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Understanding the association between frequent emergency department use and jail incarceration: A cross-sectional analysis

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Abstract

Background: Frequent emergency department (ED) use and incarceration can be driven by underlying structural factors and social needs. If frequent ED users are at increased risk for incarceration, ED-based interventions could be developed to mitigate this risk. The objective of this study was to determine whether frequent ED use is associated with incarceration.

Methods: We conducted a retrospective cross-sectional study of 46,752 individuals in San Francisco Department of Public Health's interagency, integrated Coordinated Care Management System (CCMS) during fiscal year 2018–2019. The primary exposure was frequency of ED visits, and the primary outcome was presence of any county jail incarceration during the study period.

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AUTHOR CONTRIBUTIONS

Vidya Eswaran, Ralph C. Wang, Maria C. Raven, Caroline Cawley, and Hemal K. Kanzaria conceived and designed the study. Vidya Eswaran, Ralph C. Wang, Maria C. Raven, Caroline Cawley, and Hemal K. Kanzaria supervised data collection and provided statistical advice on study design. Vidya Eswaran, Ralph C. Wang, Maria C. Raven, Caroline Cawley, Jacob M. Izenberg, and Hemal K. Kanzaria analyzed the data. Vidya Eswaran drafted the manuscript, and all authors contributed substantially to its revision. Hemal K. Kanzaria takes responsibility for the paper as a whole.

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CONFLICT OF INTEREST

The authors have no potential conflicts to disclose.

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

We performed descriptive and multivariable analysis to determine the association between the frequency of ED use and jail encounters.

Results: The percentage of those with at least one episode of incarceration during the study period increased with increasing ED visit frequency. Unadjusted odds of incarceration increased with ED use frequency: odds ratio (OR) = 2.14 (95% confidence interval [CI] = 1.94–2.35) for infrequent use, OR = 4.98 (95% CI = 4.43–5.60) for those with frequent ED use, and OR = 12.33 (95% CI = 9.59–15.86) for those with super-frequent ED use. After adjustment for observable confounders, the odds of incarceration for those with super-frequent ED use remained elevated at 2.57 (95% CI = 1.94–3.41). Of those with super-frequent ED use and at least one jail encounter, 18% were seen in an ED within 30 days after release from jail and 25% were seen in an ED within 30 days prior to arrest.

Conclusions: Frequent ED use is independently associated with incarceration. The ED may be a site for intervention to prevent incarceration among frequent ED users by addressing unmet social needs.

INTRODUCTION

The number of individuals incarcerated in the United States has sky-rocketed since 1970. Despite being down from a peak in 2008, there are currently 2.3 million people within the criminal justice system, and approximately 30%, most of whom have not been convicted of a crime, are incarcerated in local jails.¹ No other country incarcerates as many of its citizens in prisons as does the United States.² In addition to detrimental social, economic, and interpersonal impacts,³ incarceration is associated with poor health outcomes including higher rates of hypertension, asthma, cancer, arthritis, infectious diseases⁴ and death.^{3,5} Incarceration within the American criminal justice system can take many forms, including detention in state or federal prisons, local jails, juvenile centers, territorial prisons, immigration detention and other settings.¹ In contrast to prisons, which are state or federal facilities where individuals found guilty of felony offenses serve sentences exceeding a year, jails are generally county or municipal facilities that house individuals who are pending a trial, awaiting sentencing, awaiting transfer, or serving a limited sentence (typically misdemeanor cases which result in jail time of less than a year).⁶ Prisons are often centered in medical research⁷ and policy discussions,⁸ but it is important to consider those incarcerated in jails separately. About 5 million individuals are arrested and jailed annually, and 27% are arrested and booked more than once.⁹ Given the high turnover of individuals within jails, health issues affecting jail populations are likely to impact the broader public health.⁸ Those with more frequent jail arrests are more likely to have serious or moderate mental illness, serious psychological distress, substance use disorders, and lack health insurance and use the emergency department (ED) more frequently than those with no, or only one, arrest in the year.⁹ It is known that ED use is common after release from prison,¹⁰⁻¹³ with one study from Rhode Island showing¹¹ that among a cohort of 1434 released prisoners, 32% had three or more visits within 1 year of prison release and 25% were seen in EDs after 1 month of release.¹³ However, there are limited data on ED use prior to incarceration, especially jail incarceration.

