inadvertently limit one's opportunities for housing and support services by producing lower scores" (Brown, 2018, p.110). Underreporting may not only be the result of an active decision on the part of the individual (to appear to have fewer issues or for social desirability) but could also be due to conflicting perceptions of one's situation or a mental health condition (Fritsch et al., 2017). A comprehensive qualitative thematic analysis conducted in Minnesota suggested marked differences in how clients may respond to sensitive questions, and what case managers or assessors themselves know about a person's situation. For providers who are trained to advocate for their clients, it can be difficult to reconcile these two realities. One assessor stated, "Some of the questions even seem incriminating. So, I don't think people are answering them as honestly as they want to, even though I'm explaining." (Fritsch et al., p. 32). A nuance of why clients may not be completely honest beyond simply avoiding "incriminating" themselves

could relate to changes in the CoC's CES prioritization process. Where, for example, in the past, one may have chosen not to be candid for fear that they would not be permitted entry into housing or given access to resources, they are now at a disadvantage (in terms of their score) if they are not completely transparent. One assessor explained, "Now we're asking people to be super honest to get them into the right program, when in the past, we basically [told them] not to have any problems, and then we'll put them in the program" (Fritsch et al., p. 32). If underreporting (or overreporting) is highly prevalent, there are systemwide implications, as prioritization is not holding up its end of identifying those individuals or families with the greatest need and distributing resources appropriately and responsively. While race was not directly explored in the literature of underreporting, issues of race and racism can only compound the impact of response biases.

Implementation and fidelity Additional implementation and fidelity concerns raised by housing practitioners and experts include the influencing role of rapport between client and interviewer, the situational context of the assessment (e.g., location, privacy, by phone, or in-person), potential cultural and language barriers, and lack of assessor training (Brown, 2018; Fritsch et al, 2017; King, 2018). OrgCode has responded to these concerns and others regarding the VI-SPDAT, suggesting that CoCs may be implementing the tool beyond its intended scope as a *screening* tool to be used in tandem with case management, and not the sole indicator for vulnerability or need (De Jong, 2017). OrgCode do note in the tool's instructions that "[t]he use of this survey can help prioritize which clients should be given a full SPDAT assessment first," yet it is unclear how many CoCs do indeed proceed to a more in-depth assessment, how many consider additional factors, and how many accept the VI-SPDAT score as sufficient in prioritizing people experiencing homelessness for resources (OrgCode Consulting and Community Solutions, 2015). Regardless, there are potential issues with CES assessment tools as they are constructed that remain unexplored.

Racial Inequities in Coordinated Entry System Assessment

HUD has responded to insight regarding racial inequities in the homeless system in general and has developed a CoC Analysis Tool (2018b) that allows communities to use data to identify and address racial inequities related to poverty and homelessness as a starting point for action. Federal policy explicitly states that “CoCs are prohibited from using any assessment tool or the prioritization process...if it would discriminate based on race, color, religion, national origin, sex, age, familial status, disability...actual or perceived sexual orientation, gender identity, or marital status” (HUD, 2017, p.10). However, SPARC communities and other CoCs have shared anecdotal evidence that implementation of CES assessment tools—the VI-SPDAT in particular—leads to a prioritization of White people for housing resources, especially permanent supportive housing (as higher vulnerability scores typically translate to referral for PSH intervention). Issues related to question content, question phrasing, unequal opportunities across questions to receive a point towards the final score, and a need for questions that capture the unique vulnerabilities of people of color comprise these observations.

Preliminary analysis conducted by Pierce County, Washington CoC of their vulnerability assessment data suggested that Black people, on average, receive a statistically significant lower prioritization score compared to White people, suggesting that White clients are scored as “more vulnerable” than Black clients and thus may be prioritized for services. Other researchers have reached similar conclusions independently (King, 2018). Furthermore, the dearth of literature supporting

the validity and reliability of CES assessment tools currently in use, paired with, for example, evidence that at least part of VI-SPDAT was developed in response to research conducted on a predominantly White, male, chronically homeless population (Fritsch, 2017; O’Connell et al., 2005), provides compelling reasons to further explore the role of assessment tools in perpetuating *systemic* racial inequities.

People of color, both individuals and families, are dramatically overrepresented in the homeless population, and the CES may be contributing to inequitable outcomes as White clients receive more sustainable housing solutions, more quickly. The rationale behind CES is to efficiently and equitably prioritize individuals, allocate housing resources appropriately, and reduce homelessness across a CoC. If prioritization tools are undermining these objectives, homelessness response systems are not meeting the needs of the people they serve and may be both perpetuating homelessness and contributing to racial inequities.

In partnership with Building Changes and four CoCs, C4 Innovations has conducted a racial equity analysis designed to shed light on the potential for CES assessment tools to perpetuate racial inequities in the homeless system. This report describes the methodology, findings, and implications of a multi-community study. Recommendations and next steps related to local, national, and research-focused action and transformation follow presentation of our findings.

Methods

Coordinated Entry assessment data were collected from four partner communities: Portland-Gresham-Multnomah County CoC in Oregon; Roanoke City and County/Salem CoC in Virginia; Seattle/King County CoC in Washington; and Tacoma/Lakewood/Pierce County CoC in Washington. CoCs had varying numbers of years of data (for example, one community has two years of data, another has four years), but all datasets were collected between 2014 and 2018. Data were analyzed in several different ways: by community, aggregated across communities, for single (adult) individuals, and for families. Seattle/King County CoC was the only community currently using the family version of the VI-SPDAT with families. As such, family subscales were not included in order to allow for cross-community analyses, and scoring bands and subscales specific to the single adult tool were used in the family analysis. The family VI-SPDAT tool is worded similarly to the single adult tool, but a family may endorse a question if any member of their household is experiencing that vulnerability; further, the family VI-SPDAT tool contains additional questions that are designed to capture the unique vulnerabilities of families. Data were deduplicated by eliminating exact record matches. Incomplete cases were excluded from the analysis. Data were mined directly from each CoC's vulnerability assessment tool, which, in the case of three communities, was the VI-SPDAT. The Pierce County CoC vulnerability assessment tool is grounded in the VI-SPDAT, but questions vary slightly in wording, structure, and response options, some questions are missing, and an algorithm is used to generate the final prioritization score. Due to these differences between the Pierce Co. assessment tool data and other CoCs' VI-SPDAT data, Pierce County results are *not* presented in tables in this report. Community-specific reports for partner CoCs, including Pierce County, are forthcoming.

We focused our analysis on two primary research questions:

1. According to CES assessment data, are White people more likely to be prioritized for permanent housing compared to people of color?
2. Which subscales on the VI-SPDAT predict vulnerability, and thus housing needs, across racial groups? Are there methods or proxy variables that can be transformed to result in more equitable prioritization?

Several analytic techniques were used to address the study research questions. First, a one-way ANOVA was conducted to determine whether people of color differed from White clients on the prioritization score. Second, Pearson chi-square analysis was used to determine whether there is a statistically significant association between race and being classified into a specific vulnerability group (i.e., no housing intervention is needed, Rapid Re-Housing, or Permanent Supportive Housing/Housing First). Third, logistic regression was used to examine the effect of race on high prioritization score (final score of 8 or higher, i.e., an assessment for Permanent Supportive Housing/Housing First) on the VI-SPDAT.

Our approach to answer our second research question was more complex and iterative in nature. We sought to ascertain whether or not VI-SPDAT subscales predict a high score for both White clients and Black and Indigenous People/Person(s) of Color (BIPOC) clients. Multivariate logistic regressions were conducted to determine predictive qualities of VI-SPDAT subscales and graphed to identify which items were discordant across racial groups. Additionally, multivariate logistic regressions were conducted to determine predictive qualities of race in the endorsement of each subscale. Each VI-SPDAT subscale was recoded to a dichotomous (0/1) variable that indicated endorsement, or not, of the question. Odds ratios were used to estimate the strength of an association. All statistical tests were performed at the $\alpha = .05$ level of significance.

To account for the nested structure of the data related to cases nested within different sites, multilevel analyses were performed with site as a clustering variable. Thus, standard errors were computed considering nonindependence of observations due to site clustering. To determine the amount of unique variance explained by each predictor, multivariate analysis was conducted where all variables were entered simultaneously into the model. Mplus statistical software, version 8.0 (Muthen & Muthen, 1998–2017) was used. The Mplus MISSING feature was used to impute missing data for dependent variables, resulting in means and variances that are less biased than those using alternative approaches, such as listwise deletion or mean substitution. The Mplus software uses a full information maximum likelihood estimation under the assumption that the data are missing at random and are unrelated to the outcome variable.

