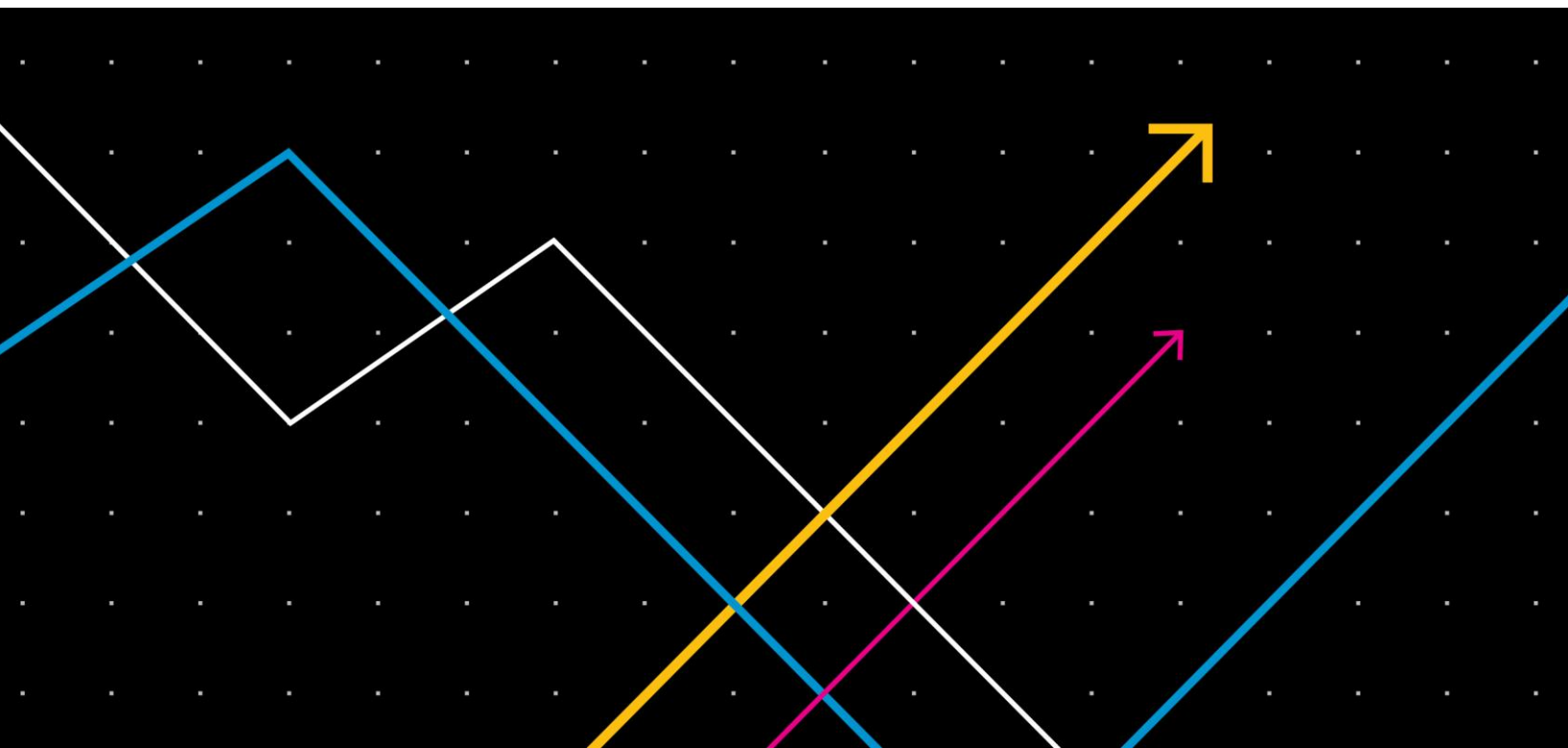




RESEARCH REPORT

Prevalence of Substance Use Disorder and Interventions for Unhealthy Substance Use among Parents by Race and Hispanic Origin in the United States, 2015–2017

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Executive Summary

Unhealthy alcohol and drug use is especially problematic among parents with dependent children. In addition to the negative consequences for parents, their children are also at risk of negative consequences, such as neglect and developmental problems. Researchers have identified medical interventions that can reduce the extent and negative consequences of unhealthy substance use including

- universally screening adult and adolescent patients,
- performing brief interventions to motivate change among patients who have unhealthy alcohol or drug use, and
- initiating treatment or helping patients get treatment elsewhere if their use is problematic enough to be a substance use disorder (SUD).

Though a body of research describes negative outcomes of unhealthy substance use among parents on children, little is known about the rates of screening and brief intervention for unhealthy use, SUD diagnosis, and SUD treatment among parents, and whether these vary by race and Hispanic origin. This is important because evidence shows that unhealthy substance use among black and Hispanic people can have worse health and justice-system consequences. In this research on US parents living with dependent children, we used data from 2015 to 2017 to explore these questions. We highlight the substantial levels of parental SUD, identify gaps in the interventions that can reduce the consequences of substance misuse for parents and their families, and show differences by race and Hispanic origin.

Findings

SUD prevalence. We found that SUDs affect families with children in all racial/Hispanic origin populations. The burden was especially high among American Indian/Alaska Native and multiple-race parents, among whom 16.1 percent and 11.9 percent, respectively, had an SUD. Parents who were Hispanic or Asian had relatively low levels of SUDs, but even these lower levels imply that substantial numbers of families with children are affected, with roughly 5 in 100 Hispanic parents and 2 in 100 Asian parents having an SUD. Patterns of any SUD by race and Hispanic origin were similar when we separately looked at higher- and lower-income parents, and SUDs were higher among lower-income parents for all groups. The prevalence of specific types of SUDs varied across the racial/Hispanic origin populations. However, alcohol use disorder was by far the biggest problem for each population for

which it could be measured. For example, roughly 1 in 20 black and white parents had alcohol use disorder, and the frequency was higher among parents who were multiple races or American Indian/Alaska Native (8.5 percent and 12.1 percent, respectively).

Asking about drug and alcohol use. Though it is recommended that medical providers screen all patients (in person or using a form/computer) at checkups and other acute care visits, the rate of parents reporting being asked about alcohol and drug use was below the rate we would see if all parents were screened, and rates varied by race/Hispanic origin.

- **Alcohol:** Rates of being asked about alcohol use at medical appointments ranged from 71.1 percent among Asian parents to 85.7 percent among American Indian/Alaska Native parents. Rates were also relatively low among Hispanic and black parents (72.7 percent and 76.3 percent, respectively). Rates of asking about alcohol were higher than rates of asking about drugs.
- **Drugs:** Rates of being asked about drug use at medical appointments ranged from 44.4 percent among Asian parents to 72.7 percent among American Indian/Alaska Native parents. Hispanic parents also reported lower rates (57.3 percent) of being asked about drug use at medical appointments.

Asking in person about drinking problems. It is also recommended that providers perform a brief intervention when patients are identified as having unhealthy alcohol or drug use, including asking patients to reflect on their drinking patterns and asking them to discuss the pros and cons of their drinking, if they were identified as having unhealthy alcohol use. Though about 30 percent of adults are considered risky drinkers, we found that parents who drink were seldom asked by a provider in-person about drinking problems. Among drinking parents, this rate was only 24.1 percent among American Indians/Alaska Native parents, 15.6 percent among multiple-race parents, and roughly 10 percent among other parents.

SUD treatment rates. We found that treatment rates for SUD were very low across all groups we examined and varied by race and Hispanic origin. Among parents with an SUD, fewer than 10 percent of black and Hispanic parents had current or recent treatment (i.e., in the past 12 months), and only 12.9 percent of white parents and about 22.1 percent of multiple-race parents had current or recent treatment. Current or recent treatment rates were higher among multiple-race and white parents and lower among Hispanic parents. One reason for low current or recent treatment rates was that many people who had treatment in the past did not reinstate it. Our estimates of people who did not restart treatment is one measure of missed opportunity to treat, because these are people who have not

managed to reinstate treatment after an expected relapse. SUDs are considered chronic relapsing conditions, like diabetes, and it is expected that people with SUDs stop and restart treatment multiple times before they stay on a path of recovery. The missed opportunity to treat after relapse includes about 10 percent of black and Hispanic parents, 17.0 percent of white parents, 19.0 percent of multiple-race parents, and 25.8 percent of American-Indian/Alaska Native parents who had treatment more than 12 months ago and did not reinstate. Rates of being treated more than 12 months ago and not reinstating were higher among white and American-Indian/Alaska Native parents and lower among black and Hispanic parents.

Policy Implications

Our findings on SUD prevalence show that SUDs are a substantial issue for families with children in all the populations we studied, but especially among parents who are American Indian/Alaska Native or multiple races. Our findings show a considerable scope for health care providers to expand their interventions for unhealthy substance use among parents of all the groups we could examine, but especially among black and Hispanic parents.

Our findings that many families with children are affected by parental SUD and that rates of intervention are low suggest that health researchers should develop and enhance intervention tools tailored to parents. For example, in an ordinary brief intervention, providers inform patients about the known risks of SUD on the patient's health, but parents may also benefit from interventions in which providers inform patients about both the known risks of parental SUD for children's health and well-being and the benefits for children from parental SUD treatment. Similarly, screenings usually occur when patients see providers about their health, but parents may be more open to recognizing and addressing their unhealthy substance use in pediatric settings, where they may be more conscious of the effect of their substance use on their child's health and well-being. It would be helpful to explore the feasibility and efficacy of novel approaches like integrating parental screening for SUD with some pediatric care.

Our findings showing higher levels of intervention (screening, asking about problems from alcohol, and SUD treatment) among American Indian/Alaska Native parents raises the question of whether tools that have been in place to make these services more culturally relevant to American Indians/Alaska Natives may help explain this result. To address these gaps, health researchers, community leaders, and policymakers could consider enhancing efforts to further develop and promote methods of more culturally relevant substance-related services to other populations we studied, as well

as subpopulations within them. However, even with guides to help practitioners screen and briefly intervene in a more culturally relevant way, there are still substantial gaps in these services among American Indians/Alaska Natives, which suggests that tools to enhance cultural effectiveness may not be sufficient to substantially increase these services among people of other racial/Hispanic origin backgrounds. The experience at the US Veterans Health Administration, part of the US Department of Veterans Affairs (VA), which is unique in substantially increasing its rates of documented screening and brief intervention, suggests that providers will increase these services when their performance is measured on these items and they are given more training, electronic reminders during medical visits, and financial incentives. For example, documented rates of brief intervention among veterans identified as having unhealthy alcohol use increased from 5 percent in the baseline year to 29 percent after providers were given electronic reminders (Lapham et al. 2012). Though the VA population differs from other populations, the increase in VA rates are proof that in some circumstances providers will increase documented rates of intervention for unhealthy substance use. Efforts to replicate aspects of the VA approach in other systems and plans could help increase these services for parents.

Raising treatment rates may require addressing stigma and fear and a range of capacity and infrastructure issues related to the low availability of evidence-based SUD treatment programs in communities, especially those that are predominantly black or Hispanic. Strategies to increase treatment include addressing deficits in clinician education, improving referral networks, increasing supportive services, increasing the availability of family-centered services, reducing insurance-related barriers, and increasing Medicaid financing for treatment. Efforts to address these issues could increase the share of parents with SUDs who receive treatment. This could improve the health and well-being of large numbers of parents, as well as the health and well-being of their children.

Prevalence of Substance Use Disorder and Interventions for Unhealthy Substance Use among Parents by Race and Hispanic Origin in the United States, 2015–2017

Introduction

Unhealthy alcohol and drug use is a serious public health concern that also has consequences for children and families. Unhealthy substance use increases risks of illness, injury, and death, and thus is particularly problematic for parents with dependent children (Jin 2018; Polen et al. 2008). Substance use disorders (SUDs) are less common, but they are especially problematic because they are chronic, relapsing disorders characterized by compulsive drug/alcohol seeking, continued use despite harmful consequences, and long-lasting changes in the brain (McKnight-Eily, Henley, et al. 2017). Children with a parent who has an SUD are more at risk of psychopathology, difficulties in academic and social settings, drug poisoning, abuse and neglect, witnessing violence, and negative long-term outcomes, including increased likelihood of illicit drug use as an adolescent and adult (Bailey, Campagna, and Dart 2009; Biederman et al. 2000; Dube et al. 2003; Institute of Medicine 2014; Seay and Kohl 2013; Wilens et al. 2002).

Researchers have identified medical interventions that can reduce the negative consequences of having an SUD, and the Centers for Disease Control and Prevention and other government agencies and medical provider organizations actively promote recommended interventions to reduce unhealthy substance use (Anton et al. 2006; ASAM 2013; Centers for Disease Control and Prevention 2014; Kranzler and Soyka 2018; Polen et al. 2008). Provider recommendations focus on universally screening patients for alcohol and drug misuse, performing brief intervention to motivate change among patients who misuse alcohol and/or drugs, and among the people whose misuse is severe enough to be an SUD, initiating treatment or referring people to other providers (McKnight-Eily, Henley, et al. 2017; US Preventive Services Task Force 2018; US Surgeon General 2016). It is recommended that providers screen all patients in person or with a form/computer using one of the validated protocols promoted by

federal agencies and provider organizations. For patients who screen positive for unhealthy alcohol or drug use, the brief counseling typically involves an in-person, nonjudgmental dialogue about motivations, strategies, and a personal plan to reduce drinking/drug use.