Individuals with frequent ED use are variably defined, often as more than four ED visits per year¹⁴ and are highly studied due to their medical complexity and significant use of the health care system. Those with frequent ED use are known to have higher mortality than the general population,¹⁵⁻¹⁷ as are those who have a history of incarceration.⁵ Patients with mental illness are more likely to both use EDs frequently¹⁸ and have interactions with the criminal justice system.¹⁹ Housing insecurity is common among both those experiencing incarceration²⁰ and those with frequent ED use.¹⁴ A study comparing medical, behavioral health and social service use among Medicaid beneficiaries in San Francisco County during 2013–2015, found that as ED visit frequency increased, so did the risk of a jail incarceration.¹⁴ However, further characterization of such individuals using more recent data has not been conducted.

In 2019, the Health Commission of San Francisco recognized incarceration as a public health issue, citing that adverse childhood experiences and social inequities (including institutional racism) lead to disparate rates of justice involvement among people of color. They also noted that criminalization of homelessness, poverty, substance use disorders and mental illness lead to incarceration, and that jails and prisons cause trauma to incarcerated individuals, their families, and their communities.²¹ Recognizing that incarceration is an adverse health outcome, it is important to specifically understand the relationship between individuals' experiences within the health care and carceral systems to direct prevention efforts.

While it is unlikely that ED use leads to incarceration, it is possible that ED visits may be a symptom of increasing social instability, whether due to financial and housing insecurity, lack of outpatient behavioral health or addiction treatment or other factors (Figure S1). Akin to studies showing excess mortality among those with high-frequency ED use, ED visits are not likely causal to death but rather are a marker of patients' underlying medical complexity and social vulnerability.¹⁵ If patients are seen in EDs prior to incarceration, the relationship between ED use and jail incarceration will be important to understand to inform ED-based interventions to address this population's needs, prevent future incarceration, and reduce excess mortality.

We hypothesized that for a subset of individuals with high-frequency ED use, there is an association between frequent ED use and incarceration. We aimed to characterize this population and identify remediable predictors of incarceration.

METHODS

Study design and setting

This was a retrospective cross-sectional study of patients in the San Francisco Department of Public Health (SFDPH) Coordinated Care Management System (CCMS) who used urgent or emergent medical, behavioral health, or social services in San Francisco between July 1, 2018, and June 30, 2019. We obtained approval for research on partially deidentified human subjects through our institution's institutional review board and reporting in this manuscript adheres to STROBE guidelines.²²

CCMS is an integrated data system linking patient-level medical, behavioral health, and social service information from across the county. A detailed description of CCMS can be found elsewhere.^{14,23} Briefly, CCMS contains information on the use of urgent and emergency medical and psychiatric services; shelter/housing services; and sobering centers as well as data on public entitlements, jail health service encounters, diagnostic codes for comorbidities associated with encounters, and demographic data. A record is created for any individual who (a) is noted as homeless in any San Francisco County public health or housing system; (b) used county behavioral health, homelessness or jail health services; or (c) used county urgent or emergent medical, mental health or substance use services. For members of the San Francisco Health Plan (SFHP), the county-managed Medicaid plan, all medical services (whether at SFDPH sites or not) are included. For those not members of the SFHP, only those encounters made at SFDPH sites will be included.

Selection of participants

Our target population included all individuals who are at risk of incarceration. Our target population included all individuals who are at risk of incarceration. Our accessible population included those individuals captured in the CCMS data set. We selected adults (≥ 18 years) who were included in CCMS (used EDs, inpatient mental health or medical hospitalization, psychiatric emergency services [PES], psychiatric or medical urgent care services, mental health diversion units, sobering centers, social or medical detoxification centers, or other crisis services in the county) during the study period. While rare, we excluded from our study individuals with over 200 visits to the ED and/or PES during the year, because they represented outliers in our population.²⁴

Measures

In San Francisco County jail, every incarcerated individual is triaged by jail health services upon arrival. These data are included in CCMS (Figure S2). We used these data to identify episodes of incarceration. Our primary outcome was whether an individual had at least one county jail encounter.