Results

Descriptive statistics of each community's CES *single adult* and *family* by race, compared to the racial breakdown of each CoC's American Community Survey data, are shown in Figures 1 and 2. In all CoCs, BIPOC single adults and families are presenting to the Coordinated Entry Systems at disproportionately higher rates compared to each community's general population. Further, there was a higher percentage of BIPOC families than BIPOC single adults.

Figure 1. Racial Inequities Between General Population and CESs: Single Adults*

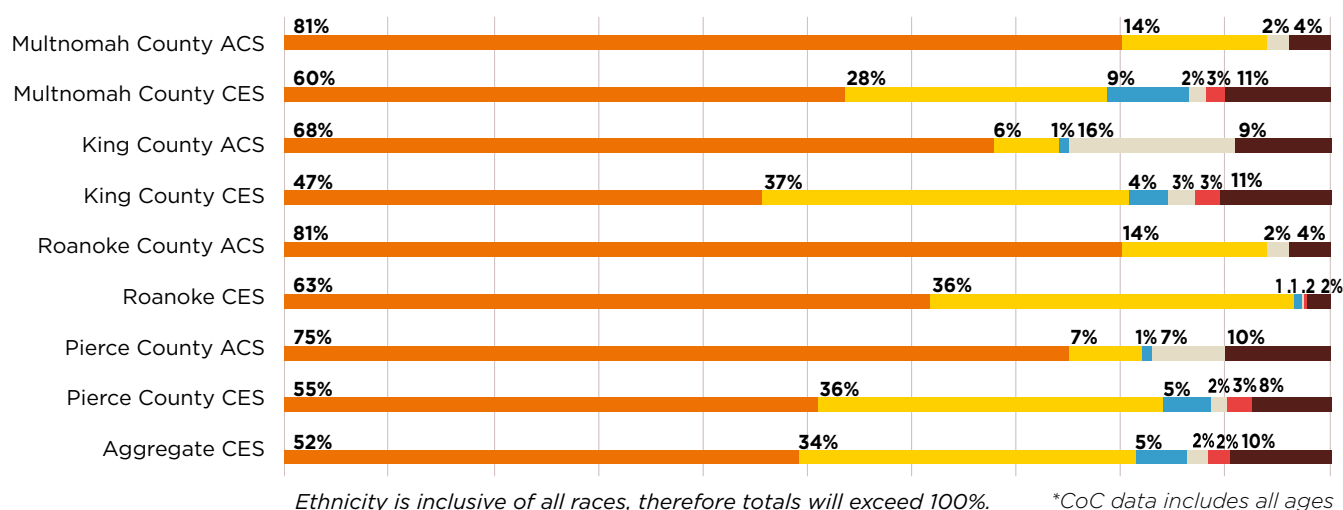
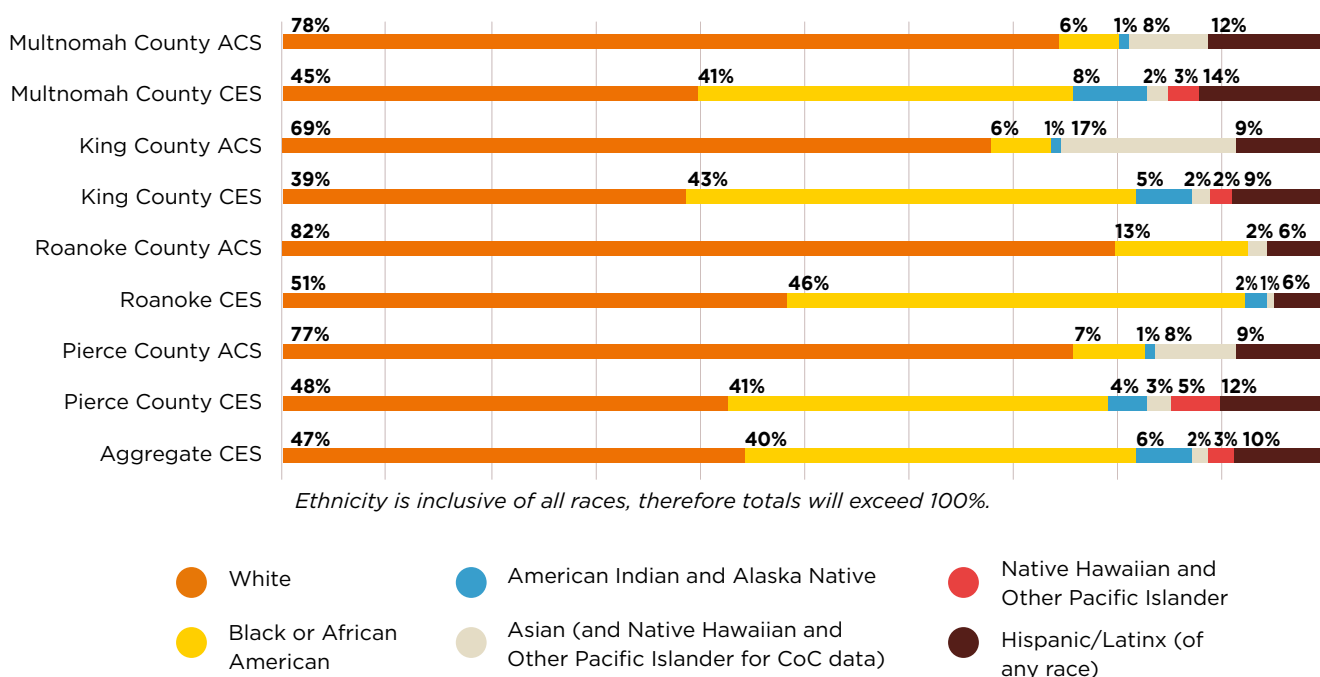


Figure 2. Racial Inequities Between General Population and CESs: Families



Our first research question explored whether average VI-SPDAT prioritization scores differed between White clients and BIPOC clients and to determine if race is a significant factor in predicting prioritization. Figures 3 and 4 visually display mean score differences for single adults and families, respectively, and indicates the datasets for which this difference was statistically significant. While differences in means were generally small, they were statistically significant for most datasets, including single adult and family aggregate datasets. Not shown are Pierce County data, where Whites had a statistically significantly higher mean score than BIPOC for single adults but not for families.

