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Arrests Among High-Risk Youth Following Emergency Department Treatment for an Assault Injury

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Abstract

Introduction: Violence is a leading cause of morbidity and mortality for youth, with more than 600,000 emergency department visits annually for assault-related injuries. Risk for criminal justice involvement among this population is poorly understood. The objective of this study was to characterize arrests among high-risk assault-injured drug-using youth following emergency department treatment.

Methods: Youth (age 18–24 years) with past 6-month drug use who were seeking emergency department treatment for either an assault or for non-violence reasons were enrolled (December 2009–September 2011) in a 2-year longitudinal study. Arrests in the 24 months following the emergency department visit were analyzed in 2016–2017 using survival analysis of objective Law Enforcement Information Network data. Hazard ratios quantifying the association between risk factors for arrest were estimated using Cox regression.

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Results: In the longitudinal cohort, 511 youth seeking emergency department care (assault injury group=299, comparison group=212) were aged ≥18 years and were included for analysis. Youth in the assault injury group cohort had a 47% higher risk of arrest than the comparison group (38.1% vs 25.9%, RR=1.47, $p<0.05$). In unadjusted analyses, male sex, assault injury, binge drinking, drug use disorder, and community violence exposure were all associated with increased risk of arrest during the follow-up period. Cox regression identified that male sex (hazard ratio=2.57), drug use disorder diagnosis (hazard ratio=1.42), assault injury at baseline (hazard ratio=1.63), and community violence exposure (hazard ratio=1.35) increased risk for arrest.

Conclusions: Drug-using assault-injured youth have high rates of arrest. Emergency department and community interventions addressing substance use and violence involvement may aid in decreasing negative violence and criminal justice outcomes among high-risk youth.

INTRODUCTION

Youth violence is a significant public health problem.[1,2] Homicides are the third leading cause of death for U.S. youth (aged 14–24 years).[3] Assault-related injuries are responsible for 600,000 emergency department (ED) visits among youth annually.[3] In addition to negative health-related outcomes (e.g., substance use, post-traumatic stress disorder [PTSD], fatal injury),[4–6] youth violence has been associated with adverse social consequences, most notably criminal justice involvement.[7,8] Nearly 1.2 million youth were arrested in 2015, with 30% of arrests attributable to substance use, weapon, or violence-related offences.[9] Disparities are significant, with homicide, violent injury, arrest, and incarceration rates persistently higher for black youth than similarly aged white youth.[1,3,10,11] Economic costs are also substantial, with interpersonal violence costs approaching $37 billion annually.[12]

The effects of an arrest and subsequent incarceration on healthy adolescent development are considerable. Such youth face loss of peer and parental social support, as well as elevated rates of school dropout, substance use, repeat arrest, and adult incarceration.[13] Youth offenders have a 50% higher 5-year mortality than non-offenders, with rates increasing substantially as the extent of their involvement progresses from arrest to juvenile detention, incarceration, and transfer to adult court.14 Notably, even when such youth re-engage within their communities, they face low rates of employment, poor access to insurance/health care, family instability, and elevated rates of poverty.[11,15] These factors exacerbate the cycle of violence involvement, increasing the likelihood that they re-engage with violent behaviors that increase negative health and social outcomes.

Urban EDs that serve as the primary setting for treating assault-injured youth[1,16–18] have emerged as an important venue for violence prevention.[19–21] ED- and hospital-based violence prevention programs, recognizing the negative effect of criminal justice involvement on health outcomes, have begun to emphasize the reduction of arrest and incarceration as important outcome measures.[1,8,22–24] However, although prior longitudinal studies have characterized criminal justice outcomes among general youth populations,[25–27] none have examined the subpopulation of youth seeking assault-injury treatment. Prior ED/hospital-based studies of assault-injured youth have provided mixed results as to whether an assault injury is a marker for increased criminal justice involvement.[28,29] Such research has

also been limited by non-comparable control groups,[30] convenience samples,[31] and trauma registry[29] or self-report data.[32] Further, among assault-injured youth seeking treatment, 55% report recent substance use.[33] Substance use is an important risk factor based on theories of problem behavior clustering,[34] the pharmacological effects of acute intoxication,[35] and the violent nature of the illicit drug trade.[36] Thus, an enhanced understanding of criminal justice outcomes among higher-risk drug-using youth following an assault injury is critical to implementing effective prevention strategies.

