a preponderance of high-risk behaviors (elevated number of sexual partners and the absence of barrier protection during intercourse). This study highlights the critical need for targeted intervention programs aimed at reducing sexual risk behavior, as well as, illicit drug use with this high-risk population.

**Sources of Support:** No outside support.

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**SUBSTANCE USE**

**SUBSTANCE ABUSE VISITS TO THE EMERGENCY DEPARTMENT: S.A.V.E.D.**

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**Purpose:** Adolescent alcohol and substance use, and its morbidities and mortalities, is a significant public health problem. Youth Risk Behavior Survey (NYC, 2009) data revealed that Staten Island youth had the highest percentage (37%) of alcohol use among the five boroughs of NYC. In an effort to determine factors leading to the initiation of alcohol/substance abuse, the objectives of this study were to quantify the prevalence of alcohol-/substance-related visits among 13-20 year olds to Staten Island University Hospital Emergency Department (ED), and to identify variables associated with these visits.

**Methods:** Retrospective data from patients 13-20 y/o was collected from ED visits between 1/1/2012 and 12/31/2012 (n = 7680). 149 ED visits contained diagnosis codes for the initial review criteria. 42 visits were excluded due to no evidence of alcohol or substance use (SA) by ICD-9 codes. The remaining 107 visits revealed ICD-9 codes consistent with SA and were eligible for the study. Variables reviewed included age, gender, ethnicity, month of ED visit, type of SA, injuries as a result of SA, chronic illness history, pre-existing mental health condition history, medications, tobacco use, zip code, and insurance status. The proportion of SA-related visits to the ED during the study period was calculated. To aid variable analysis, a control group of patients, 13-20 y/o, who visited the ED during the same time period with a non-SA-related diagnosis was randomly selected (n = 214). The primary objective of the statistical analysis was to determine whether any significant differences exist between SA-related visits and non-SA-related visits on certain demographic and clinical factors. Summary statistics (i.e. percentages and frequencies) were calculated. Either the Chi-Square or the Fisher’s Exact test were used to determine if any significant differences exist between cases and controls. Statistically significant results had a p value of < 0.05.

**Results:** Alcohol-related visits were the most common (42.0%). Opioid-related visits were second (17.7%); marijuana-related visits third (12.1%). Tobacco use and diagnosis of depression or anxiety were significantly more prevalent among SA-related visits compared to non-SA-related visits (p < 0.0001). Among SA-related visits, 9.4% were 13-14 y/o, 31.8% were 15-17 y/o, and 58.9% were 18-20 y/o. Among non-SA-related visits, 25% were 13-14 y/o, 32.1% were 15-17 y/o, and 42.9% were 18-20 y/o. These age group differences were significant (p = 0.002). The majority of SA-related visits were male (58.9%) compared with non-SA-related visits where the majority were female (52.8%). This difference was marginally significant (p = 0.048). Chronic illness was not more prevalent among SA-related visits (p > 0.05). Month of ED visit also did not appear to be associated with type of ED visit (p > 0.05).

**Conclusions:** Our data, consistent with national data, revealed more than 40% of substance-related ED visits involved alcohol. This data also confirms the growing opioid abuse problem seen globally, nationally and, significantly, on Staten Island. Our findings suggest that there are identifiable, at-risk populations to whom support should be provided during the emergency room visit. The results of this study support the use of early identification and prevention strategies targeting these high-risk groups.

**Sources of Support:** None.

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**USE OF A MEDICALLY SUPERVISED INJECTION FACILITY AMONG DRUG-INJECTING STREET YOUTH**

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**Purpose:** Medically supervised injecting facilities (SIFs) provide a sanctioned space for drug users to inject pre-obtained illicit substances and are associated with reductions in overdose mortality and human immunodeficiency virus (HIV) risk behavior among adults. However, little is known about SIF use among youth. We therefore aimed to identify factors associated with use of the Vancouver SIF, the first and only such facility in North America, among actively injecting street youth.

**Methods:** From September 2005 to May 2012, longitudinal data were collected from the At-Risk Youth Study (ARYS), a prospective cohort of street youth in Vancouver, Canada. Youth were recruited through street-based outreach and snowball sampling, and provided informed consent. Inclusion criteria were age 14-26 years and illicit drug use (other than marijuana) in the preceding 30 days. At baseline and semiannually, participants completed an interviewer-administered questionnaire. The sample was limited to youth who reported injection drug use at baseline or during follow-up. The primary outcome was self-reported use of the Vancouver SIF in the preceding 6 months at any visit. Analyses employed generalized estimating equation (GEE) logistic regression to identify sociodemographic and drug-related predictor variables associated with SIF use, adjusting for potential confounders through multivariate modeling.