Figure 3. Single Adult Mean Score by Race

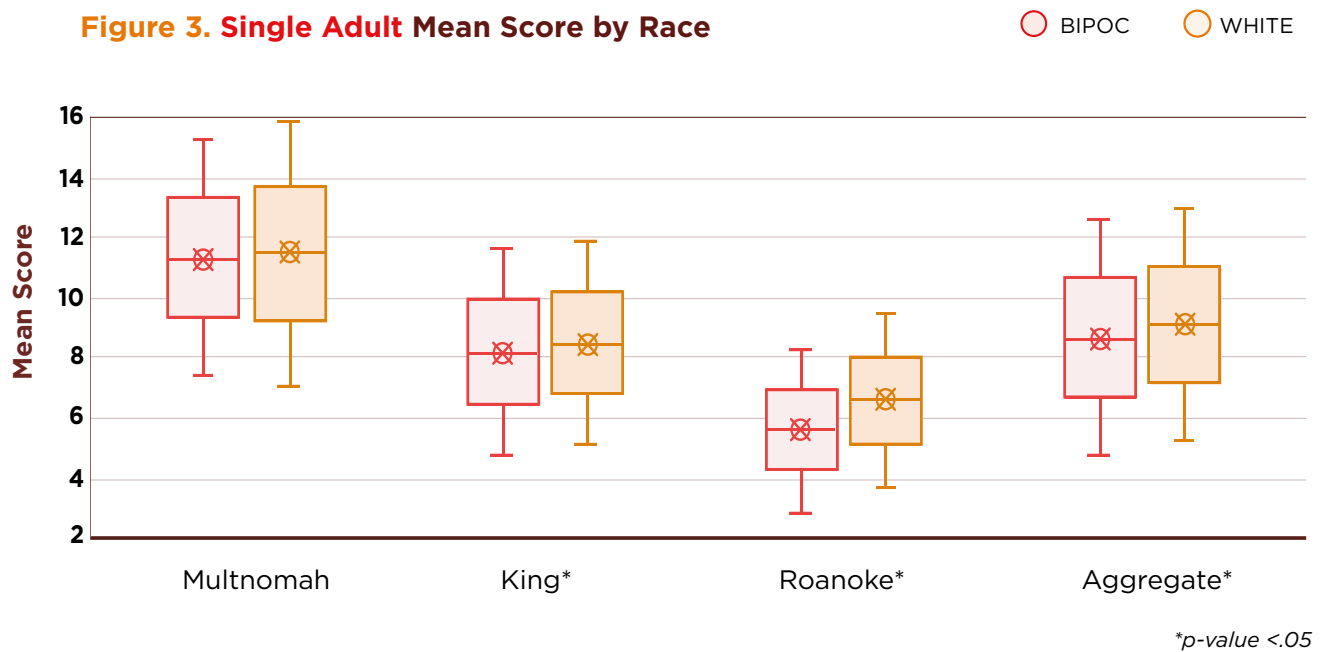
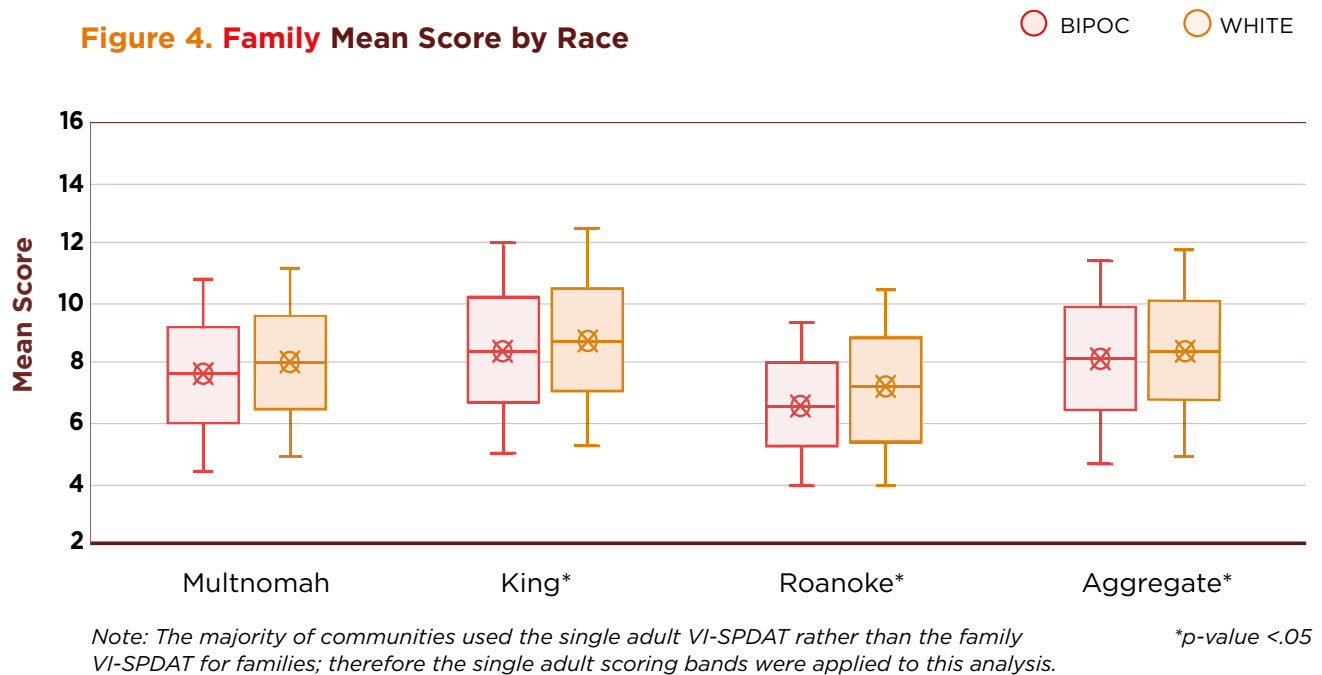


Figure 4. Family Mean Score by Race



Prioritization Category

Additionally, the results of chi-square analyses indicated that there was a statistically significant association between race and being classified into a specific vulnerability group, or intervention recommendation for single adults, (i.e., no housing intervention is needed, an assessment for Rapid Re-Housing, or an assessment for Permanent Supportive Housing/Housing First). No statistically significant results were found when family members were examined. Results are shown in Figures 5 and 6.

Figure 5. Single Adults: Intervention Recommendation by Race

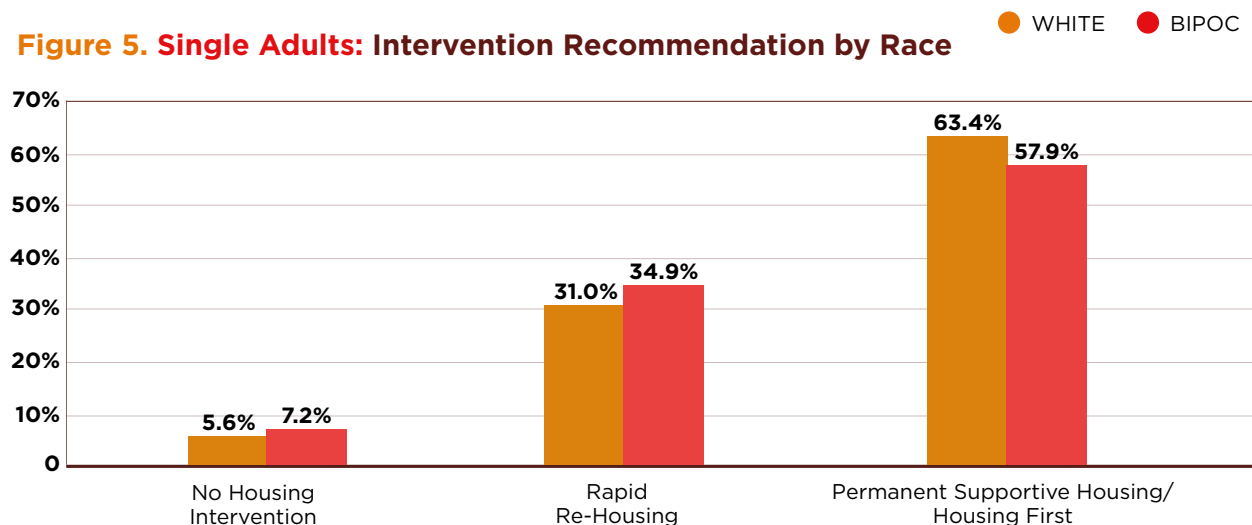
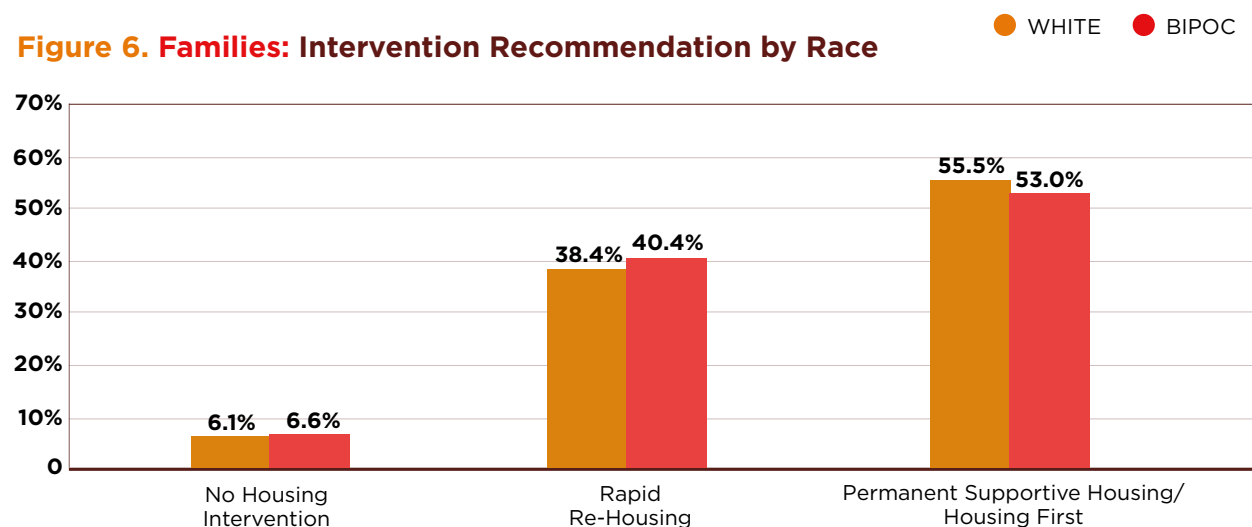


Figure 6. Families: Intervention Recommendation by Race



Note: The majority of communities used the single adult VI-SPDAT rather than the family VI-SPDAT for families; therefore the single adult scoring bands were applied to this analysis.

Race as a Predictor of Prioritization of Permanent Housing/Housing First

Finally, results of multivariate logistic regression analyses indicated that race is a predictor of receiving a high score (i.e., an assessment for Permanent Supportive Housing/Housing First) for single adults in all three communities and for the aggregate dataset (see Table 1). Specifically, BIPOC individuals were 32%* less likely than Whites to receive a high prioritization score. Not shown are results of multiple regression based on Pierce county data, which indicated that White clients were more likely to receive a higher prioritization score.