However, despite the promising research and guidelines promoted for medical interventions for substance use, research on all adults finds that rates of intervention generally remain low and differ by race and Hispanic origin, as well as other sociodemographic characteristics (McKnight-Eily, Okoro, et al. 2017; Polen et al. 2008). Though screening and brief intervention for alcohol is considered an extremely effective preventative care service and has been widely advocated, only one in three adult binge drinkers who had a medical visit in 2014 reported being asked about alcohol use and advised about risky or harmful drinking levels, and only one in six reported being asked about alcohol use and advised by a health professional to reduce their drinking (McKnight-Eily, Okoro, et al. 2017; Solberg, Maciosek, and Edwards 2008). Women, non-Hispanic white people, and people between ages 25 and 44 were less likely to get these services when they needed them (McKnight-Eily, Okoro, et al. 2017). And though treatment for SUD can be effective, it is known that among all adults treatment rates are very low, and in settings where there are disparities by race and Hispanic origin, black or Hispanic people tend to have lower treatment rates and worse treatment outcomes (Arndt, Acion, and White 2013; Guerrero et al. 2017; Mennis and Stahler 2016).

Little is known about the prevalence of SUDs among parents and the patterns of medical provider intervention for unhealthy substance use overall or by race and Hispanic origin. The goal of this research is to fill that knowledge gap. These differences are important because evidence shows that the health and justice system consequences of SUD among black and Hispanic people can be particularly severe, and black or Hispanic people also often have worse treatment outcomes (Acevedo et al. 2018; Ramchand, Pacula, and Iguchi 2006; Saloner and Cook 2017; Schmidt et al. 2007; Stahler and Mennis 2018; Witbrodt et al. 2014). It is also important to assess how levels of SUD and gaps in medical intervention vary by race and Hispanic origin because, though there is substantial SUD-related diversity within these populations, there are also community activists and advocacy organizations that may be well placed to do outreach and organizing within and on behalf of specific racial/Hispanic origin populations or geographic areas that are predominantly composed of one of these populations (Caetano, Clark, and Tam 1998; Guerrero et al. 2013).

Methods

Sample

We used the 2015, 2016, and 2017 National Survey on Drug Use and Health (NSDUH), which is the primary source of information on the prevalence, patterns, and consequences of alcohol and drug use in the US civilian noninstitutionalized population ages 12 and older. The NSDUH is a nationally representative cross-sectional survey administered by the Substance Abuse and Mental Health Services Administration (Center for Behavioral Health Statistics and Quality 2016, 2017, 2018). The sample includes civilian residents of households, shelters, rooming houses, and military bases. Our samples of interest were defined as all parents living with their children under age 18 ($N = 44,464$) and the following subgroups: Hispanics of any race ($n = 9,277$) and non-Hispanics, including whites ($n = 25,385$); blacks ($n = 5,510$); American Indians/Alaska Natives ($n = 753$); Native Hawaiians/Pacific Islanders ($n = 241$); Asians ($n = 2,005$); and people of multiple races ($n = 1,293$).¹ Hereafter, we follow Census Bureau nomenclature and refer to the non-Hispanic parent populations as white, black, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Asian, and multiple races (Humes, Jones, and Ramirez 2011). NSDUH methodology used to encourage sample people to report potentially sensitive information (e.g., drug and alcohol use) includes interviewing participants in private at their residence, using computer-assisted personal interviewing, and using audio computer-assisted self-interviewing methodologies.

Measures for SUD

We used NSDUH-defined measures to estimate prevalence of any SUD in the past 12 months and each of the following use disorders: alcohol, opioid, marijuana, cocaine (including crack), methamphetamines, tranquilizer, and other, which included use disorders for sedatives, inhalants, prescription stimulants, and hallucinogens. NSDUH defines SUDs as meeting criteria in the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, for chronic, relapsing disorder with the given substance characterized by compulsive seeking of the substance, continued use despite harmful consequences, and long-lasting changes in the brain (Center for Behavioral Health Statistics and Quality 2016, 2017, 2018). See appendix B for further detail.

Measures for Asking Parents about Substance Use

To assess levels of provider screening, we focused on estimates of the percentage of parents who reported being asked by a medical provider about drug and alcohol use at medical visits among people who reported having at least one inpatient, outpatient, or emergency department visit during the past year, hereafter referred to as patients ($n = 35,362$). For these patient respondents, the NSDUH asks whether the patient was asked in person or on a form by a health care professional about drug and alcohol use during the past year. We cannot tell from these data if patients were asked about substances using a validated screener, as recommended. We also estimated the percentage of parents asked about drug and alcohol use by a medical provider among all parents, including those who did not see a medical provider, so we could assess the overall screening rate, accounting for the facts that many people did not see a provider and rates of seeing a provider vary across race/Hispanic origin.

To assess the rates of the more involved discussions with patients that are supposed to occur when providers conduct a brief intervention, we also estimated the percentage of patients who were asked if they have any problems from drinking. We made this estimate among patients who reported drinking alcohol. This is a rough proxy for brief intervention for alcohol misuse, because brief interventions for alcohol use include asking patients to talk about their drinking patterns and asking them to discuss the pros and cons of drinking.

Measure for SUD Treatment

To estimate treatment, we separately estimated the percentage of parents who reported getting any treatment for drugs, any treatment for alcohol, and any treatment for both drugs and alcohol in the past year in an inpatient hospital, inpatient rehabilitation setting, outpatient rehabilitation setting, outpatient mental health center, doctor's office, emergency department, jail/prison, or self-help setting. We also separately estimated the percentage of parents who reported last receiving treatment for alcohol or drug use more than a year before the interview. Because SUDs are chronic relapsing conditions, looking at treatment that last occurred more than a year ago gives a better picture of the people who have relapsed and have not reinitiated treatment. We also separately estimated any past-year treatment for alcohol or drugs reported in a specialty facility, jail/prison, doctor's office, emergency department, and self-help group (e.g., Alcoholics Anonymous).

Sociodemographic and Health Measures

Sociodemographic characteristics in our study included age group, sex, marital status, family income-to-poverty ratio, employment status, metropolitan area size, and health insurance status. Health characteristics include self-reported fair or poor health, any past-year chronic condition,² any past-year mental illness,³ and any past-year medical visit (i.e., inpatient hospital, emergency department, or outpatient visit).

Analysis and Estimation Strategy

We follow NSDUH guidelines for calculating and reporting (including suppressing) estimates. For comparisons, we focused on unadjusted estimates and the difference between each population group and all others (e.g., black parents compared with parents who are Hispanic of any race or not black). However, because there are substantial sociodemographic and health differences by population group, and these are known to relate to SUD prevalence and treatment characteristics, we also generated adjusted estimates to assess the impact of controlling for some observed differences in sociodemographic and health characteristics (Acevedo et al. 2018; Guerrero et al. 2013; Saloner, Carson, and Cook 2014). Details of the adjustment methods and results are shown in appendix B.

We also estimated SUD prevalence by low-/high-income and employed/nonemployed categories, because levels of SUD and intervention for unhealthy substance use are known to vary by income and employment characteristics. Low-income was defined as having a reported family income less than or equal to 200 percent of the federal poverty level. Employed was defined as having a full- or part-time job.

Limitations

These findings should be interpreted within the context of several limitations. The NSDUH data are self-reported and thus subject to recall and social desirability biases that may vary by race and Hispanic origin. In addition, the sample excludes some populations likely to have relatively high rates of SUD, such as people who are homeless, incarcerated, or institutionalized, including at treatment centers (Center for Behavioral Health Statistics and Quality 2017). Our parent sample also excludes parents who do not live with their children, including those who lost custody or left their child's household because of an SUD. These factors tend to underestimate the rates of parental SUD and may differentially affect prevalence estimates by race and Hispanic origin. In addition, using the NSDUH, we cannot control for local geographic area and local rates of Medicaid payment acceptance for SUD

treatment, and these factors help explain racial and Hispanic origin disparities in SUD treatment (Cummings et al. 2014; Guerrero et al. 2017; Stahler and Mennis 2018).

Results

Parents’ Sociodemographic Characteristics and Selected Measures of Health Status and Health Care Use

Table 1 shows substantial sociodemographic, health status, and health care use differences by parents’ race and Hispanic origin in 2015 through 2017. For example, Hispanic, black, American Indian/Alaska Native, and multiple-race parents tended to be younger. Likely reflecting their younger age, these parents also had lower incomes and were less likely to be married. Black and multiple-race parents were also more likely to be female. White parents were more likely to be employed full time, and black, Native Hawaiian/Pacific Islander, and American Indian/Alaska Native parents were more likely to be nonemployed. Hispanic, black, and especially Asian parents disproportionately lived in large metropolitan counties. More than half (55.5 percent) of American Indian/Alaska Native parents lived in nonmetropolitan counties.

TABLE 1

Sociodemographic and Health Characteristics of Parents, by Race and Hispanic Origin, 2015–17

	Hispanic, Any Race (n = 9,277) % (95% CI)	NON-HISPANIC					
		White (n = 25,385)	Black (n = 5,510)	American Indian/Alaska Native (n = 753)	Native Hawaiian/ Pacific Islander (n = 241)	Asian (n = 2,005)	Multiple Races (n = 1,293)
		% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Age group							
≤25	9.2 (8.6, 9.7) ***	5.7 (5.4, 6.0) ***	11.3 (10.4, 12.1) ***	15.9 (12.5, 19.2) ***	9.1 (4.7, 13.5)	1.5 (1.1, 1.9) ***	12.5 (10.4, 14.6) ***
26–34	29.4 (28.0, 30.7) ***	25.1 (24.6, 25.7) ***	31.0 (29.6, 32.4) ***	34.3 (29.1, 39.5) ***	29.5 (21.3, 37.7)	21.9 (19.3, 24.6) ***	34.1 (30.4, 37.9) ***
≥35	61.5 (59.9, 63.0) ***	69.1 (68.5, 69.8) ***	57.7 (56.0, 59.5) ***	49.8 (44.6, 55.1) ***	61.4 (53.5, 69.4)	76.6 (73.8, 79.4) ***	53.4 (49.5, 57.3) ***
Employment status							
Full-time	56.2 (54.6, 57.7) ***	67.2 (66.2, 68.1) ***	61.6 (59.8, 63.5) **	54.4 (49.3, 59.5) ***	55.4 (44.2, 66.7)	63.5 (60.7, 66.3)	62.1 (58.2, 66.0)
Part-time	10.6 (9.9, 11.3) ***	13.2 (12.7, 13.7) ***	10.8 (9.7, 12.0) **	9.3 (5.9, 12.6)	8.9 (2.6, 15.2)	11.3 (9.5, 13.2)	11.8 (9.2, 14.4)
Disabled for work	1.7 (1.3, 2.1) ***	2.7 (2.4, 3.1)	4.7 (4.0, 5.3) ***	6.4 (3.4, 9.4) **	2.5 (-0.2, 5.2)	0.5 (0.1, 0.9) ***	6.1 (4.1, 8.2) ***
Nonemployed	6.3 (5.5, 7.0) ***	2.7 (2.5, 3.0) ***	9.3 (8.3, 10.4) ***	10.4 (7.6, 13.1) ***	8.3 (4.5, 12.0) **	2.6 (1.8, 3.4) ***	3.7 (2.5, 5.0)
Other	25.2 (23.9, 26.6) ***	14.2 (13.4, 14.9) ***	13.6 (12.5, 14.6) ***	19.6 (14.5, 24.6)	25.0 (15.9, 34.0)	22.1 (19.5, 24.6) ***	16.3 (13.3, 19.2)
Metropolitan statistical area							
Large	67.6 (65.2, 70.0) ***	50.2 (48.9, 51.6) ***	66.2 (63.7, 68.6) ***	19.8 (14.3, 25.3) ***	53.9 (41.7, 66.1)	82.1 (79.1, 85.2) ***	51.0 (45.8, 56.2) **
Small	25.9 (23.7, 28.1) ***	31.8 (30.5, 33.1) ***	25.5 (23.6, 27.4) ***	24.8 (18.6, 31.0)	30.6 (20.8, 40.4)	16.5 (13.6, 19.3) ***	34.2 (30.1, 38.4) **
Nonmetropolitan	6.5 (5.6, 7.4) ***	18.0 (17.0, 19.0) ***	8.3 (6.8, 9.8) ***	55.4 (48.7, 62.2) ***	15.5 (5.5, 25.4)	1.4 (0.8, 2.0) ***	14.7 (10.7, 18.7)
Health and health coverage							
No health insurance	26.6 (25.2, 28.1) ***	6.8 (6.4, 7.2) ***	11.5 (10.4, 12.6)	6.5 (3.5, 9.4) ***	9.9 (4.4, 15.5)	3.4 (2.6, 4.2) ***	10.9 (8.7, 13.2)
Self-reported fair or poor health	15.1 (14.2, 16.0) ***	7.5 (7.1, 7.9) ***	12.5 (11.3, 13.7) ***	16.3 (12.2, 20.4) ***	13.2 (6.6, 19.9)	4.4 (3.2, 5.7) ***	13.2 (10.4, 16.1) **
Chronic health condition ^a	23.3 (22.0, 24.6) ***	30.5 (29.7, 31.3) ***	33.8 (32.2, 35.3) ***	35.2 (28.9, 41.5) **	38.8 (28.4, 49.2) *	22.7 (20.5, 24.9) ***	34.1 (30.2, 38.0) **
Mental illness, past 12 months	12.8 (11.9, 13.6) ***	21.7 (21.0, 22.4) ***	15.5 (14.2, 16.8) ***	18.6 (13.2, 23.9)	21.0 (13.0, 29.1)	9.1 (7.2, 11.1) ***	29.6 (26.6, 32.6) ***
Any medical visit, past 12 months ^b	69.9 (68.5, 71.3) ***	84.0 (83.5, 84.6) ***	81.3 (80.0, 82.7) **	77.1 (72.9, 81.4)	82.3 (76.7, 87.9)	75.5 (73.1, 78.0) ***	81.6 (77.0, 86.1)
Other							
Female	56.4 (54.6, 58.2)	54.4 (53.6, 55.1) ***	63.0 (60.9, 65.1) ***	58.5 (52.2, 64.7)	64.0 (53.4, 74.7)	56.4 (53.4, 59.5)	60.5 (56.4, 64.7) **
Married	67.0 (65.3, 68.7) ***	76.8 (76.1, 77.5) ***	46.2 (44.4, 48.0) ***	45.2 (38.5, 51.9) ***	58.3 (48.7, 67.9) ***	91.1 (90.0, 92.3) ***	56.3 (51.7, 60.9) ***