The primary study objective is to examine rates and characteristics of arrest among drug-using youth (i.e., ages 18–24 years) following ED treatment for assault as compared with a drug-using sample seeking care for other reasons. From prior work[5,6,37] and theory,[34] it is hypothesized that drug-using assault-injured youth will have higher arrest rates and that arrest risk will be associated with potentially modifiable risk factors, including higher severity substance use, mental health, and violence involvement. Results will aid the design of interventions focused on addressing multiple violence-related outcomes, including criminal justice involvement.

METHODS

The Flint Youth Injury Study[5,6,33,38,39] is a 2-year longitudinal study characterizing substance use and violence outcomes among a consecutively obtained sample of assault-injured youth (original sample ages:14–24 years) with past 6-month drug use (AIG) and a comparison group (CG) of non-assaulted drug-using youth. This analysis focuses on arrests among the AIG and CG cohorts between ages 18 and 24 years. University of Michigan and Hurley Medical Center (HMC) IRBs approved study procedures; a NIH Certificate of Confidentiality was obtained.

Study Sample

This sample was recruited within the HMC ED in Flint, Michigan. HMC is the region's only Level-1 trauma center, providing care to ≅75,000 adults and ≅25,000 children annually. The study population reflects the sociodemographics of Flint,[40] which is 50%–60% black, and is similar to prior HMC studies.[41–43] Flint violent crime rates are comparable to other deindustrialized urban settings.[44]

Recruitment proceeded December 2009–September 2011. Research assistants (RAs) recruited participants 7 days/week (excluding holidays), 21 hours/day (5:00AM–2:00AM) on Tuesday/Wednesday, and 24 hours/day Thursday through Monday. Eligible participants included youth seeking treatment for assault and reporting past 6-month drug use, and youth recruited for a proportionately sampled CG of youth seeking care for reasons other than assault (e.g., abdominal pain, sprained ankle from fall) and reporting past 6-month drug use. Assault was defined as any intentional injury caused by another person. Exclusion criteria included presentation for sexual assault, suicidal ideation/attempt, child maltreatment, or cognitive conditions precluding consent (e.g., intoxication). Incarcerated youth (3.2%) and those not speaking English (<1%) were excluded. Unstable trauma patients were recruited if they stabilized within 72 hours.

Detailed methods have been published.[33] RAs utilized electronic patient logs to identify potentially eligible participants. After consent, patients were screened for eligibility using a self-administered computerized survey. Those screening positive for past 6-month illicit or non-medical prescription drug use on the NIDA–ASSIST were eligible. The CG was recruited in parallel to limit seasonal/temporal variation and was systematically enrolled to balance cohorts by sex/age. Enrolled participants completed a 90-minute baseline assessment, including a computerized survey and an RA-administered diagnostic interview. In-person follow-ups were at 6, 12, 18, and 24 months. Although incarcerated youth were not recruited, follow-ups were conducted with consenting youth who were in jail/incarcerated during follow-up. Remuneration was $1 for the screen, $20 for the baseline, and $35, $40, $40, and $50 for the 6-, 12-, 18-, and 24-month follow-ups, respectively.

Measures

Arrest records were obtained from the Michigan State Police Law Enforcement Information Network.[45] Data includes arrest date, offense, and judicial disposition. Offenses were categorized: violent crime, property-related crime, weapon-related, alcohol/drug offense, sexual offense, operating vehicle while impaired, obstruction of justice/police, or an administrative offense (e.g., bribery). Judicial dispositions included: arrest without charge, case dismissal, case delayed/closed, jail/prison sentence, probation, judicial fines/restitution, and assignment to personal development program (e.g., community service). Offense and disposition categories were not mutually exclusive.

Sociodemographic measures (age, male, race/ethnicity, public assistance) were from the Adolescent Health and Drug Abuse Treatment Outcome Studies.[46–48] Any participant/parental receipt of a government assistance program (e.g., welfare, bridge card, disability) was included as an affirmative response. Extra-curricular school (e.g., clubs) and community program (e.g., Big Brothers/Big Sisters) involvement was measured using two-items from the Flint Adolescent Study.[49] Items were asked of all participants as some school-based activities may apply to college age students. The response scale was dichotomized to indicate any involvement in the prior 6 months. Community violence exposure was assessed with five-items (*heard gun shots*, *seen drug deals*, *my house has been broken into*, *seen someone get shot/stabbed*, and *seen neighborhood gangs*) measured using a Likert-type scale ranging from zero (“never”) to three (“many times”) from the “Things I Have Seen and Heard Survey.”[50,51] For analysis, a summary score was created.