* Note: Negative odds ratios can be interpreted by dividing the OR from 1. For example, $1/.758 = 1.32$.

Table 1. Predictors for Receiving a High Prioritization Score (8+) on the VI-SPDAT for Single Adults in Multnomah, King, & Roanoke Counties and Aggregate Dataset

Logistic Regression Model Parameters				
SINGLE ADULTS	β	Wald $\chi^2(1)/S.E.$	OR	95% CI
RACE				
Multnomah	-0.17	4.69*	0.84	0.72, 0.98
King	-2.31	36.96*	0.79	0.74, 0.86
Roanoke	-0.64	33.38*	0.53	0.43, 0.66
Aggregate	-0.28	0.06*	0.76	0.67, 0.85
ETHNICITY				
Multnomah	-0.03	0.05	0.97	0.74, 1.27
King	-0.12	3.03	0.89	0.78, 1.02
Roanoke	0.43	1.77	1.54	0.82, 2.89
Aggregate	0.03	0.16	1.03	0.75, 1.41

For families, race was not a statistically significant predictor of receiving a higher prioritization score in the aggregate dataset; this was only significant for King County (see Table 2).

Table 2. Predictors for Receiving a High Prioritization Score (8+) on the VI-SPDAT for Families in Multnomah, King, & Roanoke Counties and Aggregate Dataset

Logistic Regression Model Parameters				
FAMILIES	β	Wald $\chi^2(1)/S.E.$	OR	95% CI
RACE				
Multnomah	-0.15	2.94	0.86	0.72, 1.02
King	-0.20	7.65*	0.82	0.71, 0.94
Roanoke	-0.36	2.31	0.70	0.44, 1.11
Aggregate	-0.02	0.07	0.98	0.86, 1.11
ETHNICITY				
Multnomah	-0.22	2.29	0.80	0.61, 1.07
King	0.01	0.00	1.01	0.78, 1.29
Roanoke	0.76	2.27	2.13	0.80, 5.69
Aggregate	-0.05	0.12	0.95	0.75, 1.20

OR = odds ratio; CI = confidence interval. | * $p < .05$ ** $p < .01$. | Note: White is the reference group.

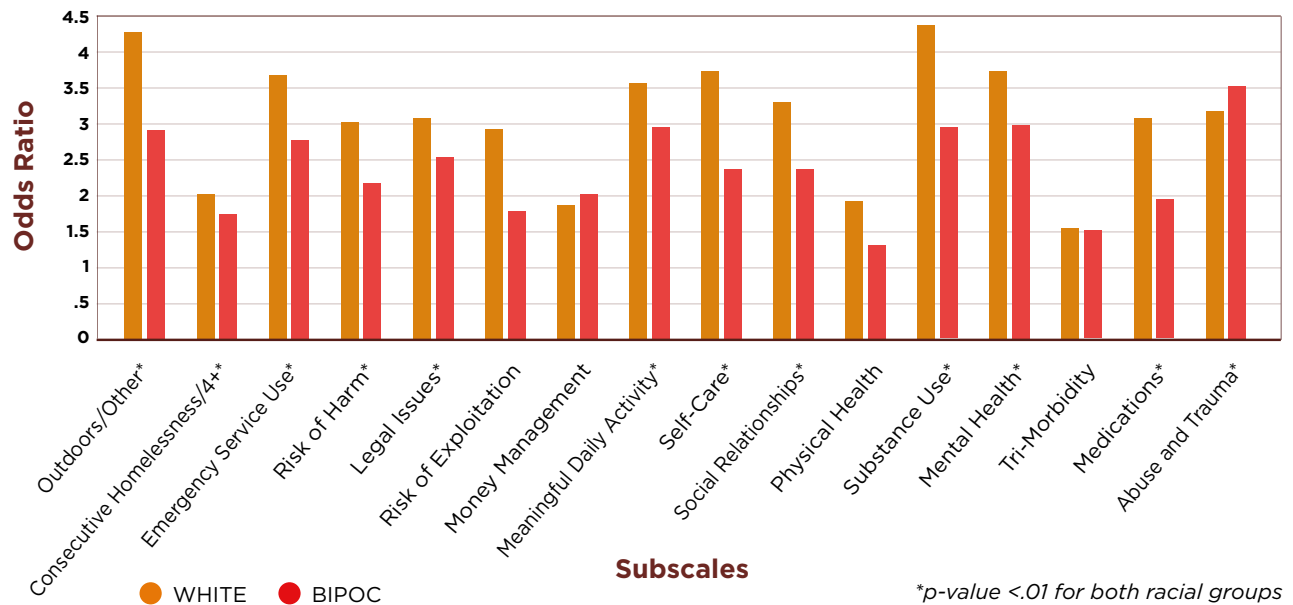
Note: The majority of communities used the single adult VI-SPDAT rather than the family VI-SPDAT for families; therefore the single adult scoring bands were applied to this analysis.

For our second research question, we used multivariate regression analyses to determine a) the odds ratio associated with each subscale as a predictor of a higher prioritization score for Whites and BIPOC; and, b) the odds ratio associated with race as a predictor of each subscale.

Subscales as Inequitable Predictors of Higher Prioritization Scores

Analyses were run by race group. In other words, White clients were filtered out to explore odds ratios for BIPOC only and vice versa. Figure 7 shows the odds ratio of each VI-SPDAT subscale in predicting a recommendation of PSH/Housing First for both White individuals and BIPOC individuals. Most subscales are more predictive (i.e., have higher odds ratios) of a PSH/Housing First prioritization for White single adults than they are for BIPOC single adults.

Figure 7. VI-SPDAT Subscales as Predictors of High Vulnerability Scores: By Race



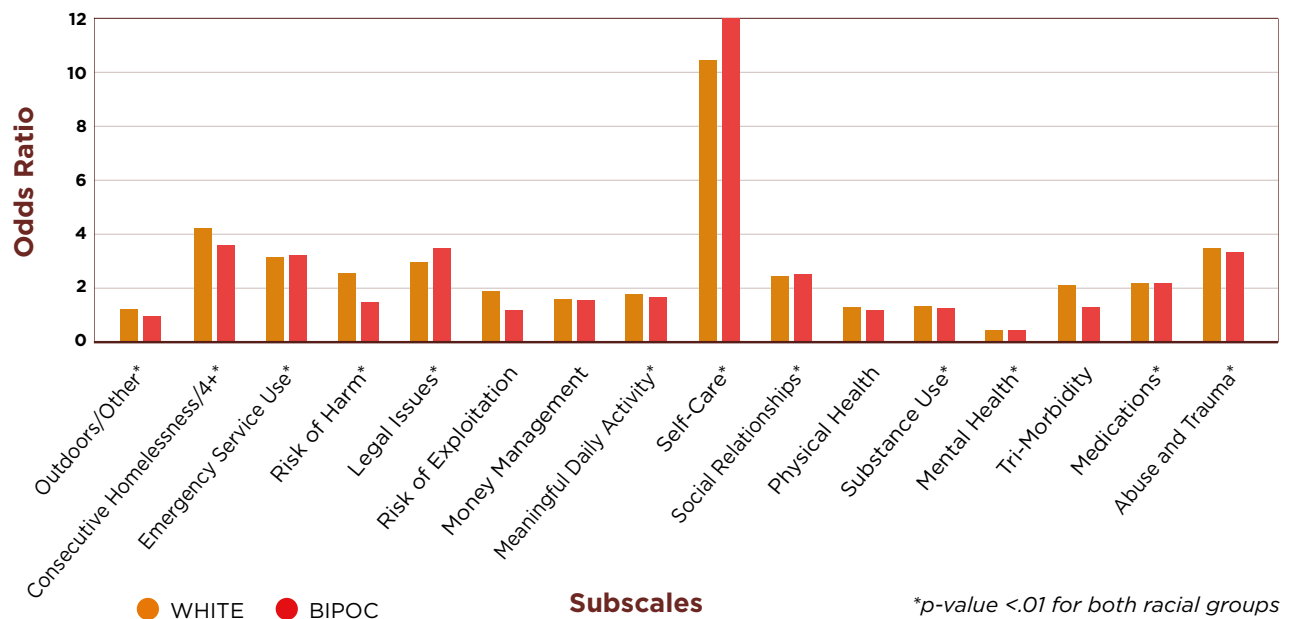
Discordance of odds ratios between racial groups identifies subscales that are more predictive of a higher prioritization score for White clients. In other words, endorsement of these subscales results in a higher likelihood of receiving a higher prioritization score. For the single adult dataset, we identified the five subscales that were most discordant (and statistically significant predictors of a high score for both racial groups):