The primary exposure of interest was frequency of ED visits. We chose these as our principal exposure and outcome measures to identify whether high-frequency ED use may be a symptom of social instability leading to increased risk for incarceration. In addition, we chose to focus on ED visits (as opposed to other health system visits) because we wanted to identify those patients at increased risk of incarceration as possible targets for ED-based intervention. We captured ED visits at the San Francisco County hospital and at any other EDs for beneficiaries of the SFHP, which provides Medicaid coverage to over 86% of Medi-Cal Managed Care beneficiaries in San Francisco County.²⁴

We categorized the number of ED visits in a year based on existing definitions¹⁴: individuals with zero ED visits within the fiscal year were defined as no ED use, those with one to three ED visits were defined as infrequent ED use, those with four to 17 ED visits were defined as frequent ED use and those with 18 or more visits in the year were defined as super-frequent ED use.

Covariates included demographic information (age, gender, race), insurance type, housing status, and any coexisting substance use or psychosis-related diagnoses found in CCMS and grouped using the Elixhauser Comorbidity Index,²⁵ which was designed to capture predictors of premature mortality. Because insurance type served as a proxy for socioeconomic status, we characterized those with dual Medicaid and Medicare as Medicaid. Substance use diagnoses encompassed diagnoses related to the use of opiates, cannabis, cocaine, sedative/hypnotics, stimulants, hallucinogens, inhalants, alcohol, drug abuse counseling, withdrawal, other psychoactive substances, and other drug abuse. Psychosis diagnoses include those related to schizophrenia (F20.x), delusional disorders (F22.x), brief psychotic disorders (F23.x), and unspecified psychosis (F29.x), among others.²⁵

We chose to include race as a predictor in our model not to imply any biological explanation, but rather to serve as a proxy for experiences with interpersonal, structural, and systemic racism and in acknowledgment of policies that have led to mass incarceration of Black people in the United States.²⁶

Data analysis

We performed descriptive analysis and tabulation of primary outcome, demographic characteristics, number of ED and PES visits, documented Elixhauser and psychiatric and substance use disorder within each ED frequency group for the study period as well as a bivariate analysis of ED visit frequency and presence of any jail visit. We performed bivariate and multivariate logistic regression to determine odds of a jail encounter by ED visit frequency, including observable confounders with known impacts on risk of incarceration. We included race, age, homelessness, insurance type (as a proxy for socioeconomic status), and psychosis and substance use disorders diagnoses, to understand factors that impacted risk of incarceration and likelihood of using the ED frequently.

Finally, we assessed the temporality of ED visits and jail encounters to determine what percentage of individuals were seen in an ED within 30 days of release from jail and conversely, the percentage who were in county jail custody within 30 days of an ED visit and assessed for differences by ED visit frequency using Pearson's chi-square tests. Encounters in which the ED date and jail date were the same were categorized as not occurring within 30 days in either direction, so as to not include encounters for medical clearance. ED encounters occurring while the patient was in custody were not considered. The data used for temporal analysis is encounter specific. If an individual has an ED encounter within 30 days of a jail exit as well as a jail encounter within 30 days of an ED visit, the individual would be counted in both categories. We used Stata statistical software version 16 (StataCorp) for all statistical analysis.

RESULTS

Characteristics of study subjects

We identified 46,756 individuals, of whom four were excluded for having over 200 ED and PES visits combined during the 2018–2019 fiscal year for a total of 46,752 in the cohort for

analysis. The median (IQR) age was 45 (32–59) years, and there was approximately 20% representation each of White, African American/Black, and Latinx individuals. There were 9797 (21%) individuals within the cohort who were characterized as unhoused during the study period and 16,920 (36%) were noted to have a history of homelessness within the lifetime of the SF source data systems that feed into CCMS (over 20 years of historical data).

Our cohort included 14,170 (30%) individuals who had no ED visits, 28,405 (61%) had infrequent ED use, 3874 (8%) had frequent ED use, and 303 (0.6%) had super-frequent ED use. Compared to individuals with infrequent ED use or no ED use, those with super-frequent and frequent ED use were more likely to be male, Black or African American, English-speaking, and Medicaid beneficiaries ($p < 0.001$). Those with super-frequent and frequent ED use were also more likely to have a documented psychosis (56% and 35% vs. 22% and 22%) or substance use related diagnosis (89% and 61% vs. 23% and 17%) than infrequent and no ED users, respectively (Table 1).

