J Addict Med. 2025 Sep-Oct;19(5):599-604. doi: 10.1097/ADM.0000000000001461.
Epub 2025 Feb 17.

Increased Risks of Major Cardiac Adverse Events in Stimulant Use Disorder as Compared With Other Substance Use Disorders: A Propensity-score Matching Cohort Study

Nicolas Garel, Kyle T Greenway, Paola Lavin, C William Pike, Rebecca Hyde, Didier Jutras-Aswad, Steven D Tate, Anna Lembke

PMID: 39961096 DOI: 10.1097/ADM.0000000000001461

Abstract

Objectives: Individuals with stimulant use disorders (StSUDs) present an elevated risk of cardiovascular complications compared with the general population. However, it remains unclear whether, within the subpopulation of individuals with substance use disorders (SUDs), those specifically affected by StSUDs face even higher cardiovascular complications.

Methods: We conducted a retrospective cohort study using the EVERSANA databank, spanning from January 2015 to December 2023. The EVERSANA data set comprises deidentified electronic health record data aggregated and standardized across the United States. Participants included patients diagnosed with SUDs, encompassing alcohol, cannabis, opioids, stimulants, tobacco, hallucinogens, sedative-hypnotics, or inhalants. We employed the International Classification of Disease 10th (ICD-10) version codes to define the presence of StSUD and SUD. Major adverse cardiac events (MACE) were assessed, and Cox proportional hazard ratios were adjusted using high-dimensional propensity score (hdPS) matching to account for potential confounders.

Results: Among 137,106 patients with SUD, 7706 (5.6%) had StSUD. The cohort was 50.2% female, 53.0% non-White, with a mean age of 49.1 years (SD±15). After adjustment, stimulant users exhibited significantly higher MACE rates (HR=1.37, 95% CI: 1.22-1.53, P <0.001), including an elevated risk of death (HR=1.23, 95% CI: 1.02-1.47, P =0.026).

Conclusion: Individuals with StSUD face increased MACE compared with those with nonstimulant SUDs.

Keywords: death; myocardial infarction; stimulants; stroke; substance use disorders.

Related information

MedGen

LinkOut - more resources

Full Text Sources

Ovid Technologies, Inc.
Wolters Kluwer

Medical

MedlinePlus Consumer Health Information
MedlinePlus Health Information