**Results:** Of 414 actively drug-injecting youth, 33.8% were female and 22.9% were Aboriginal. Mean age was 22.8 years (standard deviation, 2.7 years). During the study period, 42.3% of youth used the Vancouver SIF at least once. SIF use was reported at 37.5% of the 1,018 study observations at which youth reported injecting. Of all SIF-using youth, 51.4% went to the facility at least once weekly. Furthermore, 44.5% used it for at least one-quarter of all injections, and 22.4% did not already know. Only 2.9% of SIF users reported feeling the facility was not youth-friendly. When not using the SIF, 37.1% reported primarily injecting on the street, in a public bathroom, or in a park. In adjusted analyses, youth using the SIF were significantly more likely to have lived or spent time weekly in the Downtown Eastside neighborhood surrounding the SIF (adjusted odds ratio [AOR], 3.29; 95% confidence interval [CI], 2.38-4.54), to have injected in public (AOR, 2.08; 95% CI, 1.53-2.84), or to have engaged
in high frequency drug injection, including daily injection of heroin (AOR, 2.36; 95% CI, 1.72-3.24), cocaine (AOR, 2.44; 95% CI, 1.34-4.45), or crystal methamphetamine (AOR, 1.62; 95% CI, 1.13-2.31).

**Conclusions:** This is the first study of SIF use among street youth in North America, and showed that the facility attracted high-frequency injecting users most at risk of blood-borne infection and fatal overdose, as well as those that contribute to public drug use. SIFs, particularly when located near where youth spend time, offer a crucial point of contact with onsite addiction treatment services and public health messaging for high-risk youth.

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**BLOOD PRESSURE AND TOBACCO EXPOSURE AMONG RURAL ADOLESCENTS**

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**Purpose:** Hypertension, a major public health challenge, is the most prevalent precursor to cardiovascular disease in the United States. Among adolescents, the prevalence rate of hypertension is approximately 3% and the rates of single measurement blood pressure elevation may be as high as 37%. Longitudinal data and systematic reviews of research provide evidence that blood pressure elevations in childhood track through adolescence and into adulthood. Pre-hypertension is predictive of hypertension in adolescents, with progression between these blood pressure categories at approximately 7% per year. Tobacco use and exposure is a major cardiovascular risk factor and a cause of heart disease in adults. Further, rural communities have higher tobacco use prevalence and fewer community policies restricting tobacco use than their urban counterparts. Little is known about the effects of tobacco exposure on blood pressure in rural adolescents. The purpose was to examine the influence of tobacco exposure on blood pressure in rural adolescents ages 15-18 while controlling for age, gender, parental history of hypertension, socioeconomic status, pubertal status and weight status.

**Methods:** A convenience sample of 148 adolescents ages 15-18 was recruited from two rural high schools (88 female and 60 male, all Caucasian). Adolescents were measured for blood pressure, weight status (BMI, waist circumference), and tobacco exposure (self-report, salivary cotinine). Self-report measures of tobacco exposure included the Uptake Continuum and Peer and Family Smoking Index.

**Results:** 25% of adolescent males and 11.4% of adolescent females had elevated systolic blood pressures. A fifth of the sample (22%) had elevated salivary cotinine levels indicative of tobacco use and secondhand smoke exposure. Ten percent of participants were current tobacco users and nearly half of the participants (47.6%) stated that their family members (i.e., parents, stepparents, guardians and/or siblings) smoked cigarettes. Salivary cotinine levels were significantly associated with smoking exposure by family members (X2 = 10.81, p = .001), though not with smoking exposure by peers (X2 = 1.21, p = .271). Age, gender, waist circumference and salivary cotinine contributed to 36.4% of the variance in systolic blood pressure and 19.1% of the variance in diastolic blood pressure.

**Conclusions:** A combination of tobacco exposure and waist circumference are risk factors for elevated blood pressure in rural adolescents. In addition to the tobacco and obesity indicators, older male adolescents were more likely to exhibit high blood pressure.