Main results

A total of 3713 (8%) individuals had at least one jail health encounter during the study period. The percentage of individuals who had any jail encounter increased from 4% in individuals without ED use, to 8% in those infrequent ED use, to 17% in those with frequent ED use, and to 34% of those with super-frequent ED use ($p < 0.001$). Among those who had at least one jail encounter (3713 individuals) during the study period, 2103 (57%) had only one jail encounter, 766 (21%) had two jail encounters, 409 (11%) had three jail encounters, and the remainder had greater than three. The maximum number of jail stays was 18 in one individual. Among those with no ED use and at least one jail encounter, the mean (\pm SD) number of jail stays in the year was 1.6 (\pm 1.3), 1.9 (\pm 1.4) for those with infrequent use, 2.1 (\pm 1.5) for those with frequent ED use, and 2.3 (\pm 1.6) for those with super-frequent ED use.

Those with super-frequent ED use were more likely to experience homelessness during the fiscal year (85%) or have a substance use (89%) or psychosis (56%) diagnosis than those with frequent (49%, 61%, 35%), infrequent (19%, 23%, 22%), and no ED use (15%, 17%, 22%; $p < 0.01$). Compared to those never incarcerated, those who had at least one jail encounter in the fiscal year were more likely to experience homelessness (60% vs. 18%, $p < 0.001$), have a diagnosis of psychosis documented (51% vs. 43%, $p < 0.001$), or have a diagnoses of substance use disorder documented (57% vs. 22%, $p < 0.001$; Figure 1). ED utilization also differed between those with and without any jail encounters. Of those with at least one jail encounter, 16% had no ED visits, 64% had infrequent ED visits, 18% had frequent ED visits and 3% had super-frequent ED visits compared to 32%, 61%, 7%, and 0.5%, respectively, among those with no jail encounters ($p < 0.001$).

Regression analysis

Figure 2 shows the results from unadjusted and adjusted logistic regression, where the independent variable was any jail encounter in the fiscal year. Age was centered around the mean age of 46.5 and scaled by 10 years. While those with super-frequent ED use had 12.3 times the odds of being incarcerated than those with no ED visits in our unadjusted analysis,

when other factors were incorporated, the OR dropped to 2.6. In our adjusted model, the variables associated with strongest odds of incarceration were homelessness, male gender, substance use diagnosis, and super-frequent ED use.

Temporal analysis

We assessed the temporal relationship between ED visits and jail encounters within the fiscal year (Table 2). Of patients with at least one jail encounter, 18% of those with super-frequent ED use were seen in the ED within 30 days of release from jail compared with 6% of those with infrequent ED use. Conversely, 18% and 25% of those with frequent and super-frequent ED use, respectively, had a jail encounter within 30 days of an ED visit compared 9% of those with infrequent ED use.

DISCUSSION

We conducted a retrospective, cross-sectional analysis to assess whether increased frequency of ED use was associated with incarceration. We found that the risk of jail incarceration increased with frequency of ED use. In unadjusted regression analysis, super-frequent ED users had 12 times the odds of being incarcerated compared to those with no ED visits. The odds dropped substantially (i.e., 2.6) when other risk factors were incorporated in our adjusted model, suggesting that influences such as homelessness, behavioral health conditions, racism, and gender may explain much of the relationship between ED use and jail incarceration. However, other unobservable confounders could still play an important role; for example, failure to link patients from the ED to stabilizing community medical and social services could result in higher risk of incarceration among super-frequent ED users. More than one in five of those with super-frequent ED use who experienced incarceration had at least one ED visit in the month immediately prior to jail incarceration, and similar numbers were seen in EDs in the month after release from jail. This does not suggest that high-frequency ED use causes incarceration but rather confirms that a revolving door exists between the ED and jails.

Our study points to the high incidence of incarceration among frequent ED users, many of whom experience homelessness, substance use, or psychiatric conditions. Given the known adverse effects of incarceration on an individual's health,⁵ we recommend that clinicians consider criminal justice involvement a part of patients' social context and a marker of the extent of overlapping risks they face, while being mindful of biases (implicit and explicit) and stigma that can negatively influence attitudes toward individuals who have experienced incarceration.²⁷ Others have advocated,²⁸ and we agree, that there exists a moral imperative to address the compounding impacts of structural and social factors on the health and well-being of the patients cared for in the ED. High-frequency ED use may in fact be a marker of instability and stress in one's social context, which increases the risk of future incarceration. More nuanced temporal analyses may help elucidate this further.