The Alcohol Use Disorders Identification Test[52] and NIDA–ASSIST[53,54] separately measured past 6-month substance use, including alcohol, marijuana, illicit drugs (cocaine, hallucinogens, inhalants, methamphetamine, street opioids), and non-medical use of prescription drugs (opioids, sedatives, stimulants). Binge drinking was defined as more than five drinks on a single occasion. Substance use variables were dichotomized (yes/no). The RA-administered Mini International Neuropsychiatric Interview assessed DSM-IV diagnostic criteria for: (1) drug use disorder (i.e., abuse/dependence of marijuana, illicit drugs, or prescription drugs), (2) depression, (3) anti-social personality or conduct disorder, and (4) PTSD.[55] For analysis, any mental health diagnosis included meeting criteria for depression, anti-social personality disorder, conduct disorder, or PTSD.

Statistical Analysis

Analyses were restricted to youth age 18 years at enrollment as Law Enforcement Information Network data were only available for adult youth. Descriptive statistics and bivariate associations with the dependent variable, arrest in the 24 months following the ED visit, were examined. Time to arrest for AIG and CG were plotted using Kaplan–Meier estimators of the survival function with their associated confidence bands. Cox regression was performed to identify baseline characteristics associated with increased arrest hazard (i.e., factors that increased or decreased the expected time until arrest). Independent variables were chosen based on bivariate significance (male, assault injury, drug use disorder, community violence exposure) and theory (age, race, public assistance, mental health). Drug use disorder was retained over marijuana given that drug use disorder is inclusive of marijuana use abuse or dependence.

RESULTS

Overall, 599 youth (AIG=349, CG=250) were enrolled in the longitudinal study. Baseline characteristics and the flowchart have been previously published.[6] Of note, 75.6% of the CG patients were seeking care for a medical issue (e.g., abdominal pain), with the remainder seeking care for an unintentional injury (e.g., motor-vehicle crash). No differences were noted between the baseline cohorts with regards to age, sex, race, or SES. Follow-up rates were 85.5% at the 6-month, 83.8% at the 12-month, 84.3% at the 18-month, and 85.5% at the 24-month follow-up, with no differential follow-up.[6] On average, 3.5% of follow-ups at each timepoint were conducted in prison/jail. Among the sample, 511 (AIG=299, CG=212) youth were aged ≥18 years at baseline and were included in this analysis. Among the analytic sample (n=511), 57.1% of youth were male, 58.3% identified as black, and 73.2% were on public assistance.

Risk of arrest in the 24 months following the ED visit was 47% higher in the AIG than the CG (38.1% vs 25.9%, RR=1.47, 95% CI=1.07, 2.02). Figure 1 depicts the Kaplan–Meier survival curve estimates for both the CG and AIG; from that it is apparent that the expected time until arrest is shorter for the AIG group. The AIG also had a higher average number of arrests per participant than the CG (2.00 vs 1.55, p<0.01) and a higher proportion of AIG youth had more than one arrest during the study (21.1% vs 9.0%, p<0.001). Table 1 presents descriptive data on the 313 arrests among 195 participants (with one or more arrests). Nearly 41% of arrests were for violent or weapon-related crimes. When compared with the CG, the AIG had a higher proportion of arrests for property crime. Among 313 arrests, 44.4% did not result in formal charges and for the 174 arrests where criminal charges were filed, 30.5% resulted in fines or monetary restitution, 23.6% involved jail/prison time, 17.2% involved probation, and 5.8% involved diversionary programs. No group differences for judicial disposition were identified.

Participants who were arrested were more likely than those not arrested to be male, have a baseline assault injury, binge drink, use marijuana, meet criteria for a drug use disorder, and report higher levels of community violence exposure (Table 2). No differences were noted for the other baseline characteristics or for other substance use and mental health variables.

Cox regression analysis demonstrating covariate effects on the hazard of arrest is shown in Table 3. The hazard of arrest was about 2.5 times larger among males. A diagnosis of assault injury and drug use disorder each corresponded to a 63% and 42% increased hazard, respectively. For each additional point on the community violence exposure scale, the hazard for arrest increased by ≅35%. Age, race/ethnicity, public assistance, and mental health diagnosis were not significantly related to the expected time until arrest. The proportional hazards assumption was tested by analyzing the Schoenfeld residuals and found to be tenable (x^2=11.94, df=8, p=0.156).

