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4270.0 - Trends in Alcohol and Other Drugs Detected in Homicide and Suicide Victims in the United States, 2003 – 2014

Biostatistics, economics Epidemiology

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Abstract

The use of alcohol and other drugs (AOD) has long been recognized as an important risk factor for homicide and suicide. This study assessed trends in the prevalence of AOD detected in homicide and suicide victims from 2003 to 2014 in the United States. Data for this study came from the National Violent Death Reporting System (NVDRS). Time trends in alcohol, amphetamine, antidepressant, cocaine, marijuana and opiate detected in victims reported by 18 states were analyzed with spaghetti plots and Cochran-Armitage trend tests according to the type of incident and the decedents' demographic characteristics. NVDRS recorded a total of 48,729 deaths from homicide and 121,102 deaths from suicide. The prevalence of alcohol remained fairly stable and were 37.0% for homicide and 35.1% for suicide. The prevalence of marijuana increased from 16.0% to 50.9% in homicide ($p<0.00001$) and from 6.9% to 21.2% in suicide ($p<0.00001$). The prevalence of opiates increased from 7.7% to 24.1% in homicide ($p=0.003$) and from 16.1% to 30.4% in suicide ($p<0.00001$). Overall, male victims were more likely than female victims to test positive for alcohol (38.2% vs. 28.0%) and for marijuana (22.2% vs. 10.1%). The trends of amphetamines and antidepressants uses also increased significantly ($p<0.05$). The prevalence of nonalcohol drugs, in particular marijuana and opiates has increased markedly in the United States in recent years, likely reflective of the changes in state marijuana laws and the ongoing opioid epidemic. Epidemiologic patterns of AOD in violent death victims differ significantly between incident types and across demographic groups.