Prior studies have assessed the relationship between mental illness, substance use, homelessness,²⁹ and incarceration. Approximately 10%–20% of those in jail and 15%–25% of those in prison have a serious mental illness^{30–32} and over half of prison and jail inmates have a mental health condition.³³ Nearly 50% of those in jails have a cooccurring

mental health problem and substance use disorder, and 19% have substance use disorder alone.³³ Those experiencing homelessness also make up a disproportionate proportion of the U.S. jail population, approximately 15% compared to 0.2% of the total U.S. population,³⁴ and recent homelessness is 7.5–11.3 times more common in those jailed than the general U.S. population.⁷ Racial disparities in incarceration are also well-documented, with Black individuals more likely than others to be arrested,^{3,35} pointing to the effects of structural racism, both historic and ongoing. Similarly, high rates of homelessness and behavioral health conditions are seen among frequent ED users.^{13-15,18,36-40} In San Francisco, the Black population is disproportionately impacted by homelessness, making up only 6% of the overall population⁴¹ but 37% of the homeless population⁴² and between 33% and 41% of the monthly bookings at the San Francisco County Jail (T. Mera, personal email communication, San Francisco Jail Behavioral Health Service, April 20, 2021). Many persons experiencing incarceration attribute the lack of transportation, employment, housing, health care access, and financial resources as contributors to circumstances leading to their incarceration.⁴³ Importantly, mental illness, addiction, race, gender, and housing instability do not predict criminal tendencies but are risk factors for interactions with law enforcement and incarceration, which adversely impact health and can exacerbate existing health issues. Further investigation into the specific crimes for which those with high-frequency ED use are arrested is needed to inform possible ED-based interventions to prevent future incarceration. Based on the relationships between incarceration, substance use, and homelessness, it is possible that many of these charges are related to homelessness (such as panhandling, public urination, loitering, fare evasion, petty theft, vandalism, burglary) or substance use disorders (such as public intoxication, drug use, petty drug sales). Further studies could inform whether improved health and social services could benefit the patient and prevent adverse carceral system interactions.

It is important as physicians that we advocate for our patients and bring greater recognition to the harm that incarceration can pose to our already vulnerable patients. As physicians with a duty to improve the health of the communities we serve, it is helpful to understand that the criminalization of poverty, mental illness, and addiction serves an added blow to the health of a vulnerable population already faced with adverse health outcomes and that incarceration itself has a detrimental impact on one's health and that of the community. Emergency medicine providers have demonstrated their power in advocating at the individual, organizational, community, and policy levels⁴⁴ to address the underlying structural, and often racist, factors that lead to poverty, incarceration, medical and mental illness, addiction, and housing instability, and we should continue in these efforts.

Like other research, our study also shows high rates of homelessness, substance use, and psychosis diagnoses among frequent and super-frequent ED users. Many ED clinicians have incorporated caring for these issues as a part of an individual's visit.^{45,46} Based on our findings, we encourage ED clinicians to recognize that those with high-frequency ED use are at increased risk of incarceration, that incarceration is an event with serious adverse health outcomes, and that the history of, and risk for, future incarceration are other critical aspects of the patient's social history. EDs have demonstrated⁴⁶ the ability to provide low-barrier acute care and provision of resources that are otherwise difficult to for individuals

with behavioral health needs and those experiencing homelessness. Some of these same individuals may also be at risk of incarceration.

Our data confirm prior findings regarding high rates of ED visits immediately after release from jail.¹⁰ We add to this literature by also showing high rates of ED visits in the month prior to incarceration, which provides an empiric basis for the idea of a revolving door between the county-level carceral and health care systems and positions the ED as a place to implement interventions aimed to prevent incarceration and subsequently potentially decrease mortality. Rather than siloing medical and carceral systems, we can work to ensure that systems involve collaboration between community and jail health services to provide better care coordination for patients. The American Public Health Association has issued policy statements⁴⁷ emphasizing the role of medical, behavioral health, and social service interventions that invest in communities to prevent incarceration; divert patients from jails and prisons; and provide comprehensive reentry services for those leaving jails and prisons. Many of these diversion programs exist, with varying levels of effectiveness,^{48,49} and there is room for incorporating the ED in these established programs. Sharing information between behavioral health, medical health, and social services systems is crucially important,¹⁴ and keeping in mind real privacy concerns, we advocate that reentry services also be included in this list.