	NON-HISPANIC						
Hispanic, Any Race (n = 9,277)	White (n = 25,385)	Black (n = 5,510)	American Indian/Alaska Native (n = 753)	Native Hawaiian/ Pacific Islander (n = 241)	Asian (n = 2,005)	Multiple Races (n = 1,293)	
% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	
Income less than 100% of the FPL	31.3 (29.6, 33.1)***	10.1 (9.6, 10.7)***	33.7 (32.1, 35.4)***	38.8 (32.5, 45.1)***	29.3 (19.4, 39.2)**	8.9 (7.4, 10.5)***	24.9 (21.0, 28.7)***

Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: CI = confidence interval. FPL = federal poverty level. Parents lives with their children ages 17 or younger.

^a Chronic conditions include high blood pressure, heart conditions, diabetes, cancer, asthma, chronic obstructive pulmonary disease, HIV/AIDS, hepatitis B or C, cirrhosis, and kidney disease.

^b A medical visit is any inpatient, outpatient, or emergency department visit.

/ indicates that the difference between this estimate and the estimate for all other parents (data not shown) is significantly different from zero at the 0.05/0.01 level, using two-tailed t-test.

Hispanic, black, American Indian/Alaska Native, and multiple-race parents were more likely to report poor or fair health. Rates of past-year mental illness were high among parents who were multiple races (29.6 percent), white (21.7 percent), and Native Hawaiian/Pacific Islander (21.0 percent). Most parents (80 percent) had a past-year medical visit. However, Hispanic parents were less likely than others to have had a past-year medical visit (69.9 percent). This likely relates to Hispanic parents' high rate of uninsurance (26.6 percent).

Prevalence of Parental SUDs

Table 2 shows that SUDs affect families with children in all racial/Hispanic origin populations. The burden was especially high among American Indian/Alaska Native and multiple-race parents, among whom 16.1 percent and 11.9 percent, respectively, had an SUD. Parents who were Hispanic or Asian had relatively low levels of SUDs, but even these lower levels imply that many families with children are affected, with roughly 5 in 100 Hispanic parents and 2 in 100 Asian parents having an SUD.

Table 2 also shows that prevalence of specific SUDs vary across the populations, but alcohol use disorder (AUD) is the biggest problem for each racial/Hispanic origin population for which it could be measured. AUD ranged from about 1.9 percent among Asian parents to about 12.1 percent among American Indian/Alaska Native parents. AUD rates were 8.5 percent among multiple-race parents, 5.8 percent among white parents, 5.2 percent among black parents, and 4.4 percent among Hispanic parents (table 2). For multiple-race and white parents, the second-most prevalent SUD was opioid use disorder (1.1 percent and 2.1 percent, respectively) followed by marijuana use disorder (0.8 percent and 1.8 percent, respectively). For American Indian/Alaska Native parents, the second-most prevalent SUD was methamphetamine use disorder (4.2 percent), followed by marijuana use disorder (2.5 percent). For black and Hispanic parents, the second-most prevalent SUD was marijuana use disorder (1.9 percent and 0.8 percent, respectively), followed by opioid use disorder (0.9 percent and 0.4 percent, respectively). One in 100 Native Hawaiian/Pacific Islander parents had an "other" use disorder, defined as sedatives, inhalants, prescription stimulants, or hallucinogens.

TABLE 2

Prevalence of Substance Use Disorder in the Past 12 Months among All Parents, by Race and Hispanic Origin, 2015–17

	NON-HISPANIC						
	Hispanic, Any Race (n = 9,277)	White (n = 25,385)	Black (n = 5,510)	American Indian/Alaska Native (n = 753)	Native Hawaiian/ Pacific Islander (n = 241)	Asian (n = 2,005)	Multiple Races (n = 1,293)
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Any drug or alcohol use disorder	5.4 (4.8, 6.1)***	7.5 (7.1, 7.8)***	7.2 (6.3, 8.2)	16.1 (10.9, 21.3)***	7.9 (1.3, 14.4)	2.0 (1.3, 2.8)***	11.9 (8.6, 15.3)**
Any alcohol	4.4 (3.9, 5.0)***	5.8 (5.5, 6.1)***	5.2 (4.4, 6.0)	12.1 (8.5, 15.7)***	NA	1.9 (1.2, 2.7)***	8.5 (6.1, 10.9)***
Any opioids	0.4 (0.2, 0.6)***	1.1 (0.9, 1.3)***	0.8 (0.5, 1.1)	0.9 (0.2, 1.7)	0.4 (-0.2, 1.0)	0.1 (-0.1, 0.3)***	2.1 (0.7, 3.5)
Any marijuana	0.8 (0.6, 1.0)	0.8 (0.6, 0.9)**	1.9 (1.5, 2.4)***	2.5 (0.8, 4.1)	0.4 (-0.1, 0.9)**	0.1 (0.0, 0.3)***	1.8 (0.7, 2.9)
Any cocaine, including crack	0.2 (0.1, 0.3)	0.2 (0.1, 0.3)	0.4 (0.2, 0.7)	0.3 (-0.2, 0.7)	NA	NA	0.3 (-0.1, 0.6)
Any methamphetamines	0.2 (0.1, 0.4)	0.3 (0.2, 0.4)	0.1 (0.0, 0.1)***	4.2 (-0.2, 8.6)	0.3 (-0.1, 0.7)	NA	1.1 (0.2, 1.9)
Any tranquilizers	0.1 (0.0, 0.2)**	0.2 (0.2, 0.3)***	0.1 (0.0, 0.2)	0.3 (-0.3, 0.8)	0.7 (-0.5, 1.9)	NA	0.3 (0.0, 0.5)
Other ^a	0.2 (0.1, 0.3)	0.3 (0.3, 0.4)**	0.2 (0.1, 0.4)	1.9 (-0.6, 4.4)	1.0 (-0.3, 2.4)	NA	0.8 (0.1, 1.4)

Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: CI = confidence interval. Suppressed point estimates are indicated as not available (NA). Parents live with their children ages 17 or younger. Past 12 months precede the date that the respondent was interviewed.

^a Other includes use disorders for sedatives, inhalants, prescription stimulants, and hallucinogens.

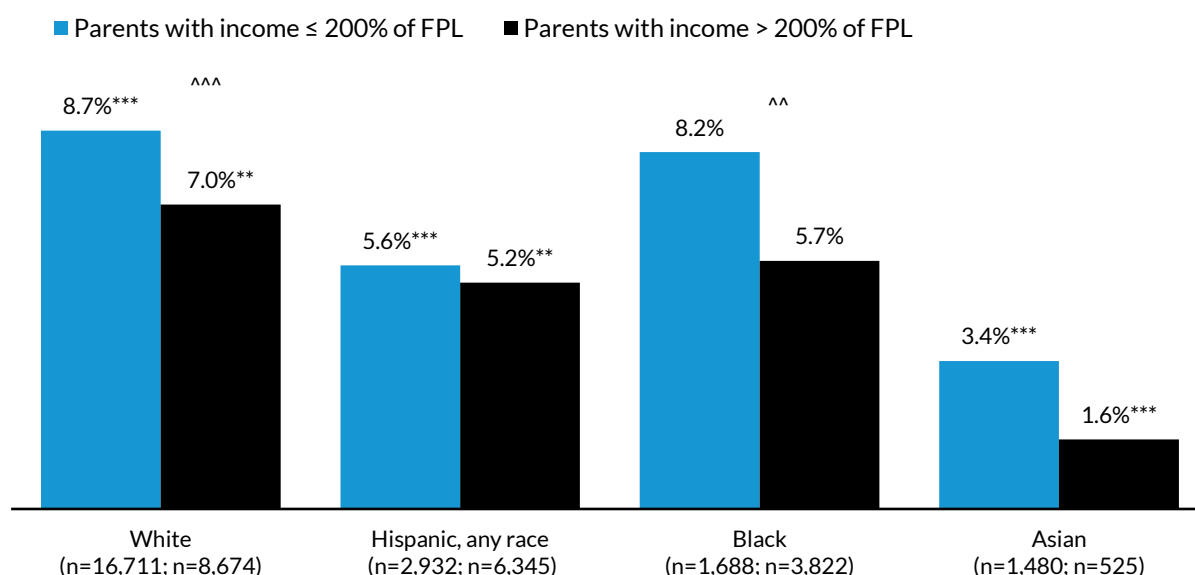
/ indicates that the difference between this estimate and the estimate for all other parents (data not shown) is significantly different from zero at the 0.05/0.01 level, using two-tailed t-tests.

Prevalence of Parental SUDs by Low-Income and Employment Statuses

Figure 1 shows that rates of any SUD tended to be higher among those who had low family incomes. Comparisons across race/Hispanic origin were similar to what we observed for all parents (i.e., higher prevalence among white parents and lower prevalence among Hispanic and Asian parents) when we looked separately at higher- and lower-income parents. Looking at differences between higher- and lower-income parents for specific SUDs, we observed that rates of AUD were generally quite similar for lower- and higher-income parents, and other substances appeared to drive the differences between lower- and higher-income parents with any SUD (appendix table 1).

FIGURE 1

Prevalence of Substance Use Disorder among Parents, by Low-Income Status in the Past 12 Months, 2015–17



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Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: FPL = federal poverty level. Low-income is defined as less than or equal to 200 percent of the federal poverty level. Past 12 months precede the date that the respondent was interviewed. White, black, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Asian, and multiple-race categories exclude those who are Hispanic. For each racial/Hispanic origin group, we include two sample sizes; the first *n* corresponds with the left bar, and the second *n* corresponds with the right bar. We suppressed data for the American Indian/Alaska Native, Native Hawaiian/Pacific Islander, and multiple-race populations using National Survey on Drug Use and Health criteria for suppression.

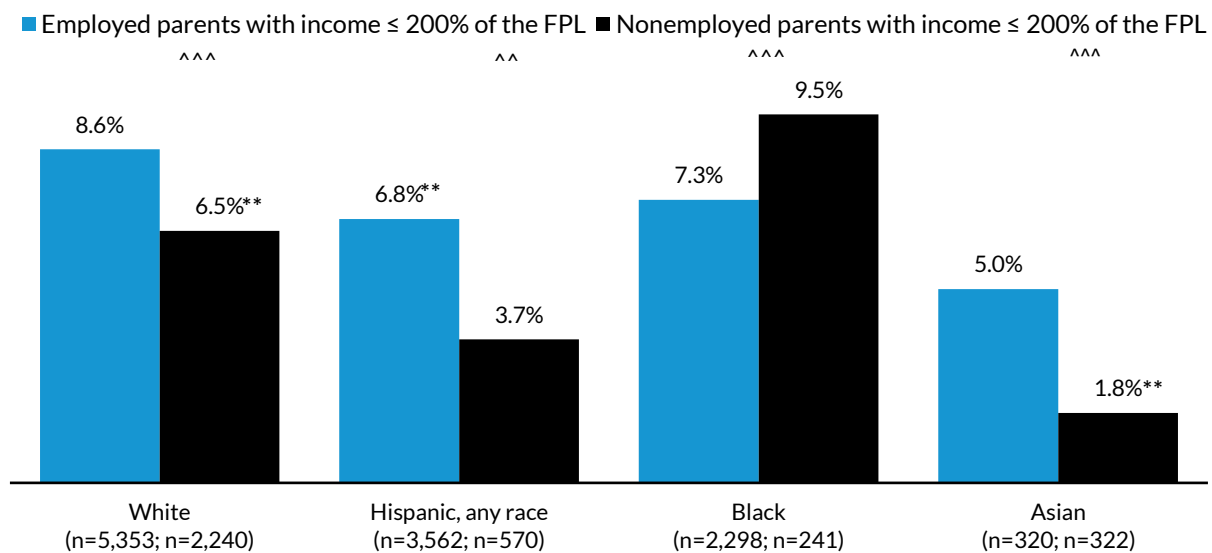
/ signifies 0.05 and 0.01 levels of statistically significant difference from parents of the same income status (higher/lower) but different racial/Hispanic origin populations.