1. Where do you sleep most frequently? *If the person answers anything **other** than “shelter”, “transitional housing”, or “safe haven,” then score 1.* [OR =4.3 White; OR=2.9 BIPOC.]
2. Are you currently able to take care of basic needs like bathing, changing clothes, using a restroom, getting food and clean water and other things like that? *If “no,” then score 1 for **self-care**.* [OR=3.8 White; OR=2.4 BIPOC.]
3. Is your current homelessness in any way caused by a relationship that broke down, an unhealthy or abusive relationship, or because family or friends caused you to become evicted? *If “yes,” then score 1 for **social relationships**.* [OR=3.3 White; OR=2.4 BIPOC.]
4. Has your drinking or drug use led you to being kicked out of an apartment or program where you were staying in the past? Will drinking or drug use make it difficult for you to stay housed or afford your housing? *If “yes” to any of the above, then score 1 for **substance use**.* [OR=4.4 White; OR=3.0 BIPOC.]
5. Are there any medications that a doctor said you should be taking that, for whatever reason, you are not taking? Are there any medications like painkillers that you don’t take the way the doctor prescribed or where you sell the medication? *If “yes” to any of the above, score 1 for **medications**.* [OR=3.1 White; OR=2.0 BIPOC.]



As Figure 8 shows, most VI-SPDAT subscales are similarly predictive for a family's high score; however, discordance was not as drastic between racial groups: VI-SPDAT subscales were similarly predictive of high scores for both white and BIPOC families. Three of the five most discordant subscales were not statistically significant for both racial groups.

Figure 8. VI-SPDAT Subscales as Predictors of High Vulnerability Scores: By Race (Families)



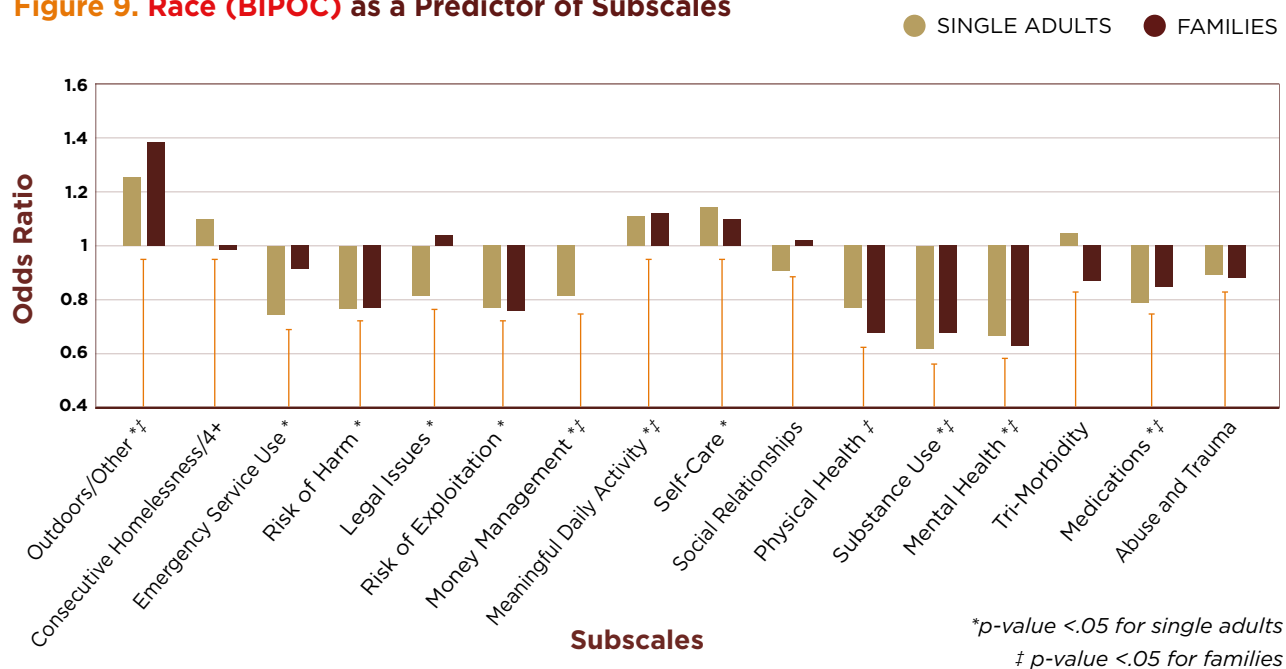
Note: The majority of communities used the single adult VI-SPDAT rather than the family VI-SPDAT for families; therefore the single adult scoring bands were applied to this analysis.

Of note are two subscales: **Consecutive Homelessness/4+** (If the family has experienced 1 or more consecutive years of homelessness, and/or 4+ episodes of homelessness, then score 1), which was more predictive of a high score for White families than for BIPOC families [OR=4.2 White; OR=3.5 BIPOC], and **Self-Care**, which was highly predictive for both racial groups and *more* predictive for BIPOC families than for White families [OR=10.5 White; 12.0 BIPOC].

Race as a Predictor of Endorsing Assessment Subscales

For single adults (receiving any prioritization score), race was a predictor of endorsing 11 of the 16 VI-SPDAT subscales. Whites were more likely to endorse eight subscales, and BIPOC were more likely to endorse three subscales: Outdoors/Other, Meaningful Daily Activity, and Self-Care Needs. For families, race was a predictor of endorsing seven subscales, three of which were more likely to be endorsed by BIPOC: Outdoors/Other, Money Management, and Meaningful Daily Activity. In other words, for both single adults and families, only three out of 16 subscales are designed to capture the vulnerabilities that BIPOC are more likely to report. Odds ratios are presented in Figure 9.

Figure 9. Race (BIPOC) as a Predictor of Subscales



Note: The majority of communities used the single adult VI-SPDAT rather than the family VI-SPDAT for families; therefore the single adult scoring bands were applied to this analysis.

Discussion

To frame the discussion of this analysis, it must first be understood that BIPOC, particularly Black/African Americans, are grossly overrepresented in Coordinated Entry Systems compared to the general population, and this disparity is even more dramatic for families. Our findings attempt to unpack the way in which the CES assessment process in particular may be perpetuating and exacerbating racial inequities at a critical decision-making point in the response to homelessness. We recommend that results from this study be interpreted and discussed with a racial equity lens and, where possible, within the community- and practice-specific contexts that create the environments in which racial inequities unfold.

In interpreting the results, the authors would like to reiterate several key points. First, we do not suggest that assessment scores alone determine how individuals and families are referred to and receive housing services. Many communities, including those that use the VI-SPDAT and other assessment tools, consider other factors in determining prioritization. Second, we present findings from three communities that use the VI-SPDAT as part of their CES, and we do not suggest that our findings represent what may be found in other CoCs throughout the country. Third, we acknowledge the presence of confounding variables that may undermine implementation or effectiveness of the tool, which are outside the scope of this study (see Limitations). However, our cross-community findings point to patterns that, even with unaccounted-for

While we would not expect Black, Indigenous, and People of Color to endorse the same vulnerabilities as Whites, when Whites are more likely to endorse the majority of subscales, this results in a tilt towards the prioritization of White folks over BIPOC.

contextual confounders, are contained within the process and structure of the coordinated entry assessment system. We report these findings because in examining racial inequities in the homelessness system, the consequences of a widely-used biased assessment tool are great and are in direct contravention of federal regulations.

Racial Inequities Among Single Adults

According to our assessment data, White people experiencing homelessness have higher mean prioritization scores than their BIPOC counterparts. While the difference is small, the results are statistically significant and indicate a clear inequity by race in the assessment score of people experiencing homelessness. Although a difference in mean scores does not necessarily translate to a difference in prioritization, chi-square analyses of prioritization *categories* by race indicate that there is a statistically significant difference in the recommendation for prioritization of White individuals for permanent supportive housing/Housing First than for BIPOC individuals.

Race is also a predictor of receiving a high prioritization score on the VI-SPDAT, where being White is a predictor of receiving a high score. These findings were consistent across communities and in our aggregate dataset, indicating that beyond community-specific context and potential administrator or self-report bias, the assessment tool itself plays a role in creating racial inequities within coordinated entry systems.