While further studies are needed, it is possible that interventions based within the ED to address housing insecurity, material needs,⁵⁰ and access to substance use and mental health services among frequent ED users may also reduce these patients' risk of future incarceration. Indeed, case management is one of the few interventions that has been shown to decrease ED use.⁵¹ Collaboration between health services and the criminal justice system do exist, for example, in the form of behavioral health courts and diversion programs that allow those facing criminal charges to obtain mental health treatment instead.⁵²⁻⁵⁵ The ED may in fact be an additional intercept point for intervention to prevent individuals from entering, or reentering, the criminal justice system.⁵⁶ Investigation into reasons for arrest among ED users is needed to guide future interventions. Understanding whether arrests are due to potentially modifiable factors, such as housing insecurity or poor access behavioral health services, could inform ED-based intervention development. Potential interventions may include electronic medical record triggers for automated social work consults, ED-based case management to improve connection to community-based medical and social services including housing, and provision of long-acting maintenance addiction and mental health medications.

LIMITATIONS

This study has several limitations. We use data from a single county, and the majority of the study population relies on a safety net health care system. Thus, our data may not be generalizable outside of San Francisco County or to non-safety net care systems. We lacked access to some information, including service use at non-SFDPH facilities by non-SFHP clients, utilization of financial assistance programs, and historical access of services while a minor, that could have been useful in understanding potential gaps in care for our study cohort. Because non-county ED visits and diagnoses could only be

counted for Medicaid beneficiaries, we may have undercounted the prevalence of ED visits and comorbidities among individuals not insured by the SFHP. Furthermore, our use of Elixhauser comorbidities was defined by encounters for these conditions within the same fiscal year, further raising the risk of undercounting. Increasing frequency of ED visits also creates more opportunities for the documentation of diagnoses, including those related to substance use and psychosis and demographic information such as race. Accordingly, the data of those with less frequent ED use may be undercounted. Our temporal analysis is limited due to the fact that our study period is truncated at either end of the fiscal year, and thus we may be missing ED visits or incarcerations that occurred in the 30 days before and after the fiscal year. Finally, our use of the administrative category of race as a proxy of racism is not perfect⁵⁷ because it may not represent self-reported race; homogenizes the experience of many with intersectional lived experiences; and may underestimate the prevalence of experiences with individual, institutional, and structural racism.⁵⁸

CONCLUSIONS

In summary, in the population studied, individuals with frequent ED use are more likely to experience incarceration than those who do not use the ED, and they are often seen in the month immediately preceding incarceration or following release. The ED is poised to identify individuals at risk for incarceration and to deploy interventions to address factors such as homelessness, addiction treatment, and mental health treatment. Our findings underscore the importance of cross-sector communication and care coordination to address underlying needs to interrupt the revolving door in and out of jails and to prevent the harms incarceration has on individuals' health and that of their families⁵⁹ and communities.⁶⁰