DISCUSSION

This study identified that nearly 40% of high-risk youth seeking ED treatment for assault experience at least one arrest within the 24 months following their visit, a 47% higher risk than CG youth. Although comparisons are difficult as this is the first longitudinal study to examine arrests among a systematically sampled cohort of assault-injured drug-using ED youth, results are comparable or higher than case-control/retrospective studies.[8,22–24] Findings have implications for violence prevention. First, similar to research identifying that an assault injury increases the risk for violent injury recidivism,[6] firearm violence,[5] and substance use,[37] findings suggest that it is also a marker for identifying youth at elevated risk for negative criminal justice outcomes. Second, the finding that more than 20% of AIG participants experienced more than one arrest and that a quarter of the participants who were charged with a crime received jail/prison time (less than 6% were sent to a diversionary program) reinforces that once youth are engaged within the justice system, they have an elevated risk of recidivism and negative outcomes that perpetuate the cycle of violence. This is consistent with research demonstrating that criminal justice involvement disrupts the transitional milestones necessary for a healthy progression from adolescence to adulthood (e.g., education, employment, family formation)[13] and with data indicating that youth who experience official court processing instead of diversionary programs had higher rates of subsequent violent and non-violent criminal activity and were more likely to have an adult criminal record.[56] This is particularly concerning in light of research showing that more severe criminal justice involvement (e.g., incarceration) is accompanied by higher mortality.[14] Taken together, findings underscore the need for violence prevention initiatives that address risk for arrest and future incarceration as key outcome measures in parallel with violence.

Several hospital-based violence interventions focusing on intensive wrap-around services have demonstrated modest success reducing arrest and conviction rates for violent crimes during the post-injury period.[8,22,23] Although the optimal structure of such interventions continues to be a focus of research, study data may aid the identification of components critical to enhancing intervention efficacy. The finding that arrests were higher among those with an assault injury and that more than 40% of all arrests were related to violence- and weapon-related charges raises concern for retaliatory violence stemming from the ED visit. This is consistent with data demonstrating that the immediate post-injury period is a high-risk time for retaliatory violence[57,58] and that retaliation is a key motivation for youth violence, especially severe violence involving firearms.[58–60] In addition, almost half of assault-injured youth indicated that they did not believe the altercation leading to their ED

visit was over, and a quarter indicated that they or their friends/family intended to seek retribution.[33] Thus, the need for violence initiatives to address retaliatory risk and include skills training on non-violent conflict resolution cannot be overstated.

Although all enrolled youth had drug use as a criterion of inclusion (96.8% reported marijuana use), those with a drug use disorder had a 42% higher risk of arrest. This, combined with the finding that a quarter of arrests were for drug- or alcohol-related offenses and that arrested youth had higher rates of binge drinking compared with those not arrested, emphasizes the need to address substance use and referral to treatment within violence prevention programs. Many hospital-based interventions, while showing promise, have not traditionally addressed substance use beyond referral to treatment.[8,20,22,24,61–66] Yet, other researchers have demonstrated that single-session substance use[67–69] and combined multisession collaborative care interventions[70] addressing PTSD and associated comorbidities (e.g., substance use) are efficacious in reducing violence among lower at-risk youth. Thus, incorporating substance use treatment as a central component of interventions designed for higher-risk assault-injured youth may enhance efficacy, especially among youth in low-resource communities with limited access to treatment services.[71–73] Although mental health diagnoses were not predictive of arrest, it is notable that approximately 36% of youth met criteria for at least one diagnosis. This, combined with research establishing an association between PTSD and violence,[5,6] and studies demonstrating that providing ED youth with serious mental health disorders access to treatment reduces criminal justice involvement[74] emphasizes the need to incorporate access to mental health services within prevention programs.