^^/^^^ signifies 0.05 and 0.01 levels of statistically significant difference between higher- and lower-income parents in the same racial/Hispanic origin population.

Figure 2 shows that among low-income parents, employed parents tended to have higher rates of SUD than parents who were not employed (i.e., nonemployed, students, homemakers, etc.). However, for low-income black parents, rates of SUD were lower among those who were employed than those who were not. See table A.1 for more detail.

FIGURE 2

Prevalence of Substance Use Disorder among Low-Income Parents, by Employment Status in the Past 12 Months, 2015–17



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Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: FPL = federal poverty level. Low-income is defined as less than or equal to 200 percent of the federal poverty level. Past 12 months precede the date that the respondent was interviewed. White, black, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Asian, and multiple-race categories exclude those who are Hispanic. For each racial/Hispanic origin group, we include two sample sizes; the first *n* corresponds with the left bar, and the second *n* corresponds with the right bar. We suppressed data for the American Indian/Alaska Native, Native Hawaiian/Pacific Islander, and multiple-race populations using National Survey on Drug Use and Health criteria for suppression.

** signifies 0.05 level of statistically significant difference from parents of the same employment status but different racial/Hispanic origin populations.

^^/^^^ signifies 0.05 and 0.01 levels of statistically significant difference between employed and nonemployed parents in the same racial/Hispanic origin population.

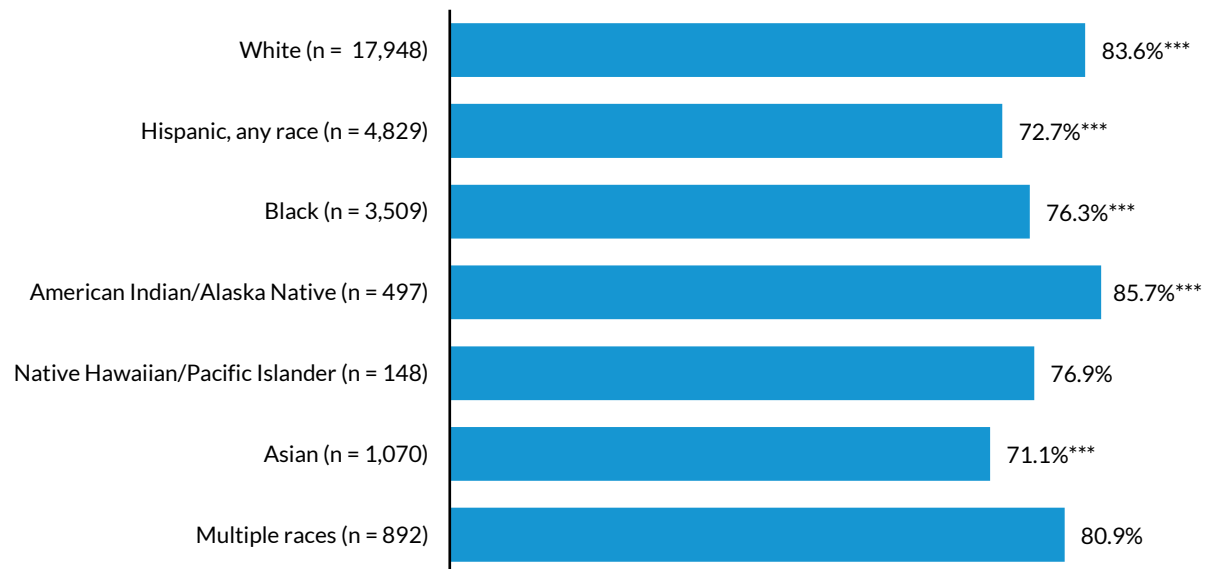
Share of Parents Asked about Substance Use by a Medical Provider

Figures 3 and 4 show the share of parents with a medical visit in the past year who were asked by a medical provider about alcohol and drug use either in person or on a form by race and Hispanic origin. Figure 3 shows that rates of asking about alcohol were higher for white (83.6 percent) and American

Indian/Alaska Native (85.7 percent) parents and lower for Hispanic (72.7 percent), black (76.3 percent), and Asian (71.1 percent) parents. Figure 4 shows that rates of asking about drug use were also higher for white (64.5 percent) and American Indian/Alaska Native (72.7 percent) parents and lower for Hispanic (57.3 percent) and Asian (44.4 percent) parents. Adjusting for observed differences in the populations generally made differences smaller, but patterns were similar (see appendix table 2).

FIGURE 3

Percentage of Parents Asked in Person or on a Form by a Medical Provider about Alcohol Use, among Those with a Medical Visit in the Past 12 months, 2015–17



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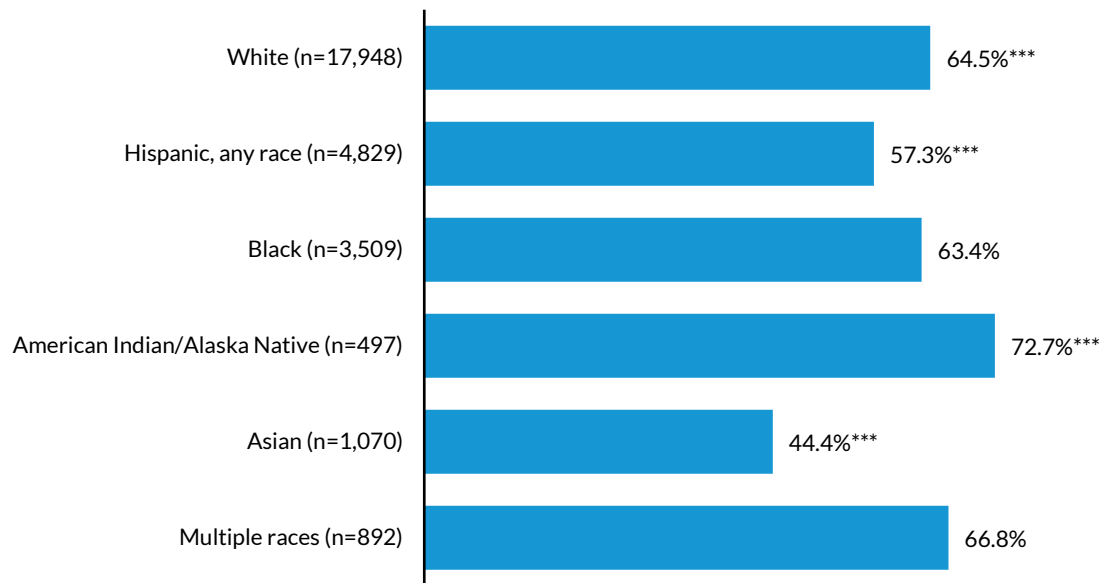
Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: White, black, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Asian, and multiple-race categories exclude those who are Hispanic. We suppressed data for the American Indian/Alaska Native, Native Hawaiian/Pacific Islander, and multiple-race populations using National Survey on Drug Use and Health criteria for suppression.

*** signifies statistically significant difference from other parents at the 0.01 level.

FIGURE 4

Percentage of Parents Asked in Person or on a Form by a Medical Provider about Drug Use, among Those with a Medical Visit in the Past 12 Months, 2015–17



URBAN INSTITUTE

Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: White, black, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Asian, and multiple-race categories exclude those who are Hispanic. We suppressed data for the American Indian/Alaska Native, Native Hawaiian/Pacific Islander, and multiple-race populations using National Survey on Drug Use and Health criteria for suppression.

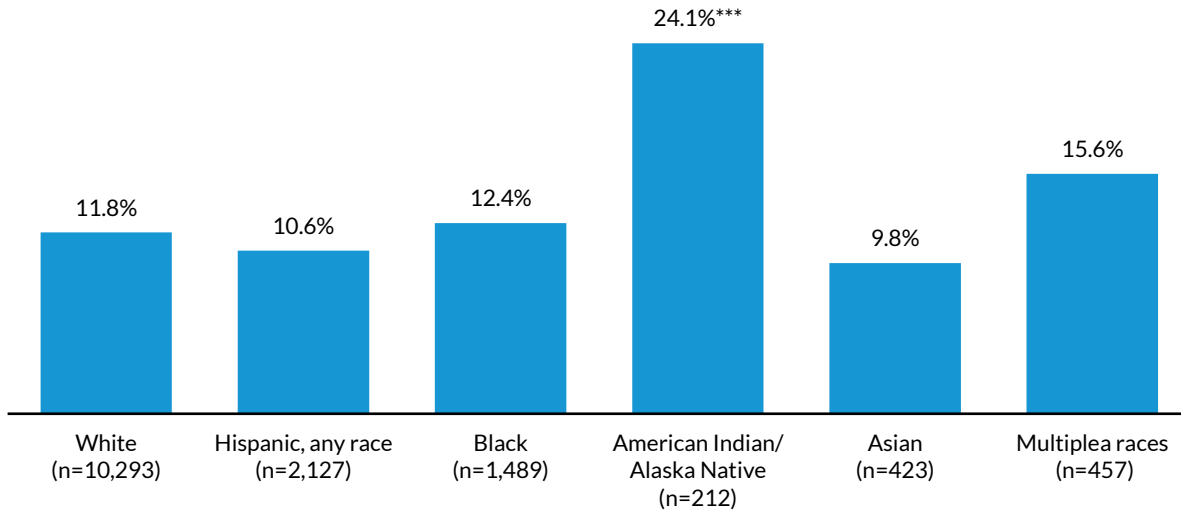
*** signifies statistically significant difference from other parents at the 0.01 level.

We also found that for all race and Hispanic origin populations, the share of parents asked by a medical provider about alcohol and drug use either in person or on a form was considerably lower when we included parents who had not seen a medical provider (table A.3). This pattern was especially pronounced for Hispanic parents, among whom the share asked about alcohol or drug use fell from 74.5 percent to 52.5 percent when we switched from looking at parents who had a medical visit to all parents. We observe this pattern because Hispanic parents were less likely to have health insurance and to have seen a medical provider (table 1).

Figure 5 shows the share of parents who drink alcohol who were asked about alcohol problems. We found that parents who drink were seldom asked by a provider about drinking problems. This rate was only 24.1 percent among American Indian/Alaska Native parents, 15.6 percent among multiple-race parents, and roughly 10 percent among other parents who drink.

FIGURE 5

Percentage of Parents Asked in Person by a Medical Provider If They Had Any Problems from Alcohol, among Those Who Drink and Had a Medical Visit in the Past 12 months, 2015–17



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Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: White, black, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Asian, and multiple-race categories exclude those who are Hispanic. We suppressed data for the American Indian/Alaska Native, Native Hawaiian/Pacific Islander, and multiple-race populations using National Survey on Drug Use and Health criteria for suppression.

*** signifies statistically significant difference from other parents at the 0.01 level.

Rates of SUD Treatment among Parents with SUDs

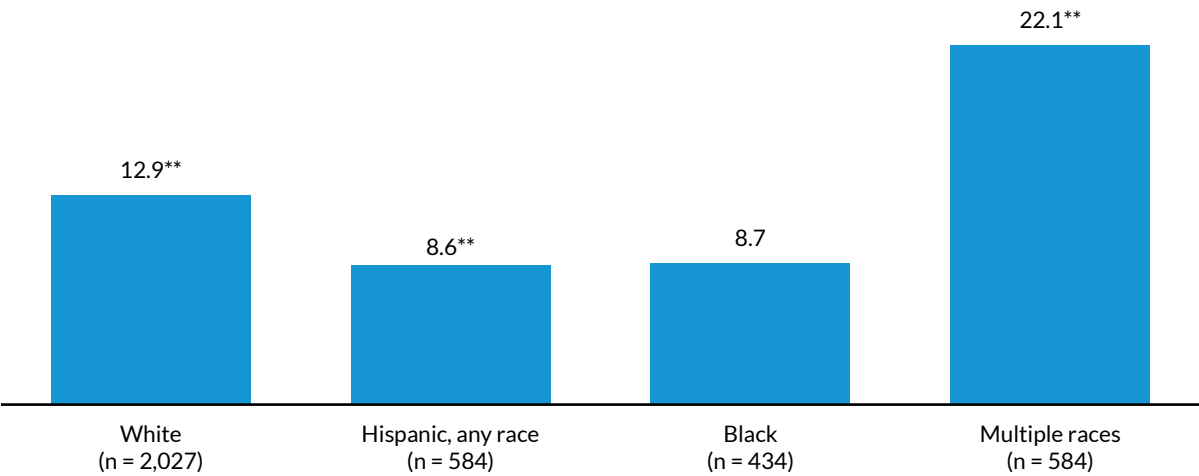
Figures 6 and 7 show the treatment rates among parents with SUDs by race and Hispanic origin, showing the percentage of people who reported treatment in the past year and the percentage of people who reported that their last treatment was more than one year before the interview date. We found that treatment rates for SUD were very low across all groups we examined and varied by race and Hispanic origin. Among parents with an SUD, fewer than 10 percent of black and Hispanic parents had current or recent treatment (i.e., in the past 12 months), and only 12.9 percent of white parents and 22.1 percent of multiple-race parents had current or recent treatment (figure 6). Current or recent treatment rates were higher among multiple-race and white parents and lower among Hispanic parents.