Racial Inequities Among Families

According to our assessment data, White families experiencing homelessness have higher mean prioritization scores than their BIPOC counterparts. However, chi-square analyses indicate that this difference in mean scores does not translate to a statistically significant difference in prioritization category. Further, for families, race is not a significant predictor of receiving a high prioritization score. Indeed, subscales showed very little variation in the predictive quality of higher prioritization scores for both BIPOC and White families. These findings, when viewed through a racial equity lens, spark multiple follow-up questions about why families of color may receive equitable prioritization, including: What other “vulnerabilities” may a BIPOC family be experiencing that are captured in assessment processes? For example, do BIPOC families present with more children and are thus prioritized for that reason? Data on the number of children in families were overwhelmingly missing in our dataset and not included in this analysis. It is likely that additional information and factors are being used to prioritize families. Communities should mine their CES data to better understand these findings.

The Role of the CES Assessment Tool

Our analysis identifies how assessment items, particularly VI-SPDAT subscales, predict prioritization and may be contributing to inequitable assessment outcomes. The approach of comparing the role of subscales in predicting a high score for Whites and BIPOC is presented for visual purposes: the evidence of discordant odds ratios (among single adults) indicates that subscales are more predictive of a desirable outcome for Whites than they are for BIPOC, and that subscales vary in weight in predicting a recommendation for PSH/HF. It should also be noted that subscales are not constructed equally in terms of opportunities to endorse, with between one and six questions per subscale. This highlights that subscales are not designed to carry equal weight and that, with the right combination of endorsements, Whites may not have to endorse as many vulnerabilities (i.e., questions on the VI-SPDAT) as BIPOC to score a recommendation for PSH/HF.

Race as a predictor of endorsement of subscales is also critical to understanding how an assessment tool can perpetuate inequities. Items specifically endorsed more frequently by BIPOC can be targeted for use as proxy variables for mitigating racial inequities in scoring; items specifically endorsed more frequently by Whites can be targeted for transformation. While we would not expect BIPOC to endorse the same vulnerabilities as White clients, when White clients are more likely to endorse the majority of vulnerabilities and BIPOC are only more likely to endorse three out of 16 subscales, this results in a tilt towards the prioritization of Whites over BIPOC.



To interpret these findings with a racial equity lens, one should consider the following questions:

1. Do questions and subscales equitably capture the specific vulnerabilities that BIPOC are more likely to experience?
2. Are assessment questions crafted with cultural humility, or conversely, are these questions culturally blind?
3. Are assessment questions designed to identify a true vulnerability that indicates housing resource needs?
4. How might a person or family of color respond to the assessment question? Would they be more likely to be subject to greater scrutiny? Would they be less likely to self-report?

For example, consider the cultural context of the **social relationships** question and that Blacks in America may have more family members in their social networks and more contact with these network members than Whites (Ajrouch et al., 2001), which in turn might not result in those contacts causing eviction. Furthermore, Black/ African Americans may be less likely to perceive or report members of their community as the cause for economic or housing struggles, given that they share with their supports the collective experience of discrimination. This question also problematically embeds an inquiry of a domestic violence situation, which, when paired with the complex phenomenon of women of color under-reporting domestic violence or an unhealthy or abusive relationship (Tillman, Bryant-Davis, Smith, & Marks, 2010), may be further unresponsive to the reality of BIPOC clients' experiences. Should having stronger social supports preclude prioritization of permanent supportive housing services? Or, consider the **medications** subscale, which offers two opportunities to endorse. BIPOC single adults are 27% less likely to endorse this subscale than Whites. Whites who endorse this subscale are 3.1 times as likely than not to get a PSH/HF recommendation, whereas BIPOC who endorse this item are 2.0 times as likely to get a PSH/HF recommendation than not. The first question in the subscale assumes access to adequate medical care in an inquiry about not taking prescribed medications (rather than capturing, for example,

unmet treatment need in any form). The second question includes an inquiry of drug diversion. For someone who is participating in what may be perceived as an illegal activity, endorsement would be self-incriminating or revealing of the client as a seemingly unworthy candidate for housing resources. One might understand why someone experiencing homelessness, who is seeking services and likely already experiencing discrimination in some form in their lives, might be unwilling to report this. Furthermore, one might question how participation in an illegal activity (drug diversion) signifies a vulnerability and thus prompts a score for that item (let alone why this activity is captured under an item that should presumably capture access to or need of prescription medication).

We do not purport to assume that all CoCs using the VI-SPDAT in their prioritization efforts are doing so in a vacuum. For the majority of CoCs, a client's assessment score is considered in conjunction with additional information, including local questions and case worker expertise, though both of these factors may either improve or worsen the client's status in terms of priority. Additionally, given often limited housing stock and/or resources, many CoCs use their own (higher) scoring threshold to prioritize for PSH/HF. Nonetheless, the data shared by the three communities reveal that race is a factor in the coordinated entry assessment process.

An assessment tool that is developed and tested with racial equity in mind would, presumably, result in equitable scores. A racially equitable tool would not contain subscales that were considerably more predictive of a desirable outcome than another item, especially if those predictive qualities were consistently higher for White clients than for BIPOC. Furthermore, a tool designed with racial equity in mind would equally and equitably capture the specific vulnerabilities of people of color experiencing homelessness, recognizing that these vulnerabilities are different than those of White clients. Finally, a racially equitable tool would be normed on BIPOC homeless populations to scientifically demonstrate its efficacy in prioritizing non-White clients for housing services. Findings from this study point to the critical role of assessment tools in perpetuating racial inequities that occur across the spectrum of homelessness response systems in the United States.



Limitations

There were several limitations to this study. In addition to the tool itself, there are other factors and confounding variables to consider that may influence inequities in scoring and prioritization, such as assessor demographics; training in effective and trauma-informed interviewing; biases related to race, gender, and other characteristics; relationship/rapport between assessors and clients; accuracy of self-report; the environment and mode (location, privacy, by phone or in-person etc.) where assessment takes place; client perceptions or understanding; and the cultural sensitivity of language used by the assessor and of the tool itself. These factors were not accessible through our datasets and in most cases are not collected at the community level. Gender and age were not explored in this analysis but should be included in future analyses to understand the relationship between multiple marginalization factors and outcomes. Limitations related to family data include the fact that for one CoC (Seattle/King Co.), the family VI-SPDAT tool was used; however, data were analyzed using the structure and scoring band of the single adult tool to allow for cross-community analyses. It is also likely that communities are using additional information to determine family prioritization, yet those data were not available to us here. More research is needed to understand racial inequities among families. Additionally, race of only the head of household was used in our analyses- future research should consider the race of all members of the household. Our analyses were also limited by the completeness of the communities' data sets. Missingness was a factor in some datasets. Finally, our results are not nationally representative due to the geographic concentration (Pacific Northwest) of our participating communities; however, as described above, this study attempts to unpack the role of CES assessment tools and could therefore be applicable to any CoC's CES processes.

Recommendations and Next Steps

Our findings point to the pressing need and potential to initiate change and transformation in the CES assessment and prioritization process, and there are specific policy and practice implications that should be considered in order to be responsive to our research results:



Local

1. While aggregate analyses are critical to understanding general patterns in the data, **community-specific racial equity analyses must be performed** in order to determine the extent of racial inequities in the CES and to identify opportunities for local strategic action. Analyses similar to the ones presented here are ideal, but a simple comparison of means is a good place to start. At the minimum, use existing tools such as HUD COC Racial Equity Analysis Tool to identify the populations that are disproportionately represented in your homeless system, and start a conversation in your CoC.
2. As part of such analyses, communities should **assess whether/which contextual factors**—client/provider rapport, location of assessment, assessor training, cultural competence of assessors—**may be contributing to and confounding disparate impacts for BIPOC** and take actionable steps to address them.
3. For CoCs using the VI-SPDAT, **investigate alternative tools and/or methods, as well as the inclusion of other factors, for prioritization and use a racial equity framework for this investigative process.**
4. Ensure that **providers and program administrators are trained in racial equity frameworks and practice**, cultural humility/sensitivity, and trauma-informed practice. Undertake continuous quality improvement and self-evaluation of this process.

National/Policy

1. HUD should consider **revising their CES policy and guidelines and more clearly communicate to CoCs how to responsibly use prioritization tools in tandem with other methods to accurately and equitably allocate resources and services** to individuals and families experiencing homelessness. This should include providing racial equity policy and process review tools.
2. HUD and affiliated agencies should **reconsider the training and technical assistance provided to CoCs on CES to ensure that these efforts are conducted using a racial equity framework.** There should also be transparency about the implications and limitations of using the VI-SPDAT for achieving racially equitable outcomes. To accomplish this, HUD should provide their technical assistants/contractors with robust training in racial equity principles, and racial equity competencies should be a part of the exam to become an official technical assistant for HUD, with no grandfathering.
3. HUD should consider and **provide guidance on reliability testing results and ensure that the demographic characteristics of the population on whom tools are normed matches the populations being served** before endorsing any assessment or triaging tool *or* deciding that a particular tool is fit for a community.