Higher perceived community violence exposure was associated with an elevated risk of arrest, emphasizing the need for interventions crossing multiple socioecologic levels. Within a theoretic context, community-level interventions focused on increasing social capital and community engagement are thought to enhance overall community organization, leading to lower rates of problem behaviors (e.g., violence) and improving neighborhood safety.[75,76] Greening initiatives have demonstrated success with such an approach, decreasing rates of firearm violence, violent crime, and community stress, while improving perceptions of neighborhood safety.[77] Recent research has also demonstrated the strength of combining individual-level hospital interventions with broader community-wide interventions, such as mentoring programs, neighborhood greening, and community policing, finding that a comprehensive intervention package addressing multiple socioecologic levels can be successful decreasing violent crime and assault injuries.[76]

Similar to prior research,[78,79] males had a greater risk of arrest. Despite this, females accounted for one quarter of those arrested and half of youth seeking assault treatment,[33] highlighting the need for interventions tailored for both sexes. Although SES was not associated with differential arrest risk, it is notable that more than 70% of youth reported receipt of public assistance, reflecting the high rates of poverty, unemployment and neighborhood disadvantage in this community. It is interesting to note, however, that AIG youth were noted to have higher rates of property-related crimes than the CG, highlighting monetary gain as a potential motivation for criminal activities. Future analyses should consider more sensitive SES measures as a means of exploring the role of poverty in

criminal justice involvement. Interestingly, arrest rates did not differ by race/ethnicity, likely reflecting overall low variability between racial/ethnic categories in this sample.

Limitations

First, the study was conducted at a single urban hospital in a city that is approximately 60% black. Although results may not be generalizable to rural/suburban youth, or to communities with dissimilar ethnic compositions, the study context is not that dissimilar from other economically challenged small U.S. cities. Second, although arrest data was from objective sources, baseline measures were self-report. Researchers have, however, identified that self-reported behaviors are reliable/valid when privacy/confidentiality is assured and when self-administered by computer as in this study.[80–85] Third, entry criterion included drug use. As such, the ability to generalize findings to assault-injured youth without drug use are limited. Yet, given that a single use of marijuana in the preceding 6 months qualified for inclusion, impact on generalizability is likely negligible. Further, as standardized measures did not assess traditional or synthetic forms of cannabis use, no comment was able to be made on the emerging trends of synthetic cannabis use. Fourth, the authors were not able to specifically link arrest data to a retaliation episode for the ED visit. Yet, self-report data on intention to retaliate collected at the ED visit (noted above) highlights the elevated retaliatory risk. Fifth, because access to arrest data was limited to adult youth (age 18 years or older), younger youth (age 14–17 years at baseline, n=88) were not able to be included. Finally, the age of the data (enrollment December 2009– September 2011) is a potential limitation; however, given the paucity of longitudinal studies examining objective criminal justice outcomes among high-risk youth, findings remain relevant to informing violence prevention initiatives.

CONCLUSIONS

Youth violence has been associated with multiple negative health and social outcomes, including criminal justice involvement. This study examines legal involvement of a cohort of assault-injured drug-using youth. The finding that rates of criminal arrest approach nearly 40% in the 24 months following the ED visit and that most relate to retaliatory violence, weapons, or substance use suggests that prevention efforts focused on reducing violence and substance use may have the potential to reduce criminal justice involvement and negative health-related outcomes.