Figure 7 shows that about 10 percent of black and Hispanic parents, 17.0 percent of white parents, 19.0 percent of multiple-race parents, and 25.8 percent of American-Indian/Alaska Native parents had treatment more than 12 months ago and have not reinitiated it in the past year. Rates of being treated

more than 12 months ago and not reinitiating were higher among white and American-Indian/Alaska Native parents and lower among black and Hispanic parents.

Adjusting for observed differences in the populations generally made differences in treatment rates smaller, but patterns remained similar (table A.4).

FIGURE 6
Rates of Past Year Treatment among Parents with a Substance Use Disorder
, by Race and Hispanic Origin, 2015–17

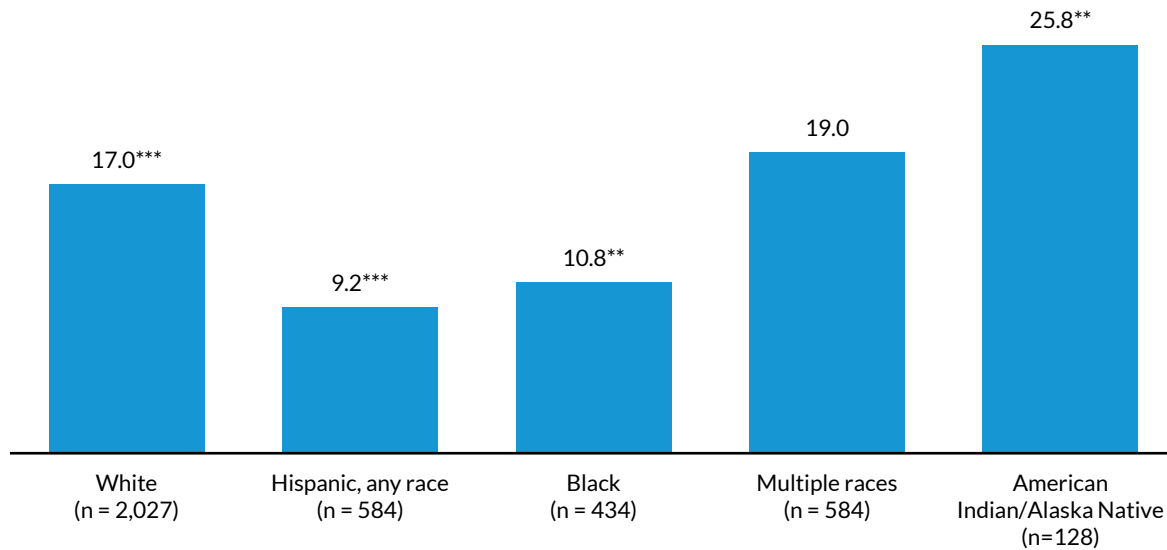


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Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.
Notes: White, black, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Asian, and multiple-race categories exclude those who are Hispanic. We suppressed data for the American Indian/Alaska Native, Native Hawaiian/Pacific Islander, and multiple-race populations using National Survey on Drug Use and Health criteria for suppression.
/ signifies statistically significant difference from parents in other racial/Hispanic origin groups at the 0.05 and 0.01 levels.

FIGURE 7

Rates of Treatment that Occurred More than a Year Ago and Was Not Reinitiated in the Past Year among Parents with a Substance Use Disorder, by Race and Hispanic Origin, 2015–17



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Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: White, black, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Asian, and multiple-race categories exclude those who are Hispanic. We suppressed data for the American Indian/Alaska Native, Native Hawaiian/Pacific Islander, and multiple-race populations using National Survey on Drug Use and Health criteria for suppression.

/ signifies statistically significant difference from parents in other racial/Hispanic origin groups at the 0.05 and 0.01 levels.

Discussion

Our findings show that SUDs affect many families with children and are a largely unaddressed problem across parents of all the race and Hispanic origin populations we studied. Parents who were American Indian/Alaska Native or multiple races had especially high levels of SUDs. Parents who were Hispanic or Asian had relatively low levels of SUDs, but even these lower levels imply that substantial numbers of children are at risk, with roughly 5 in 100 Hispanic parents and 2 in 100 Asian parents having an SUD. Slightly higher incidence among lower-income families suggests that many at-risk children and families are especially vulnerable, with both low incomes and parental SUDs.

We found that the prevalence of specific SUDs varied across the racial/Hispanic origin populations but that AUD was by far the biggest problem for each population. This suggests that increased intervention around unhealthy alcohol use may be particularly effective.

Our findings show considerable scope for health care providers to expand their intervention for unhealthy substance use among parents of all the populations we could examine. There is also ample opportunity to directly increase these services, with four in five parents seeing a provider at least once a year. Though it is recommended that medical providers screen all patients (in person or using a form/computer) at checkups and other acute care visits, rates of being asked about alcohol and drug use were not close to the level we would see if all parents were screened at visits, and rates varied by race/Hispanic origin. Our results show a large gap in screening among Asian parents who had a medical visit, and though their rates of SUDs may be relatively low, it is important to note that admissions for SUD treatment have increased more for Asian/Pacific Islanders than other populations, suggesting a growing problem (Evans et al. 2012; Sahker et al. 2017).

Rates of screening were substantially lower when we looked at rates including people who did not see a provider. This finding shows that increasing provider intervention for unhealthy substance use is just one piece of the approach needed to reduce the consequences of parental unhealthy substance use. Our results showing high uninsurance and lower rates of medical visits among Hispanic parents point to another key piece: increasing insurance coverage and access to providers.

Though about 30 percent of adults are considered risky drinkers, we found that parents who drink were seldom asked by a provider in person about drinking problems. It is recommended that providers perform a brief intervention when patients screen positive for unhealthy substance use, not just an SUD, and a key component of brief intervention for alcohol involves asking patients to discuss problems from drinking. That only 24.1 percent of American Indian/Alaska Native parents, 15.6 percent of multiple-race parents, and roughly 10 percent of other parents were even asked about drinking problems suggests that brief interventions were seldom performed. In addition, that rates of brief intervention were higher among populations with higher rates of SUD raises the question of whether many providers do not know that brief interventions effectively help people with less involved substance use problems. This has been observed among providers in the VA health system when they introduced a successful initiative aimed at increasing screening and brief intervention (Bradley et al. 2006).

Our findings also demonstrate substantial gaps in SUD treatment for parents, with even larger gaps for black and Hispanic parents. Our finding that the treatment gap is larger among black and Hispanic parents comports with research on racial and Hispanic origin disparities in treatment, which point to local geography, Medicaid financing, and lack of housing and other supports as key drivers of disparities (Acevedo et al. 2018; Cummings et al. 2014; Saloner, Carson, and Cook 2014; Saloner and Cook 2017; Stahler and Mennis 2018).

Low receipt of substance use treatment may be related to low rates of SUD identification and diagnosis by providers, low rates of treatment initiation and retention, or both. We cannot tell from our data what percentage of parents with an SUD have been diagnosed, but we observe considerable problems with retention and reinitiation among parents. Our finding that about 10 percent of black and Hispanic parents, 17.0 percent of white parents, 19.0 percent of multiple-race parents, and 25.8 percent of American-Indian/Alaska Native parents had treatment more than 12 months ago and have not reinitiated in the past year shows a large missed opportunity to treat parental SUD. These are people who have not managed to reinitiate treatment after an expected relapse. SUDs are considered chronic relapsing conditions, like diabetes, and it is expected that people with SUDs stop and restart treatment multiple times before they stay on a path of recovery.

Our findings showing higher levels of intervention (screening, asking about problems from alcohol, and SUD treatment) among American Indian/Alaska Native parents also raises the question of whether efforts to make these services more culturally relevant to American Indians/Alaska Natives may help explain this result. Whether interventions are more culturally relevant for parents who are American Indian/Alaska Native is unclear, but there appears to be more tools available to increase cultural relevance for them, and this may make it easier for providers to intervene (Centers for Disease Control and Prevention 2018).

More culturally relevant substance-related services may help increase these services for the populations we studied, but substantial gaps in these services among American Indians/Alaska Natives persist despite what appears to be more tools to make these services culturally relevant. This suggests greater cultural relevance may not be sufficient to substantially increase rates of these services.

Conclusion

Our findings suggest that addressing unhealthy substance use among parents will require addressing other previously identified barriers with screening and brief intervention. Research suggests that some providers are reluctant to ask about substance use because of concerns about time, funding and reimbursement, and their own knowledge and ability (Barry et al. 2004; Holland, Pringle, and Barbetti 2009; Muench et al. 2015). The experience of the VA health system suggests that providers will increase screening and brief intervention when they are required to and are given more education, technical assistance, and financial incentives. In 2004, the VA introduced a performance measure requiring annual screening for unhealthy alcohol use and brief intervention for those who screen positive and later began using medical record reviews to monitor documentation of brief intervention

for those who screened positive for alcohol misuse. In addition, the VA uses electronic reminders for providers during visits and financial incentives for compliance. These changes significantly increased documented rates of screening and brief intervention (Bradley et al. 2006; Lapham et al. 2012). Efforts to replicate aspects of the VA approach in other systems and plans could help increase these services for parents. For example, some facilities serving VA patients adopted other facilities' electronic medical record systems used to give providers computerized reminders during visits. And the VA health system educated providers about the benefits of screening and brief intervention in a broad population, not just those who may have a substance use disorder.

Our findings that many families with children are affected by parental SUD and that rates of intervention are low suggest that health researchers should develop and enhance intervention tools tailored to parents. For example, in an ordinary brief intervention, providers inform patients about the known risks of SUD on the patient's health, but parents may also benefit from interventions in which providers inform patients about both the known risks of parental SUD for children's health and well-being and the benefits for children from parental SUD treatment. Similarly, screenings usually occur when patients see providers about their health, but parents may be more open to recognizing and addressing their unhealthy substance use in pediatric settings, where they may be more conscious of the effect of their substance use on their child's health and well-being. It would be helpful to explore the feasibility and efficacy of novel approaches like integrating parental screening for SUD with some pediatric care.

Raising treatment rates may require addressing stigma and fear and a range of capacity and infrastructure issues related to the low availability of evidence-based SUD treatment programs in communities, especially those that are predominantly black or Hispanic (Acevedo et al. 2018; Bouchery and Dey 2018; Cummings et al. 2014; Jones et al. 2015). Fear of having a record of SUD and/or SUD treatment may be particularly worrisome for parents who are aware that some parents lose custody of their children because of an SUD. Issues include

- raising awareness among policymakers that health care provider organizations advocate treatment, and not punishment, for parents with unhealthy substance use.⁴
- addressing deficits in clinician education about unhealthy substance use and SUD treatment (Bradley et al. 2006; Yarborough et al. 2018)
- improving referral networks to facilitate patient acceptance and access (Bernstein et al. 2009)
- increasing supportive services that may be especially important for black and Hispanic people (Saloner and Cook 2017)

- increasing the availability of family-centered services (Dallas et al. 2017)
- expanding insurance coverage and reducing insurance-related barriers, such as prior authorization and cost sharing (Sharma et al. 2017)
- increasing Medicaid financing for treatment (Cummings et al. 2014; Guerrero et al. 2017)

Addressing barriers to screening, brief intervention, and SUD treatment could increase the share of parents who receive appropriate intervention for unhealthy substance use, which in turn could improve parents' and children's health and functioning and protect child welfare.