Research

1. In light of these findings, more research is needed to examine **how and in what way VI-SPDAT subscales and questions can be transformed to produce more equitable prioritization results**. This research should examine simple and accessible ways that communities can strategize movement toward racial equity within the existing structures of their system. For example, future research could explore how transformation of subscales that are either disproportionately impacting higher scores or disproportionately endorsed by Whites can result in reduced disparities in housing prioritization. By accounting for apparent biases in this way, we may be able to move closer to an equitable tool.
2. A **geographically representative study** is needed to understand how racial inequities in the CES persist across CoCs in the U.S. More **qualitative research is needed to understand the ways in which CES assessment tools perpetuate racial inequities** and to explore additional confounding factors.
3. A **sub-analysis on 18 to 24-year-olds** presenting to the CES is critical to understanding the ways in which age and race intersect with homelessness—and identify culturally specific solutions to addressing this double marginalization.
4. To further explore reliability and validity of the VI-SPDAT and other assessment tools, research involving **clinical validation of the very vulnerabilities those assessments are meant to capture may further illuminate the extent to which the delivery mode, phrasing, and outcomes of these tools may perpetuate racial inequities**. Particularly, the following vulnerabilities should be explored: prior child welfare involvement and foster care history, criminal justice and juvenile justice involvement, history of trauma and adverse childhood experiences, and eviction histories.
5. People with lived experience, CoCs, and providers of homeless services hold the solution to addressing the inherent biases with current Coordinated Entry Systems. More research is needed to develop and test alternatives to assessment tools. **Future research on assessment alternatives should prioritize cognitive interviewing, construct validity of assessment tool subscales, and norming on populations of color. Significant efforts should be made to engage people with lived experience in all equity work.**

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Data Appendix

A. Single Adults

I. Descriptive Statistics

Table 1: Mean, Median and Standard Deviation on the Measure of Prioritization Score as a Function of Race or Ethnicity among Single Adults

		N	Mean	Median	SD
Race	White	9815	9.16	9.00	3.867
	African American	6431	8.39	8.00	3.848
	American Indian or Alaskan Native	949	10.83	11.00	4.437
	Asian	373	8.07	8.00	3.449
	Native Hawaiian or Other Pacific Islander	392	8.66	8.00	3.595
	Multicultural/More than one race	833	9.01	9.00	3.440
	Total	18793	8.95	9.00	3.902
Ethnicity	Hispanic or Latino	1937	9.18	9.00	3.975
	Non-Hispanic or Latino	17083	8.91	9.00	3.896
	Total	19020	8.94	9.00	3.905

Table 2: Mean, Median, and Standard Deviations on the Measure of Prioritization Score as a Function of Race (White vs. BIPOC) among Single Adults

Race	N	Mean	Median	SD
White	9815	9.16	9.00	3.867
BIPOC	8978	8.71	8.00	3.925
Total	18793	8.95	9.00	3.902

Table 3: t-Test results comparing the mean VI-SPDAT scores for White and BIPOC Single Adults (N= 18,793)

Independent Samples Test									
		Levene's Test for Equality of Variances				t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
Difference in Mean Prioritization Score	Equal variances assumed	.515	.473	7.99	18791	.000	.455	.057	.343 .566
	Equal variances not assumed			7.99	18589.82	.000	.455	.057	.343 .566

Table 4: Cross-Tabulations and Chi-Square Analysis to Test the Relationship between Race and Type of Housing Intervention among Single Adults (N = 18,793)

Type of intervention					
		No Housing Intervention	Rapid Re-Housing	Permanent Supportive Housing/First	N = 18,793
Race	White	547 (5.6%)	3046 (31.0%)	6222 (63.4%)	Chi-Square
	BIPOC	642 (7.2%)	3136 (34.9%)	5200 (57.9%)	63.193* 2

*p < .05

II. Regression Analyses

Table 5: Logistic Regression Analysis: Factors Predicting a High Score (8+) among Single Adults (N=18,209)

Variable	Estimate	Std. Error	OR	95% CI
Age	-0.006	0.007	0.994	0.981 - 1.007
Gender^	0.377**	0.017	1.458	1.411 - 1.507
Race^^	-0.262**	0.063	0.769	0.681 - 0.870
Ethnicity	0.000	0.187	1.000	0.692 - 1.444

Note. OR = odds ratio; CI = confidence interval.

*p < .05 **p < .001.

^Male is reference group.

^^White is the reference group.

Table 6: Logistic Regression Analysis: Race as a Predictor of Endorsing Individual Subscales on the VI-SPDAT Among Single Adults (N=8,504)

VI-SPDAT Subscale	Estimate	Std. Error	OR	95% CI
<i>Hx of Housing and Homelessness</i>				
Shelter/Tran Housing/Safe Haven	0.23*	0.07	1.25	[1.10, 1.43]
Consecutive Homelessness/4+	0.09	0.28	1.10	[0.63, 1.91]
<i>Risks</i>				
Emergency Service Use	-0.29**	0.05	0.75	[0.69, 0.82]
Risk of Harm	-0.26**	0.06	0.77	[0.69, 0.86]
Legal Issues	-0.20**	0.004	0.82	[0.81, 0.82]
Risk of Exploitation	-0.26**	0.07	0.77	[0.68, 0.88]
<i>Socialization and Daily Functioning</i>				
Money Management	-0.20*	0.08	0.82	[0.71, 0.96]
Meaningful Daily Activity	0.11*	0.03	1.11	[1.04, 1.18]
Self-Care	0.14*	0.07	1.15	[1.01, 1.31]
Social Relationships	-0.10	0.07	0.91	[0.79, 1.04]
<i>Wellness</i>				
Physical Health	-0.26	0.15	0.77	[0.58, 1.03]
Substance Use	-0.48**	0.08	0.62	[0.53, 0.73]
Mental Health	-0.39**	0.08	0.67	[0.57, 0.80]
Tri-Morbidity	0.04	0.22	1.04	[0.68, 1.59]
Medications	-0.24*	0.11	0.79	[0.64, 0.97]
Abuse and Trauma	-0.10	0.09	0.90	[0.75, 1.08]
Note. White is the reference group. OR = odds ratio; CI = confidence interval. *p < .05, **p < .001				

Table 7: Logistic Regression Analysis: VI-SPDAT Subscales Predicting a High Score (8+) among White Single Adults (N=8,973) and BIPOC Single Adults (N= 7,875)

	Estimate	Std. Error	OR	95% CI	Estimate	Std. Error	OR	95% CI
Hx of Housing and Homelessness	White				BIPOC			
Shelter/Tran Housing/ Safe Haven	1.457**	0.190	4.295	2.961 - 6.229	1.078**	0.092	2.939	2.455 - 3.519
Consecutive Homelessness/4+	0.717*	0.209	2.049	1.360 - 3.087	0.561**	0.065	1.752	1.542 - 1.990
Risks	White				BIPOC			
Emergency Service Use	1.305**	0.225	3.686	2.369 - 5.735	1.025**	0.196	2.787	1.897 - 4.096
Risk of Harm	1.108**	0.120	3.029	2.396 - 3.829	0.773**	0.093	2.167	1.807 - 2.600
Legal Issues	1.134**	0.245	3.107	1.923 - 5.021	0.940**	0.137	2.559	1.956 - 3.348
Risk of Exploitation	1.079**	0.253	2.940	1.792 - 4.825	0.593	0.354	1.810	0.905 -3.619
Socialization and Daily Functioning	White				BIPOC			
Money Management	0.616	0.346	1.852	0.939 - 3.651	0.720*	0.280	2.055	1.188 - 3.554
Meaningful Daily Activity	1.274**	0.224	3.575	2.306 - 5.542	1.084**	0.185	2.958	2.060 - 4.248
Self-Care	1.323**	0.199	3.754	2.542 - 5.543	0.869*	0.341	2.384	1.222 - 4.653
Social Relationships	1.192**	0.188	3.295	2.279 - 4.763	0.861**	0.196	2.366	1.611 - 3.475
Wellness	White				BIPOC			
Physical Health	0.655**	0.111	1.926	1.550 - 2.392	0.289	0.369	1.335	0.647 - 2.754
Substance Use	1.480**	0.145	4.391	3.307 - 5.830	1.082**	0.153	2.952	2.188 - 3.983
Mental Health	1.318**	0.099	3.736	3.075 - 4.540	1.097**	0.182	2.997	2.098 - 4.280
Tri-Morbidity	0.447	0.453	1.564	0.644 - 3.800	0.421	0.651	1.524	0.426 - 5.454
Medications	1.132**	0.177	3.103	2.193 - 4.391	0.683*	0.280	1.981	1.145 - 3.428
Abuse and Trauma	1.164**	0.250	3.202	1.963 - 5.224	1.266**	0.197	3.547	2.412 - 5.215
Gender[^]	0.871**	0.168	2.390	1.721 - 3.319	0.915**	0.177	2.497	1.765 - 3.533
Age	-0.015*	0.007	0.985	0.971 - 0.999	-0.015**	0.003	0.985	0.980 - 0.990
Ethnicity	0.518	0.297	1.678	0.937 - 3.003	0.108	0.113	1.114	0.893 - 1.389

Note. OR = odds ratio; CI = confidence interval.