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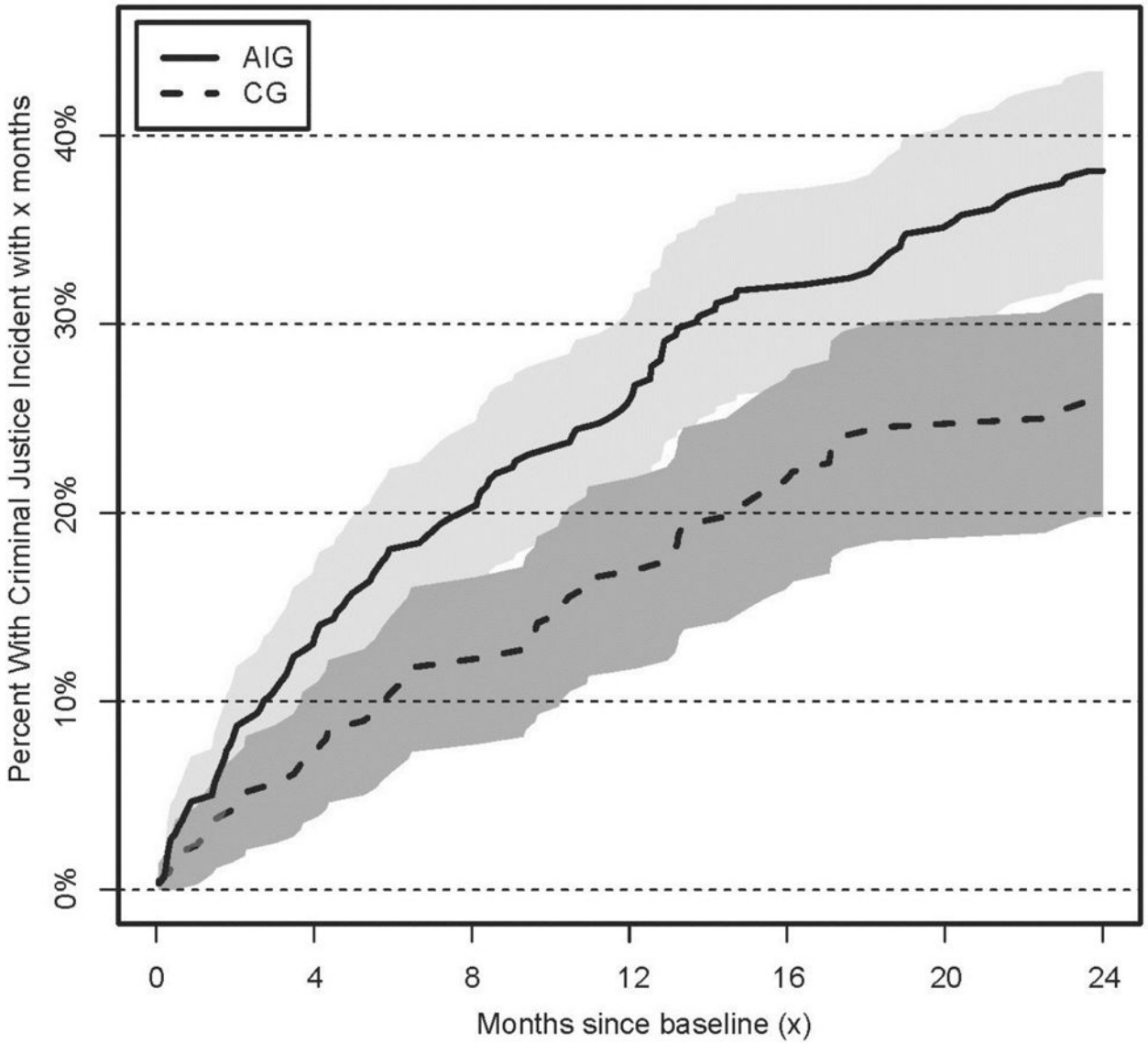

Figure 1. Cumulative frequency of time to first arrest during the 24-month follow-up by cohort (AIG; CG).

AIG, assault injury group; CG, comparison group.

Table 1.

Criminal Offence Categories for Arrests (n=313 Arrests/195 Participants) During the 24-month Follow-up by Cohort (AIG; CG)

Category	Assault-injury group N=228 (72.8%)	Comparison group N=85 (27.2%)	Total arrests N=313	RR[a] (95% CI)
Violent crime/Weapon offence	95 (41.7)	32 (37.7)	127 (40.6)	1.11 (0.81, 1.51)
Property crime	**73 (32.0)**	**16 (18.8)**	**89 (28.4)**	**1.70 (1.05, 2.75)**
Administrative offences	16 (7.0)	6 (7.1)	22 (7.0)	0.99 (0.40, 2.26)
Alcohol offenses	4 (1.8)	1 (1.2)	5 (1.6)	1.49 (0.17, 13.15)
Drug offenses	48 (21.1)	19 (22.4)	67 (21.4)	0.94 (0.59, 1.51)
Sexual offenses[a]	2 (0.9)	0 (0.0)	2 (0.6)	NA
Operating while impaired	27 (11.8)	16 (18.8)	43 (13.7)	0.63 (0.36, 1.11)
Obstructing police	30 (13.2)	7 (8.2)	37 (11.8)	1.60 (0.73, 3.50)

Notes: Data presented as n (%) unless otherwise indicated. Participants may have more than one arrest; denominator is total number of arrest incidents. Boldface indicates statistical significance ($p<0.05$). Notation about offences: Examples of each type of offence are provided. List not exhaustive. Violent crime/Weapon offence = Homicide, kidnapping, sexual assault, robbery, assault, inappropriate possession, carrying, sales or trafficking or firearms. Property crime = robbery, arson, extortion, burglary, larceny, stolen vehicle, forgery and counterfeiting, embezzlement, stolen or damaged property. Administrative offences = Obscenity, gambling, escape and flight, obstruction of judiciary, congress or legislative proceedings, bribery, disturbing public peace, traffic offenses, health and safety violations, civil rights violation, invasion of privacy, or vagrancy. Alcohol or drug offences = Drunkenness, dangerous drug intoxication or possession. Sexual offences = Sexual assault, commercializing sex. Operating while impaired = Driving while under the influence of drugs or alcohol. Obstructing police = Impairing the proceedings of a police investigation.