Appendix A. Detailed Estimates

TABLE A.1

Prevalence of Substance Use Disorder among Parents, by Race and Hispanic Origin,
Low-Income Status, and Employment Status in the Past 12 Months, 2015–17

	ALL PARENTS WITH INCOME > 200% OF FPL						
	Hispanic, Any Race (n = 2,932)	White, Non- Hispanic (n = 16,711)	Black, Non- Hispanic (n = 1,688)	American Indian/Alaska Native, Non- Hispanic (n = 228)	Native Hawaiian/ Pacific Islander, Non-Hispanic (n = 93)	Asian, Non- Hispanic (n = 1,480)	Multiple Races, Non-Hispanic (n = 599)
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Any drug or alcohol use disorder	5.2 (4.1, 6.3)**	7.0 (6.5, 7.5)***	5.7 (4.3, 7.0)	NA	NA	1.6 (0.6, 2.6)***	NA
Any opioids	0.2 (0.0, 0.4)***	0.8 (0.6, 1.0)***	0.5 (0.0, 0.9)	NA	NA	0.1 (-0.1, 0.4)***	NA
Any alcohol	4.5 (3.4, 5.6)	5.9 (5.5, 6.4)***	4.8 (3.5, 6.1)	NA	NA	1.6 (0.6, 2.6)***	NA
Any marijuana	0.7 (0.4, 0.9)	0.6 (0.4, 0.7)	1.5 (0.8, 2.2)***	NA	NA	NA	NA
Any cocaine, including crack	0.2 (0.0, 0.4)	0.1 (0.0, 0.2)	0.2 (-0.1, 0.6)	NA	NA	NA	NA
Any methamphetamines	0.2 (0.0, 0.4)	0.1 (0.1, 0.2)	0.1 (0.0, 0.1)**	NA	NA	NA	NA
Any tranquilizers	0.1 (0.0, 0.1)	0.2 (0.1, 0.2)***	NA	NA	NA	NA	NA
Other ^a	0.2 (0.0, 0.3)	0.2 (0.1, 0.3)	0.0 (0.0, 0.1)***	NA	NA	NA	NA

ALL PARENTS WITH INCOME ≤ 200% OF THE FPL

	Hispanic, Any Race (n = 6,345)	White, Non- Hispanic (n = 8,674)	Black, Non- Hispanic (n = 3,822)	American Indian/Alaska Native, Non- Hispanic (n = 525)	Native Hawaiian/ Pacific Islander, Non- Hispanic (n = 148)	Asian, Non- Hispanic (n = 525)	Multiple Races, Non- Hispanic (n = 694)
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Any drug or alcohol use disorder	5.6 (4.9, 6.3)***	8.7 (7.8, 9.5)***^^^	8.2 (6.9, 9.5)^^	17.5 (11.2, 23.9)***	NA	3.4 (1.3, 5.5)***	14.4 (8.4, 20.5)**
Any opioids	0.5 (0.3, 0.8)***^^	2.1 (1.6, 2.5)***^^^	1.0 (0.6, 1.4)	0.9 (0.1, 1.7)	0.3 (-0.2, 0.9)***	0.1 (-0.1, 0.2)***	2.9 (0.7, 5.2)
Any alcohol	4.4 (3.7, 5.1)***	5.4 (4.8, 5.9)	5.5 (4.4, 6.6)	14.1 (8.5, 19.6)***	NA	3.1 (1.1, 5.1)**	10.1 (5.7, 14.4)**
Any marijuana	0.9 (0.5, 1.2)***	1.4 (1.0, 1.7)^^^	2.2 (1.6, 2.8)***	3.0 (0.7, 5.3)	0.6 (-0.2, 1.5)	0.5 (-0.2, 1.2)**	2.8 (0.8, 4.8)
Any cocaine, including crack	0.2 (0.0, 0.3)**	0.5 (0.3, 0.7)^^^	0.6 (0.2, 0.9)	0.4 (-0.3, 1.1)	NA	0.0 (0.0, 0.1)***	0.5 (-0.2, 1.1)
Any methamphetamines	0.3 (0.1, 0.4)**	0.7 (0.5, 1.0)***^^^	0.1 (0.0, 0.1)***	2.9 (-0.3, 6.2)	NA	NA	1.3 (-0.1, 2.8)
Any tranquilizers	0.1 (0.0, 0.2)***	0.5 (0.3, 0.6)***^^^	0.2 (0.0, 0.3)	NA	NA	NA	0.2 (-0.1, 0.5)
Other ^a	0.2 (0.1, 0.4)***	0.8 (0.5, 1.0)***^^^	0.3 (0.1, 0.6)^^^	0.7 (-0.2, 1.6)	NA	0.0 (0.0, 0.1)***	0.6 (-0.1, 1.2)

ALL EMPLOYED PARENTS WITH INCOME > 200% OF THE FPL

	Hispanic, Any Race (n = 3,562)	White, Non-Hispanic (n = 5,353)	Black, Non- Hispanic (n = 2,298)	American Indian/ Alaska Native, Non- Hispanic (n = 255)	Native Hawaiian/ Pacific Islander, Non-Hispanic (n = 76)	Asian, Non- Hispanic (n = 320)	Multiple Races, Non- Hispanic (n = 414)
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Any drug or alcohol use disorder	6.8 (5.8, 7.8)**tt	8.6 (7.6, 9.7)ttt	7.3 (6.1, 8.5)ttt	16.2 (6.9, 25.5)	NA	5.0 (1.9, 8.1)ttt	13.2 (6.9, 19.5)tt
Any opioids	0.6 (0.2, 1.0)***	1.8 (1.3, 2.3)***ttt	0.8 (0.4, 1.2)	1.2 (-0.3, 2.8)	NA	0.1 (-0.1, 0.3)***	1.5 (-0.1, 3.1)
Any alcohol	5.5 (4.6, 6.4)	5.8 (5.0, 6.6)tt	4.8 (3.6, 6.0)	12.6 (5.1, 20.2)	NA	4.6 (1.6, 7.5)ttt	11.5 (5.6, 17.5)
Any marijuana	0.8 (0.5, 1.2)**tt	1.2 (0.8, 1.5)ttt	2.0 (1.4, 2.6)***tt	3.8 (-0.4, 8.0)	NA	0.8 (-0.4, 2.0)	1.6 (0.0, 3.2)
Any cocaine, including crack	0.2 (0.0, 0.4)	0.4 (0.1, 0.7)	0.4 (0.1, 0.8)	0.1 (-0.1, 0.4)	NA	0.0 (0.0, 0.1)***	0.1 (-0.1, 0.3)**
Any methamphetamines	0.3 (0.0, 0.6)	0.6 (0.3, 0.9)**ttt	0.0 (0.0, 0.1)***	1.0 (-0.4, 2.4)	NA	NA	0.3 (-0.1, 0.7)
Any tranquilizers	0.1 (0.0, 0.3)	0.4 (0.2, 0.6)ttt	0.1 (0.0, 0.3)	NA	NA	NA	0.1 (-0.1, 0.2)**
Other ^a	0.3 (0.0, 0.5)	0.5 (0.3, 0.8)ttt	0.3 (0.0, 0.5)	0.2 (-0.2, 0.7)	NA	0.0 (0.0, 0.1)***	0.2 (-0.1, 0.5)

ALL NONEMPLOYED PARENTS WITH INCOME > 200% OF THE FPL

	Hispanic, Any Race (n = 570)	White, Non- Hispanic (n = 2,240)	Black, Non- Hispanic (n = 241)	American Indian/Alaska Native, Non- Hispanic (n = 36)	Native Hawaiian/ Pacific Islander, Non- Hispanic (n = 15)	Asian, Non- Hispanic (n = 322)	Multiple Races, Non- Hispanic (n = 87)
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Any drug or alcohol use disorder	3.7 (1.9, 5.6)	6.5 (5.1, 7.9)**	9.5 (3.8, 15.1)	NA	NA	1.8 (-0.7, 4.3)***	NA
Any opioids	0.3 (-0.3, 0.9)**	1.2 (0.7, 1.7)	NA	NA	NA	0.0 (0.0, 0.1)***	NA
Any alcohol	3.4 (1.6, 5.2)	4.6 (3.4, 5.9)	6.7 (1.6, 11.8)	NA	NA	1.8 (-0.7, 4.3)**	NA
Any marijuana	0.1 (-0.1, 0.4)***	1.0 (0.5, 1.4)	4.5 (1.1, 8.0)**	NA	NA	NA	NA
Any cocaine, including crack	0.0 (0.0, 0.0)	0.2 (0.0, 0.4)	NA	NA	NA	NA	NA
Any methamphetamines	0.3 (-0.3, 0.9)	0.4 (0.1, 0.7)	NA	NA	NA	NA	NA
Any tranquilizers	0.3 (-0.1, 0.8)	0.4 (0.1, 0.7)	NA	NA	NA	NA	NA
Other ^a	0.2 (-0.1, 0.5)	0.4 (0.1, 0.7)	NA	NA	NA	NA	NA

Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: FPL = federal poverty level. CI = confidence interval. Suppressed point estimates are indicated as not available (NA). Parents are defined as parents living with their children ages 17 or younger. Low-income is defined as having family income ≤ 200 percent of the federal poverty level. Employed is defined as having a full- or part-time job.

^a Other includes use disorders for sedatives, inhalants, prescription stimulants, and hallucinogens.

/ indicates that the difference between this estimate and the estimate for all other parents in the row is significantly different from zero at the 0.05/0.01 level, using two-tailed t-tests.

^^/^^^ indicates that the difference between this estimate and the estimate for parents with income > 200 percent of the federal poverty level in the same racial/Hispanic origin population is significantly different from zero at the 0.05/0.01 level, using two-tailed t-tests.

tt/ttt indicates that the difference between this estimate and the estimate for parents who are not employed and in the same racial/Hispanic origin population is significantly different from zero at the 0.05/0.01 level, using two-tailed t-tests.

TABLE A.2

Unadjusted and Adjusted Percentage of Parents Asked by a Medical Provider about Substance Use, by Race and Hispanic Origin, among Parents with a Medical Visit in the Past 12 Months, 2015–17

	Non-Hispanic						
	Hispanic, any race (n = 4,829)	White (n = 17,948)	Black (n = 3,509)	American Indian/Alaska Native (n = 497)	Native Hawaiian/Pacific Islander (n = 148)	Asian (n = 1,070)	Multiple races (n = 892)
Unadjusted estimates							
<i>Asked if use</i>							
Alcohol or drugs	74.5 (72.9, 76.0)***	84.8 (84.2, 85.5)***	78.5 (76.7, 80.3)***	88.1 (84.4, 91.9)***	79.2 (68.8, 89.5)	71.7 (68.1, 75.2)***	82.9 (79.3, 86.5)
Alcohol	72.7 (71.2, 74.2)***	83.6 (83.0, 84.3)***	76.3 (74.5, 78.1)***	85.7 (81.9, 89.5)***	76.9 (66.6, 87.3)	71.1 (67.5, 74.8)***	80.9 (77.5, 84.3)
Drugs	57.3 (55.3, 59.3)***	64.5 (63.5, 65.5)***	63.4 (61.0, 65.7)	72.7 (65.0, 80.3)***	NA	44.4 (40.6, 48.2)***	66.8 (61.8, 71.7)
Adjusted estimates							
<i>Asked if use</i>							
Alcohol or drugs	78.7 (76.7, 80.7)***	83.5 (82.6, 84.4)***	81.2 (79.0, 83.4)	86.9 (82.1, 91.8)**	NA	70.5 (65.8, 75.3)***	82.8 (78.5, 87.0)
Alcohol	77.3 (75.3, 79.3)***	82.3 (81.3, 83.2)***	79.6 (77.4, 81.9)	84.3 (78.7, 89.8)	NA	69.3 (64.5, 74.0)***	81.4 (77.1, 85.8)
Drugs	58.9 (56.8, 60.9)	62.3 (61.1, 63.4)***	62.3 (59.5, 65.0)	65.6 (56.6, 74.7)	NA	45.4 (40.4, 50.5)***	59.7 (53.6, 65.8)

Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: Suppressed point estimates are indicated as not available (NA). Parents are defined as parents living with their children ages 17 or younger. Medical visit is defined as any inpatient, outpatient, or emergency department visit. Regression-adjusted percentages are adjusted for differences by type of substance use disorder, age group, sex, marital status, income-to-poverty category, educational level, employment category, number of chronic conditions, any mental illness status, number of emergency department visits, number of outpatient visits, number of nights in an inpatient hospital, and health insurance category.

/ indicates that the difference between this estimate and the estimate for all other parents (data not shown) is significantly different from zero at the 0.05/0.01 level, two-tailed t-test.