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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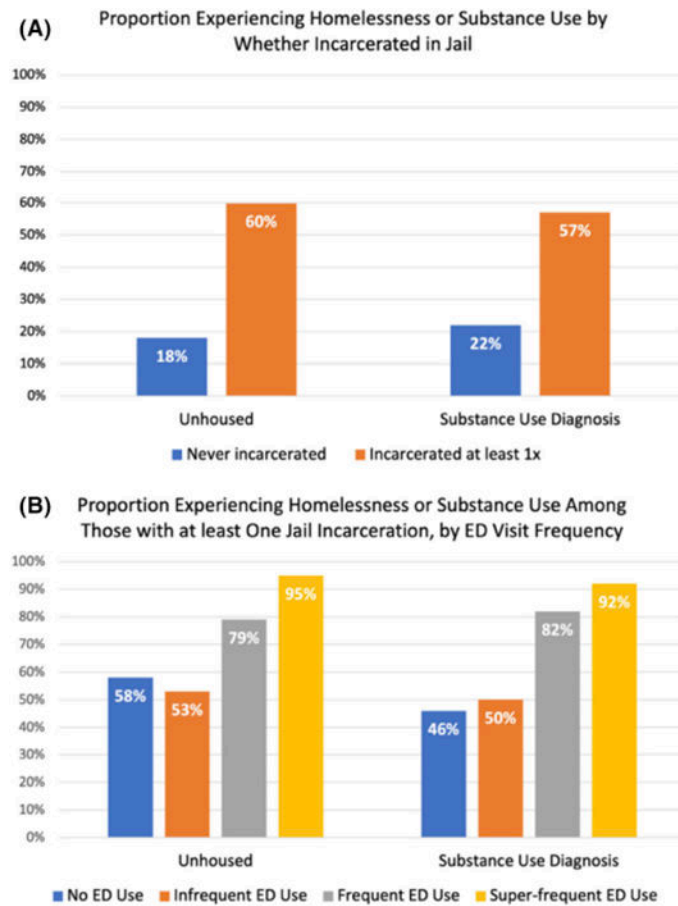


FIGURE 1. Homelessness and substance use diagnosis by history of incarceration during the fiscal year. Proportion of individuals who experienced homelessness and substance use diagnoses during the fiscal year, (A) by any incarceration during the fiscal year and (B) among those who had at least one episode of jail incarceration, by ED visit frequency