[a]Risk ratio is non-finite because one risk is zero.

Table 2.

Characteristics of Youth (n=511) With and Without an Arrest During the 24-Months Follow-up Period

Characteristics	Arrest within the 24-months after baseline ED visit (N=169; 33.1%)	No arrest within the 24-months after baseline ED visit (N=342; 66.9%)	RR (95% CI)
Baseline characteristics			
Age, years, mean (SD)[a]	20.79 (1.87)	20.70 (1.94)	1.02 (0.95, 1.08)
Male, n (%)	**127 (75.2)**	**165 (48.3)**	**1.56 (1.35, 1.79)**
Black race, n (%)	100 (59.2)	198 (57.9)	1.02 (0.88, 1.19)
Public assistance, n (%)	126 (74.6)	248 (72.5)	1.03 (0.92, 1.15)
School/Community involvement, n (%)	54 (32.0)	116 (33.9)	0.94 (0.72, 1.23)
Community violence, mean (SD)[a]	**2.52 (0.70)**	**2.27 (0.72)**	**1.39 (1.17, 1.65)**
Baseline ED visit presentation			
Assault–Injury, n (%)	**114 (67.5)**	**185 (54.1)**	**1.24 (1.08, 1.44)**
Past 6-month substance use at baseline ED visit			
Marijuana use, n (%)[b]	**167 (98.8)**	**329 (96.2)**	**1.03 (1.00, 1.06)**
Illicit drug use, n (%)[c]	23 (13.6)	36 (10.5)	1.29 (0.79, 2.11)
Non-medical prescription drug use, n (%)[d]	42 (24.9)	63 (18.4)	1.38 (0.98, 1.94)
Binge drinking, n (%)[e]	**85 (50.3)**	**139 (40.6)**	**1.24 (1.02, 1.51)**
Drug use disorder, n (%)	**112 (66.3)**	**173 (50.6)**	**1.31 (1.13, 1.52)**
Mental health diagnoses at baseline ED visit			
PTSD (past month), n (%)	19 (11.2)	37 (10.8)	1.04 (0.62, 1.75)
Any mental health diagnosis, n (%)[f]	**70 (41.4)**	**113 (33.0)**	1.25 (0.99, 1.58)

Notes: Boldface indicates statistical significance ($p<0.05$). Baseline characteristics were measured at the time of the ED visit.

[a] For mean-calculated variables, RR was estimated using binomial regression with a log link.

[b] p-value is 0.049.

[c] Illicit drugs includes cocaine, hallucinogens, inhalants, methamphetamine, street opioids (e.g., heroin).

[d] Prescription drugs involves non-medical use (i.e., to get high and/or using someone else's prescription) of prescription opioids, stimulants, or sedatives.

[e] Binge drinking is 5 or more drinks consumed on a single occasion.

[f] Any mental health diagnosis includes meeting diagnostic DSM-IV criteria for depression, antisocial personality disorder, conduct disorder, or PTSD.

ED, emergency department; PTSD, post-traumatic stress disorder.

Table 3.

Cox Regression Characterizing Covariate Effects on the Hazard of Criminal Justice Involvement During 24-month Follow-up

Baseline characteristics	Hazard ratio (95% CI)
Age	1.00 (0.92, 1.08)
Male	**2.57 (1.79, 3.67)**
Black race	1.02 (0.75, 1.40)
Public assistance	1.20 (0.85, 1.71)
Drug use disorder	**1.42 (1.01, 2.00)**
Any mental health diagnosis[a]	0.98 (0.70, 1.38)
Assault-injury group	**1.63 (1.18, 2.25)**
Community violence	**1.35 (1.06, 1.72)**

Note: Boldface indicates statistical significance ($p<0.05$). Baseline characteristics were measured at the time of the ED visit.

[a]Any mental health diagnosis includes meeting diagnostic DSM-IV criteria for depression, antisocial personality disorder, conduct disorder, or post-traumatic stress disorder (PTSD).