TABLE A.3

Unadjusted and Adjusted Percentage of All Parents Asked by a Medical Provider about Substance Use, by Race and Hispanic Origin, 2015–17

	Non-Hispanic						
	Hispanic, any race (n = 9,277)	White (n = 25,385)	Black (n = 5,510)	American Indian/Alaska Native (n = 753)	Native Hawaiian/ Pacific Islander (n = 241)	Asian (n = 2,005)	Multiple races (n = 1,293)
Unadjusted estimates							
Asked if use							
Alcohol or drugs	52.5 (50.8, 54.2)***	71.6 (70.9, 72.4)***	64.2 (62.3, 66.2)	68.1 (63.3, 72.9)	65.3 (56.0, 74.5)	54.7 (51.5, 57.9)***	67.9 (62.7, 73.1)
Alcohol	51.2 (49.6, 52.8)***	70.6 (69.8, 71.3)***	62.5 (60.5, 64.4)	66.2 (61.6, 70.8)	63.4 (54.5, 72.4)	54.3 (51.1, 57.5)***	66.2 (61.3, 71.2)
Drugs	40.4 (38.8, 41.9)***	54.4 (53.5, 55.3)***	51.9 (49.5, 54.2)**	56.2 (49.4, 63.0)	44.1 (33.5, 54.6)	33.7 (31.0, 36.4)***	54.7 (49.3, 60.1)
Adjusted estimates							
Asked if use							
Alcohol or drugs	63.5 (61.9, 65.1)***	67.3 (66.6, 68.1)***	64.9 (62.9, 66.9)	69.0 (65.6, 72.4)**	63.1 (52.0, 74.2)	56.5 (52.9, 60.1)***	66.8 (63.1, 70.6)
Alcohol	62.4 (60.7, 64.0)***	66.4 (65.6, 67.2)***	63.6 (61.6, 65.6)	67.0 (63.1, 70.9)	61.0 (49.9, 72.1)	55.4 (51.8, 59.0)***	65.7 (61.9, 69.5)
Drugs	47.5 (45.8, 49.1)	50.2 (49.2, 51.1)***	49.8 (47.5, 52.1)	52.0 (45.7, 58.2)	38.8 (26.6, 51.0)	36.4 (32.5, 40.4)***	48.2 (42.9, 53.4)

Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: Suppressed point estimates are indicated as not available (NA). Parents are defined as parents living with their children ages 17 or younger. Regression-adjusted percentages are adjusted for differences by type of substance use disorder, age group, sex, marital status, income-to-poverty category, educational level, employment category, number of chronic conditions, any mental illness status, number of emergency department visits, number of outpatient visits, number of nights in an inpatient hospital, and health insurance category.

/ indicates that the difference between this estimate and the estimate for all other parents (data not shown) is significantly different from zero at the 0.05/0.01 level, two-tailed t-test.

TABLE A.4

Adjusted and Unadjusted Treatment Rates for Substance Use Disorder among Parents with a Substance Use Disorder, by Race and Hispanic Origin, 2015–17

	NON-HISPANIC						
	Hispanic, Any Race (n = 584)	White (n = 2,027)	Black (n = 434)	Native American/ Alaska Native (n = 128)	Native Hawaiian/ Pacific Islander (n = 22)	Asian (n = 47)	Multiple Races (n = 584)
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Unadjusted estimates							
Any treatment for alcohol or drugs past 12 months	8.6 (5.1, 12.0)**	12.9 (11.2, 14.6)**	8.7 (5.5, 11.8)	NA	NA	NA	22.1 (12.6, 31.7)
Any treatment for drugs	4.1 (1.6, 6.7)***	8.1 (6.6, 9.6)***	5.6 (3.3, 8.0)	NA	NA	NA	8.5 (2.0, 15.0)
Any treatment for alcohol	6.6 (3.6, 9.6)	6.7 (5.6, 7.9)	5.2 (3.2, 7.3)	NA	NA	NA	12.3 (4.1, 20.6)
Last treated for alcohol or drug use more than 12 months ago	9.2 (6.5, 11.8)***	17.0 (14.2, 19.7)***	10.8 (6.5, 15.1)**	25.8 (14.9, 36.8)**	NA	NA	19.0 (9.8, 28.2)
Adjusted estimates							
Any treatment for alcohol or drugs past 12 months	12.2 (6.8, 17.5)	13.8 (11.7, 16.0)**	4.3 (0.1, 8.5)***	NA	NA	NA	18.3 (8.6, 28.0)
Any treatment for drugs	6.6 (2.9, 10.4)	9.2 (7.3, 11.1)***	NA	NA	NA	NA	NA
Any treatment for alcohol	8.6 (4.1, 13.0)	7.4 (5.7, 9.0)	2.9 (-0.2, 5.9)**	NA	NA	NA	NA
Last treated for alcohol or drug use more than 12 months ago	10.0 (6.7, 13.3)***	17.9 (14.9, 21.0)***	9.3 (3.4, 15.3)**	32.7 (21.2, 44.1)***	NA	NA	NA

Source: Data are from the pooled 2015, 2016, and 2017 National Survey on Drug Use and Health.

Notes: CI = confidence interval. Suppressed point estimates are indicated as not available (NA). Treatment was defined as the hospital inpatient setting, rehabilitation inpatient setting, rehabilitation outpatient clinic, outpatient mental health center or private doctor's office, emergency department, prison, and self-help treatment settings. Parents are defined as parents living with their children ages 17 or younger. Regression-adjusted percentages are adjusted for differences by type of substance use disorder, age group, sex, marital status, income-to-poverty category, educational level, employment category, number of chronic conditions, any mental illness status, and health insurance category.

/ indicates that the difference between this estimate and the estimate for all other parents (data not shown) is significantly different from zero at the 0.05/0.01 level, two-tailed t-test.

Appendix B. Definitions and Estimation

Substance Use Disorder Definitions

Alcohol use disorder. Alcohol use disorder was defined as meeting *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (DSM-IV) criteria for either dependence or abuse for alcohol.

Respondents who used alcohol on six or more days in the past 12 months were defined as having dependence if they met three or more of the following seven dependence criteria:

1. Spent a lot of time engaging in activities related to alcohol use
2. Used alcohol in greater quantities or for a longer time than intended
3. Developed tolerance
4. Made unsuccessful attempts to cut down on use
5. Continued use despite physical health or emotional problems associated with alcohol use
6. Reduced or eliminated participation in other activities because of alcohol use
7. Experienced withdrawal symptoms when cutting back or stopping use

Respondents who used alcohol on six or more days in the past 12 months and did not meet criteria for alcohol dependence were defined as having abuse if they reported one or more of the following:

1. Problems at work, home, and school because of alcohol use
2. Regularly using alcohol and then doing something physically dangerous
3. Repeated trouble with the law because of alcohol use
4. Continued use of alcohol despite problems with family or friends

Marijuana and illicit drug use disorder. This section presents overall estimates for illicit drug use disorder and then provides SUD estimates for selected specific illicit drugs. Illicit drug use disorder is defined as meeting DSM-IV criteria for either dependence or abuse for one or more of the following illicit drugs: marijuana, cocaine, hallucinogens, heroin, inhalants, methamphetamine, or prescription psychotherapeutic drugs that were misused (i.e., pain relievers, tranquilizers, stimulants, and sedatives). There are seven possible dependence criteria for specific illicit drugs:

1. Spent a lot of time engaging in activities related to use of the drug
2. Used the drug in greater quantities or for a longer time than intended
3. Developed tolerance to the drug
4. Made unsuccessful attempts to cut down on use of the drug
5. Continued to use the drug despite physical health or emotional problems associated with use
6. Reduced or eliminated participation in other activities because of use of the drug
7. Experienced withdrawal symptoms when respondents cut back or stopped using the drug

For most illicit drugs, dependence is defined as meeting three or more of these seven criteria. However, experiencing withdrawal symptoms is not included as a criterion for some illicit drugs based on DSM-IV criteria. For these substances, dependence is defined as meeting three or more of the first six criteria.

Respondents who used (or misused) a specific illicit drug in the past 12 months and did not meet the dependence criteria for that drug were defined as having abuse for that drug if they reported one or more of the following:

1. Problems at work, home, and school because of use of the drug
2. Regularly using the drug and then doing something physically dangerous
3. Repeated trouble with the law because of use of the drug
4. Continued use of the drug despite problems with family or friends

Marijuana use disorder. Marijuana use disorder occurs when someone experiences clinically significant impairment caused by the recurrent use of marijuana, including health problems, persistent or increasing use, and failure to meet major responsibilities at work, school, or home. NSDUH respondents who used marijuana on six or more days in the past 12 months were categorized as having a marijuana use disorder if they met the DSM-IV criteria for either dependence or abuse for marijuana. Dependence and abuse criteria for illicit drugs (including marijuana) were described previously.

Pain reliever use disorder. Pain reliever use disorder occurs when someone experiences clinically significant impairment caused by the recurrent use of pain relievers, including health problems, physical withdrawal, persistent or increasing use, and failure to meet major responsibilities at work, school, or home. NSDUH respondents who misused pain relievers in the past 12 months were categorized as having a pain reliever use disorder if they met the DSM-IV criteria for either dependence or abuse for

pain relievers. Dependence and abuse criteria for illicit drugs (including misused pain relievers) were described previously.

Tranquilizer use disorder. Tranquilizer use disorder occurs when someone experiences clinically significant impairment caused by the recurrent use of tranquilizers, including health problems, persistent or increasing use, and failure to meet major responsibilities at work, school, or home. NSDUH respondents who misused tranquilizers in the past 12 months were categorized as having a tranquilizer use disorder if they met the DSM-IV criteria for either dependence or abuse for tranquilizers. Dependence and abuse criteria for illicit drugs (including misused tranquilizers) were described previously.

Stimulant use disorder. Stimulant use disorder occurs when someone experiences clinically significant impairment caused by the recurrent use of prescription stimulants, including health problems, persistent or increasing use, and failure to meet major responsibilities at work, school, or home. NSDUH respondents who misused stimulants in the past 12 months were categorized as having a stimulant use disorder if they met the DSM-IV criteria for either dependence or abuse for stimulants. Dependence and abuse criteria for illicit drugs (including misused stimulants) were described previously. Respondents who met criteria for methamphetamine use disorder were not classified as having a stimulant use disorder unless they also met the criteria for stimulant use disorder based on their misuse of prescription stimulants.

Cocaine use disorder. Cocaine use disorder occurs when someone experiences clinically significant impairment caused by the recurrent use of cocaine, including health problems, physical withdrawal, persistent or increasing use, and failure to meet major responsibilities at work, school, or home. NSDUH respondents who used cocaine or crack in the past 12 months were categorized as having a cocaine use disorder if they met the DSM-IV criteria for either dependence or abuse for cocaine. Dependence and abuse criteria for illicit drugs (including cocaine) were described previously.

Heroin use disorder. Heroin use disorder occurs when someone experiences clinically significant impairment caused by the recurrent use of heroin, including health problems, physical withdrawal, persistent or increasing use, and failure to meet major responsibilities at work, school, or home. NSDUH respondents who used heroin in the past 12 months were categorized as having a heroin use disorder if they met the DSM-IV criteria for either dependence or abuse for heroin. Dependence and abuse criteria for illicit drugs (including heroin) were described previously.

Methamphetamine use disorder. Respondents were asked questions about SUD symptoms that they attributed specifically to their use of methamphetamine. Methamphetamine use disorder does not

include stimulant use disorder based on the misuse of prescription stimulants because, starting in 2015, these concepts were measured and reported separately.

Methamphetamine use disorder occurs when someone experiences clinically significant impairment caused by the recurrent use of methamphetamine, including health problems, physical withdrawal, persistent or increasing use, and failure to meet major responsibilities at work, school, or home. NSDUH respondents who used methamphetamine in the past 12 months were categorized as having a methamphetamine use disorder if they met the DSM-IV criteria for either dependence or abuse for methamphetamine. Dependence and abuse criteria for illicit drugs (including methamphetamine) were described previously.

Opioid use disorder. Misuse of opioids include two categories of drugs: the use of heroin and the misuse of prescription pain relievers. NSDUH collects dependence and abuse information for these two categories of drugs. A respondent was classified as having an opioid use disorder if he or she met DSM-IV criteria for heroin use disorder or pain reliever use disorder, as described previously.

Estimation

We estimated unadjusted and regression-adjusted means using STATA 15. All estimates and significance tests account for the complex design of the survey and follow Substance Abuse and Mental Health Services Administration guidelines for NSDUH estimation (Center for Behavioral Health Statistics and Quality 2018).⁵ Differences were calculated between each population group and all others with statistical significance set at $p\text{-value} \leq 0.05$. The regression model controlled for health and sociodemographic characteristics associated with SUD screening and/or treatment in the literature. Regression-adjusted rates of getting elements of screening were adjusted for differences by type of SUD, age group, sex, marital status, income-to-poverty category, educational level, employment category, number of chronic conditions, any mental illness status, number of emergency department visits, number of outpatient visits, number of nights in an inpatient hospital, and health insurance category. Regression-adjusted treatment rates used the same adjustors, except for the variables for medical visits because those relate directly to treatment (i.e., treatment involves inpatient and outpatient medical visits).

Notes

¹ Those who reported multiple races are not Hispanic.

² Defined as hypertension, heart disease, diabetes mellitus, cancer, asthma, chronic obstructive pulmonary disease, HIV/AIDS, hepatitis B or C, cirrhosis, and kidney disease.

³ Mental illnesses were defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental disorder or SUD, as assessed by the Mental Health Surveillance Study Structured Clinical Interview for the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition. NSDUH mental illness estimates are based on a predictive model, and serious mental illness is defined as that which results in serious functional impairment that substantially interferes with or limits one or more major life activities (Center for Behavioral Health Statistics and Quality, 2016, 2017, 2018).