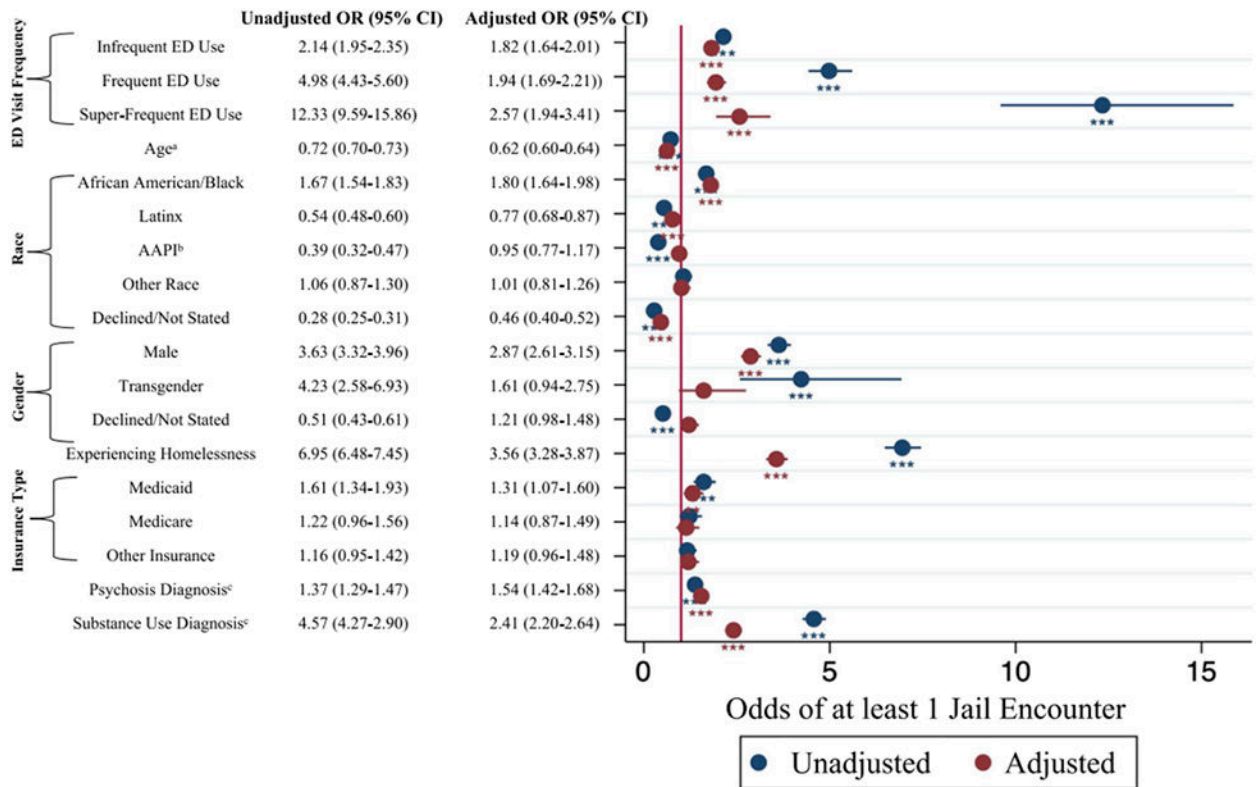


FIGURE 2. Reference categories: 2.41 (2.20–2.64); ED visit frequency = no ED visits; race = White; gender = female; insurance type = private. ^aCentered and scaled by 10 years; ^bAsian American/Pacific Islander (AAPI); ^cbased on Elixhauser Comorbidity Index. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Frequency of ED use in San Francisco, California, by selected demographic characteristics and social factors, fiscal years 2018–2019

TABLE 1

	Total N = 46,752	No ED visits, 0/year n = 14,170	Infrequent ED visits, 1–3/year n = 28,405	Frequent ED visits, 4–17/year n = 3874	Super-frequent ED visits, 18+/year n = 303	p-value
Age (years)	45 (32–59)	45 (32–60)	42 (32–59)	47 (34–58)	47 (37–57)	0.23
Gender						<0.001
Male	21,790 (47)	6101 (43)	13,211 (47)	2265 (58)	213 (70)	
Female	16,675 (36)	4849 (34)	10,463 (37)	1292 (33)	71 (23)	
Transgender	127 (0)	33 (0)	66 (0)	21 (1)	7 (2)	
Declined/not stated	8160 (17)	3187 (22)	4655 (16)	296 (8)	12 (4)	
Race						<0.001
White	9436 (20)	2816 (20)	5509 (19)	1017 (26)	94 (31)	
African American/Black	8715 (19)	1719 (12)	5646 (20)	1239 (32)	111 (37)	
Latinx	8717 (19)	2243 (16)	5786 (20)	641 (17)	47 (16)	
Asian American/Pacific Islander	2736 (6)	827 (6)	1781 (6)	124 (3)	4 (1)	
Other	1049 (2)	264 (2)	668 (2)	103 (3)	14 (5)	
Declined/not stated	16,099 (34)	6301 (44)	9015 (32)	750 (19)	33 (11)	
Flagged homeless during the fiscal year	9797 (21)	2131 (15)	5505 (19)	1904 (49)	257 (85)	<0.001
Ever flagged homeless	16,920 (36)	3709 (26)	10,226 (36)	2699 (70)	286 (94)	<0.001
Insurance type						<0.001
Private	2295 (5)	891 (6)	1262 (4)	135 (3)	7 (2)	
Medicaid	33,446 (72)	9476 (67)	20,689 (73)	3026 (78)	255 (84)	
Medicare	2154 (5)	738 (5)	1246 (4)	156 (4)	14 (5)	
Other	8852 (19)	3062 (22)	5206 (18)	557 (14)	27 (9)	
Missing	5 (0)	3 (0)	2 (0)	0 (0)	0 (0)	
Psychosis diagnosis ^a	20,422 (44)	3172 (22)	6209 (22)	1320 (35)	169 (56)	<0.001
Substance use diagnosis ^a	11,632 (25)	2378 (17)	6631 (23)	2352 (61)	271 (89)	<0.001
Any jail encounter in fiscal year	3713 (8)	576 (4)	2358 (8)	675 (17)	104 (34)	<0.001

Note: For continuous variables, data are reported as median (IQR). For categorical variables, data are reported as n (%).

^aBased on Elixhauser comorbidity for psychosis or substance use diagnosis.

TABLE 2

Percentage of those with at least one jail encounter and with an ED or jail encounter within 30 days of another

	Infrequent ED visits (n = 2,673)	Frequent ED visits (n = 801)	Super- frequent ED visits (n = 117)	p-value
Jail exit to ED in 30 days	167 (6.3)	110 (13.7)	21 (17.9)	<0.01
ED to jail entrance 30 days	251 (9.4)	140 (17.5)	29 (24.8)	<0.01

Note: Data are reported as *n* (%).

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