*p < .05 **p < .001

[^]Male is the reference group.

B. Families

As described in the Methods section, the majority of communities used the single adult VI-SPDAT rather than the family VI-SPDAT for families; therefore the single adult scoring bands were applied to this analysis.

I. Descriptive Statistics

Table 8: Mean, Median and Standard Deviation on the Measure of Prioritization Score as a Function of Race or Ethnicity among Families

		N	Mean	Median	SD
Race	White	2543	8.38	8.0	3.441
	African American	2587	7.92	8.0	3.278
	American Indian or Alaskan Native	380	9.15	9.0	3.614
	Asian	116	7.60	7.0	3.436
	Native Hawaiian or Other Pacific Islander	149	7.58	7.0	3.292
	Multicultural	290	9.17	9.0	3.576
	Total	6065	8.24	8.0	3.409
Ethnicity	Hispanic or Latino	664	8.04	8.0	3.507
	Non-Hispanic or Latino	5409	8.24	8.0	3.425
	Total	6073	8.22	8.0	3.435

Table 9: Mean, Median, and Standard Deviations on the Measure of Prioritization Score as a Function of Race (White vs. BIPOC) among Families

Race	N	Mean	Median	SD
White	2543	8.38	8.00	3.441
BIPOC	3522	8.13	8.00	3.383
Total	6065	8.24	8.00	3.409

Table 10: t-Test results comparing the mean VI-SPDAT scores for White and BIPOC Families (N= 6,065)

Independent Samples Test										
		Levene's Test for Equality of Variances				t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Difference in Mean Prioritization Score	Equal variances assumed	3.791	.052	2.731	6063	.006	.242	.089	.068	.416
	Equal variances not assumed			2.724	5421.218	.006	.242	.089	.068	.417

Table 11: Cross-Tabulations and Chi-Square Analysis to Test the Relationship between Race and Type of Intervention among Families (N = 6,065)

Type of intervention						
		No Housing Intervention	Rapid Re-Housing	Permanent Supportive Housing/First	N = 6065	
Race	White	155 (6.1%)	977 (38.4%)	1411 (55.5%)	Chi-Square	df
	BIPOC	234 (6.6%)	1422 (40.4%)	1866 (53.0%)	3.835	2

*p < .05

II. Regression Analyses

Table 12: Logistic Regression Analysis: Factors Predicting a High Score (8+) among Families (N = 5,381)

Variable	Estimate	Std. Error	OR	95% CI
Age	0.000	0.006	1.000	0.988 - 1.012
Gender^	0.065	0.093	1.067	0.888 - 1.281
Race^^	-0.023	0.066	0.977	0.858 - 1.113
Ethnicity	0.058	0.102	1.059	0.867 - 1.294

Note. OR = odds ratio; CI = confidence interval.

*p < .05**p < .001.

^^White is the reference group.

^Male is reference group.

Table 13: Logistic Regression Analysis: Race as a Predictor of Endorsing Individual Subscales on the VI-SPDAT Among Families (N=2,498)

VI-SPDAT Subscale	Estimate	Std. Error	OR	95% CI
<i>Hx of Housing and Homelessness</i>				
Shelter/Tran Housing/Safe Haven	0.33*	0.10	1.39	[1.14, 1.70]
Consecutive Homelessness/4+	-0.01	0.43	0.99	[0.43, 2.29]
<i>Risks</i>				
Emergency Service Use	-0.08	0.08	0.92	[0.79, 1.07]
Risk of Harm	-0.26	0.18	0.77	[0.54, 1.09]
Legal Issues	0.05	0.04	1.05	[0.98, 1.12]
Risk of Exploitation	-0.28	0.14	0.76	[0.57, 1.01]
<i>Socialization and Daily Functioning</i>				
Money Management	0.01**	0.001	1.01	[1.007, 1.01]
Meaningful Daily Activity	0.11*	0.05	1.12	[1.02, 1.23]
Self-Care	0.10	0.12	1.10	[0.87, 1.40]
Social Relationships	0.02	0.06	1.02	[0.91, 1.14]
<i>Wellness</i>				
Physical Health	-0.39**	0.08	0.68	[0.58, 0.79]
Substance Use	-0.39**	0.08	0.68	[0.58, 0.80]
Mental Health	-0.44**	0.10	0.64	[0.53, 0.78]
Tri-Morbidity	-0.14	0.67	0.87	[0.23, 3.26]
Medications	-0.16**	0.03	0.85	[0.81, 0.90]
Abuse and Trauma	-0.12	0.20	0.89	[0.60, 1.32]
Note. White is the reference group. OR = odds ratio; CI = confidence interval. *p < .05, **p < .001.				

Table 14: Logistic Regression Analysis: VI-SPDAT Subscales Predicting a High Score (8+) among White Families (N=2,387) and among BIPOC Families (N=3,231)

VI-SPDAT Subscale	Estimate	Std. Error	OR	95% CI	Estimate	Std. Error	OR	95% CI
<i>Hx of Housing and Homelessness</i>	<i>White</i>				<i>BIPOC</i>			
Shelter/Tran Housing/ Safe Haven	0.277	0.252	1.319	0.805 - 2.161	0.078	0.510	1.081	0.397 - 2.938
Consecutive Homelessness/4+	1.426**	0.054	4.164	3.748 - 4.626	1.264**	0.153	3.541	2.623 - 4.781
<i>Risks</i>	<i>White</i>				<i>BIPOC</i>			
Emergency Service Use	1.122**	0.072	3.071	2.668 - 3.534	1.151**	0.036	3.163	2.949 - 3.392
Risk of Harm	0.923**	0.131	2.516	1.945 - 3.256	0.349	0.266	1.417	0.842 - 2.387
Legal Issues	1.048**	0.100	2.852	2.344 - 3.471	1.227**	0.083	3.411	2.897 - 4.018
Risk of Exploitation	0.598**	0.161	1.818	1.327 - 2.491	0.127	0.192	1.136	0.780 - 1.655
<i>Socialization and Daily Functioning</i>	<i>White</i>				<i>BIPOC</i>			
Money Management	0.404*	0.144	1.498	1.129 - 1.988	0.411*	0.137	1.509	1.153 - 1.976
Meaningful Daily Activity	0.576*	0.204	1.780	1.192 - 2.656	0.519**	0.114	1.680	1.344 - 2.098
Self-Care	2.350*	0.704	10.481	2.640 - 41.618	2.485*	0.871	12.005	2.178 - 66.186
Social Relationships	0.886**	0.019	2.425	2.337 - 2.517	0.918**	0.108	2.504	2.026 - 3.094
<i>Wellness</i>	<i>White</i>				<i>BIPOC</i>			
Physical Health	0.199	0.143	1.221	0.923 - 1.614	0.082	0.174	1.085	0.772 - 1.527
Substance Use	0.261	0.159	1.298	0.950 - 1.774	0.162**	0.040	1.175	1.086 - 1.272
Mental Health	-0.848**	0.228	0.428	0.274 - 0.669	-0.906**	0.171	0.404	0.289 - 0.565
Tri-Morbidity	0.740	0.400	2.095	0.956 - 4.590	0.303	0.435	1.354	0.577 - 3.176
Medications	0.786**	0.068	2.194	1.918 - 2.509	0.781*	0.298	2.183	1.217 - 3.915
Abuse and Trauma	1.227**	0.034	3.411	3.193 - 3.644	1.211**	0.022	3.356	3.216 - 3.502
<i>Gender[^]</i>	-1.276**	0.213	0.279	0.184 - 0.424	-0.514	0.460	0.598	0.243 - 1.473
<i>Age</i>	0.038*	0.012	1.039	1.014 - 1.064	0.024	0.014	1.025	0.998 - 1.052
<i>Ethnicity</i>	0.055	0.109	1.056	0.852 - 1.309	0.406*	0.123	1.501	1.180 - 1.909

Note. OR = odds ratio; CI = confidence interval.

*p < .05** p < .001.

[^]Male is the reference group.