⁴ For example, the American Congress of Obstetricians and Gynecologists notes that, “every leading medical and public health organization that has addressed this issue has concluded that the problem of drug and alcohol use during pregnancy is a health concern best addressed through education, prevention, and community-based treatment, not through punitive drug laws or criminal prosecution” “Toolkit on State Legislation: Pregnant Women and Prescription Drug Abuse, Dependence and Addiction,” American Congress of Obstetricians and Gynecologists, accessed July 10, 2019, <https://www.acog.org/-/media/Departments/Government-Relations-and-Outreach/NASToolkit.pdf>.

⁵ The analysis was exempted by the Urban Institute’s Institutional Review Board because we used a public use NSDUH data file with anonymized data.

References

- Acevedo, Andrea, Lee Panas, Deborah Garnick, Dolores Acevedo-Garcia, Jennifer Miles, Grant Ritter, et al. 2018. "Disparities in the Treatment of Substance Use Disorders: Does Where You Live Matter?" *The Journal of Behavioral Health Services & Research* 45 (4): 533–49.
- Anton, Raymond F., Stephanie S. O'Malley, Domenic A. Ciraulo, Ron A. Cisler, David Couper, Dennis M. Donovan, et al. 2006. "Combined Pharmacotherapies and Behavioral Interventions for Alcohol Dependence: The COMBINE Study: A Randomized Controlled Trial." *Journal of the American Medical Association* 295 (17): 2003–17.
- Arndt, Stephan, Laura Acion, and Kristin White. 2013. "How the States Stack Up: Disparities in Substance Abuse Outpatient Treatment Completion Rates for Minorities." *Drug and Alcohol Dependence* 132 (3): 547–54.
- ASAM (American Society of Addiction Medicine). 2013. *Advancing Access to Addiction Medications: Implications for Opioid Addiction Treatment*. Rockville, MD: American Society of Addiction Medicine.
- Bailey, J. Elise, Elizabeth Campagna, and Richard C. Dart. 2009. "The Underrecognized Toll of Prescription Opioid Abuse on Young Children." *Annals of Emergency Medicine* 53 (4): 419–24.
- Bernstein, Edward, Deric Topp, Emily Shaw, Carol Girard, Karen Pressman, Ebonie Woolcock, et al. 2009. "A Preliminary Report of Knowledge Translation: Lessons from Taking Screening and Brief Intervention Techniques from the Research Setting into Regional Systems of Care." *Academic Emergency Medicine* 16 (11): 1225–33.
- Biederman, Joseph, Stephen V. Faraone, Michael C. Monuteaux, and Jennifer A. Feighner. 2000. "Patterns of Alcohol and Drug Use in Adolescents Can Be Predicted by Parental Substance Use Disorders." *Pediatrics* 106 (4): 792–7.
- Bouchery, Ellen, and Judith Dey. 2018. "Substance Use Disorder Workforce." Washington, DC: US Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation.
- Bradley, Katherine A., Emily C. Williams, Carol E. Achtmeyer, Bryan Volpp, Bonny J. Collins, and Daniel R. Kivlahan. 2006. "Implementation of Evidence-Based Alcohol Screening in the Veterans Health Administration." *American Journal of Managed Care* 12 (10): 597–606.
- Caetano, Raul, Catherine L. Clark, and Tammy Tam. 1998. "Alcohol Consumption among Racial/Ethnic Minorities." *Alcohol Health & Research World* 22 (4): 233–41.
- Center for Behavioral Health Statistics and Quality. 2016. *2015 National Survey on Drug Use and Health: Methodological Summary and Definitions*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- . 2017. *2016 National Survey of Drug Use and Health: Methodological Summary and Definitions*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- . 2018. *2017 National Survey on Drug Use and Health: Methodological Summary and Definitions*. Rockville, MD: Substance Use and Mental Health Services Administration.
- Centers for Disease Control and Prevention. 2014. *Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use: A Step-by-Step Guide for Primary Care Practices*. Atlanta: Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities.
- . 2018. *Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use: A Step-by-Step Guide for Tribal Communities*. Atlanta: Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities.
- Cummings, Janet R., Hefei Wen, Michelle Ko, and Benjamin G. Druss. 2014. "Race/Ethnicity and Geographic Access to Medicaid Substance Use Disorder Treatment Facilities in the United States." *JAMA Psychiatry* 71 (2): 190–6.

- Dallas, Ruthie M., Kathryn Icenhower, Karol Kaltenbach, Diana Kramer, Thomas McMahon, Iliana Ojeda-Rivera, et al. 2017. *Perspectives on Family-Centered Care for Pregnant and Postpartum Women: Broadening the Scope of Addiction Treatment and Recovery*. Kansas City, MO: ATTC Center of Excellence on Behavioral Health for Pregnant and Postpartum Women and Their Families.
- Dube, Shanta R., Vincent J. Felitti, Maxia Dong, Daniel P. Chapman, Wayne H. Giles, and Robert F. Anda. 2003. "Childhood Abuse, Neglect, and Household Dysfunction and the Risk of Illicit Drug Use: The Adverse Childhood Experiences Study." *Pediatrics* 111 (3).
- Evans, Elizabeth, Jennifer Pierce, Libo Li, Richard Rawson, and Yih-Ing Hser. 2012. "More Alike than Different: Health Needs, Services Utilization, and Outcomes of Asian American and Pacific Islander (AAPI) Populations Treated for Substance Use Disorders." *Journal of Ethnicity in Substance Abuse* 11(4): 318–38.
- Guerrero, Erick G., Bryan R. Garner, Benjamin Cook, Yinfei Kong, William A. Vega, and Lillian Gelberg. 2017. "Identifying and Reducing Disparities in Successful Addiction Treatment Completion: Testing the Role of Medicaid Payment Acceptance." *Substance Abuse Treatment, Prevention, and Policy* 12 (1): 1–10.
- Guerrero, Erick G., Jeanne C. Marsh, Lei Duan, Christine Oh, Brian Perron, and Benedict Lee. 2013. "Disparities in Completion of Substance Abuse Treatment between and within Racial and Ethnic Groups." *Health Services Research* 48 (4): 1450–67.
- Holland, Cynthia L., Janice L. Pringle, and Victor Barbetti. 2009. "Identification of Physician Barriers to the Application of Screening and Brief Intervention for Problem Alcohol and Drug Use." *Alcoholism Treatment Quarterly* 27 (2): 174–83.
- Humes, Karen R., Nicholas A. Jones, and Roberto R. Ramirez. 2011. "Overview of Race and Hispanic Origin: 2010." Suitland, MD: US Census Bureau.
- Institute of Medicine. 2014. "New Directions in Child Abuse and Neglect Research." Washington, DC: National Academies of Sciences, Engineering, and Medicine.
- Jin, Jill. 2018. "Screening and Counseling to Reduce Unhealthy Alcohol Use." *Journal of the American Medical Association* 320 (18): 1948.
- Jones, Christopher M., Melinda Campopiano, Grant Baldwin, and Elinore McCance-Katz. 2015. "National and State Treatment Need and Capacity for Opioid Agonist Medication-Assisted Treatment." *American Journal of Public Health* 105 (8): e55–e63.
- Kranzler, Henry R., and Michael Soyka. 2018. "Diagnosis and Pharmacotherapy of Alcohol Use Disorder: A Review." *Journal of the American Medical Association* 320 (8): 815–24.
- Lapham, Gwen T., Carol E. Achtmeyer, Emily C. Williams, Eric J. Hawkins, Daniel R. Kivlahan, and Katherine A. Bradley. 2012. "Increased Documented Brief Alcohol Interventions with a Performance Measure and Electronic Decision Support." *Medical Care* 50 (2): 179–87.
- McKnight-Eily, Lela R., S. Jane Henley, Patricia P. Green, Erika C. Odom, and Daniel W. Hungerford. 2017. "Alcohol Screening and Brief Intervention: A Potential Role in Cancer Prevention for Young Adults." *American Journal of Preventive Medicine* 53 (3): S55–S62.
- McKnight-Eily, Lela R., Catherine A. Okoro, Roberto Mejia, Clark H. Denny, John Higgins-Biddle, Dan Hungerford, et al. 2017. "Screening for Excessive Alcohol Use and Brief Counseling of Adults — 17 States and the District of Columbia, 2014." *Morbidity and Mortality Weekly Report* 66 (12): 313–9.
- Mennis, Jeremy, and Gerald J. Stahler. 2016. "Racial and Ethnic Disparities in Outpatient Substance Use Disorder Treatment Episode Completion for Different Substances." *Journal of Substance Abuse Treatment* 63: 25–33.
- Muench, John, Kelly Jarvis, Denna Vandersloot, Meg Hayes, Whitney Nash, Joseph Hardman, et al. 2015. "Perceptions of Clinical Team Members Toward Implementation of SBIRT Processes." *Alcoholism Treatment Quarterly* 33(2): 143–60.

- Polen, Michael R., Evelyn P. Whitlock, Jennifer P. Wisdom, Peggy Nygren, and Christina Bougatsos. 2008. "Screening in Primary Care Settings for Illicit Drug Use: Staged Systematic Review for the United States Preventive Services Task Force." *Evidence Synthesis* 58 (1).
- Ramchand, Rajeev, Rosalie Liccardo Pacula, and Martin Y. Iguchi. 2006. "Racial Differences in Marijuana-Users' Risk of Arrest in the United States." *Drug and Alcohol Dependence* 84 (3): 264–72.
- Sahker, Ethan, Chi W. Yeung, Yunkyoung L. Garrison, Soeun Park, and Stephan Arndt. 2017. "Asian American and Pacific Islander Substance Use Treatment Admission Trends." *Drug and Alcohol Dependence* 171 (February): 1–8.
- Saloner, Brendan, Nicholas Carson, and Benjamin Lê Cook. 2014. "Explaining Racial/Ethnic Differences in Adolescent Substance Abuse Treatment Completion in the United States: A Decomposition Analysis." *Journal of Adolescent Health* 54 (6): 646–53.
- Saloner, Brendan, and Benjamin Lê Cook. 2017. "Blacks and Hispanics Are Less Likely Than Whites to Complete Addiction Treatment, Largely Due to Socioeconomic Factors." *Health Affairs* 32 (1): 135–45.
- Schmidt, Laura A., Yu Ye, Thomas K. Greenfield, and Jason Bond. 2007. "Ethnic Disparities in Clinical Severity and Services for Alcohol Problems: Results from the National Alcohol Survey." *Alcoholism: Clinical and Experimental Research* 31 (1): 48–56.
- Seay, Kristen D., and Patricia L. Kohl. 2013. "Caregiver Substance Abuse and Children's Exposure to Violence in a Nationally Representative Child Welfare Sample." *Journal of Social Work Practice in the Addictions* 13 (1): 70–90.
- Sharma, Anjalee, Sharon M. Kelly, Shannon Gwin Mitchell, Jan Gryczynski, Kevin E. O'Grady, and Robert P. Schwartz. 2017. "Update on Barriers to Pharmacotherapy for Opioid Use Disorders." *Current Psychiatry Reports* 19 (6): 35.
- Solberg, Leif I., Michael V. Maciosek, and Nichol M. Edwards. 2008. "Primary Care Intervention to Reduce Alcohol Misuse." *American Journal of Preventive Medicine* 34 (2): 143–52.
- Stahler, Greald J., and Jeremy Mennis. 2018. "Treatment Outcome Disparities for Opioid Users: Are There Racial and Ethnic Differences in Treatment Completion across Large US Metropolitan Areas?" *Drug and Alcohol Dependence* 190 (September): 170–8.
- US Preventive Services Task Force. 2018. "Screening and Behavioral Counseling Interventions to Reduce Unhealthy Alcohol Use in Adolescents and Adults: US Preventive Services Task Force Recommendation Statement." *Journal of the American Medical Association* 320 (18): 1899–1909.
- US Surgeon General. 2016. *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health*. Washington, DC: US Department of Health and Human Services.
- Wilens, Thomas E., Joseph Biederman, Elizabeth Bredin, Amy L. Hahey, Ana Abrantes, Deborah Neft, et al. 2002. "A Family Study of the High-Risk Children of Opioid- and Alcohol-Dependent Parents." *The American Journal on Addictions* 11 (1): 41–51.
- Witbrodt, Jane, Nina Mulia, Sarah E. Zemore, and William C. Kerr. 2014. "Racial/Ethnic Disparities in Alcohol-related Problems: Differences by Gender and Level of Heavy Drinking." *Alcoholism, Clinical and Experimental Research* 38 (6): 1662–70.
- Yarborough, Bobbi Jo, Felicia Chi, Carla Green, Agatha Hinman, Jennifer Mertens, Arne Beck, et al. 2018. "Patient and System Characteristics Associated with Performance on the HEDIS Measures of Alcohol and Other Drug Treatment Initiation and Engagement." *Journal of Addiction Medicine* 12 (4): 278–86.

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