Alcohol and substance abuse

0028 METHAMPHETAMINE EXPOSURES REPORTED TO UNITED STATES POISON CONTROL CENTERS, 2000–2019

^{1,2}T Chen, ^{1,3,4}H Spiller, ¹J Badeti, ⁴A Funk, ^{1,3}M Zhu, ^{1,3,5}G Smith. ¹Center for Injury Research and Policy in the Abigail Wexner Research Institute at Nationwide Children's Hospital, Columbus, USA; ²New Jersey Medical School, Newark, USA; ³The Ohio State University College of Medicine, Department of Pediatrics, Columbus, USA; ⁴Central Ohio Poison Center at Nationwide Children's Hospital, Columbus, USA; ⁵Child Injury Prevention Alliance, Columbus, USA

10.1136/injuryprev-2021-SAVIR.14

Statement of purpose To investigate characteristics and trends of methamphetamine exposures reported to United States (US) poison control centers.

Methods/Approach Data from the National Poison Data System were analyzed to investigate exposures to methamphetamine.

Results From January 1, 2000 through December 31, 2019, US poison control centers managed 54,199 cases involving methamphetamine as the first-ranked substance. Adults 20–39 years old accounted for more than half (56.3%) of all cases. There were 1,291 deaths, of which 43.0% involved multiple-substance exposures. Among multiple-substance exposures in which methamphetamine was the first-ranked substance, stimulants and street drugs (excluding methamphetamine) were most commonly present (22.7%), followed by opioids (19.0%). The substance class associated with the most fatalities was opioids (n=243, 26.6%). The rate of methamphetamine exposures per 100,000 US population increased by 79.5% from 2000–2005, then decreased by 68.0% from 2005–2007, followed by an increase of 614.6% from 2007–2019. From 2007–2019, the rate significantly increased among all age groups, except among 6–12-year-olds, and in all US regions. The rates of single- substance and multiple-substance exposures increased significantly from 2007–2019 by 456.7% (p<0.0001) and 843.6% (p<0.0001), respectively. From 2007–2019, the proportions of cases resulting in admission to a health care facility and serious medical outcome increased by 38.6% and 55.2%, respectively, and the fatality rate increased by 492.3%.

Conclusions The rate of exposure to methamphetamine in the US declined initially following passage of the Combat Methamphetamine Epidemic Act of 2005. However, since 2007, the rate and severity of methamphetamine exposures in the US have increased.

Significance This is the first study to analyze methamphetamine exposures among all age groups over an extensive time period in the US. The findings from this study can help inform future prevention, monitoring, and research efforts.

Suicide prevention

0030 ASSESSING SUICIDE MECHANISMS BY GEOGRAPHIC DIVISION, URBANIZATION, SEX, RACE/ETHNICITY, AND AGE – UNITED STATES 2004–2018

A Wulz, A Wolkin, G Miller, S Kegler, E Yard. Centers for Disease Control and Prevention, Atlanta, USA

10.1136/injuryprev-2021-SAVIR.15

Statement of purpose We assessed suicide rates by mechanism within geographic divisions by urbanicity, age, race/ethnicity and sex to inform targeted approaches for suicide prevention strategies. We addressed health equity by highlighting potential disparities and differences between and within demographics, geographic divisions and urbanization levels.

Methods/Approach We will conduct temporal trend analysis using population-based mortality data from the National Vital Statistics System between 2004 and 2018 to estimate trends in suicide rates. We will tabulate national annual counts of suicide deaths among U.S. residents, by injury mechanism, stratified by Census Divisions, 2013 NCHS urban-rural classification scheme for counties, age, race/ethnicity, and sex.

Results In preliminary analysis using CDC WONDER we found certain mechanisms of suicide increasing. We found females had statistically significant higher crude rates of suicide by suffocation than by firearm in large central metro areas in New England (1.3; 0.3) and Middle Atlantic (1.2; 0.3) and in large fringe metro areas in New England (1.6; 0.4) and Middle Atlantic (1.3; 0.6). Males had statistically significant higher crude rates of suicide by suffocation than by firearm in large central metro areas in New England (6.0; 3.7) and Middle Atlantic (4.2; 3.5) and in large fringe metro areas in New England (6.4; 4.3). Suicide rates by firearm are highest in most other geographic and urbanization areas for sex. Further analyses will highlight trends in suicide rates by mechanism and by sex, age, race/ethnicity within geographic areas and urbanicity to elucidate differences between and within demographic groups.

Conclusions Results may inform suicide prevention strategies for different populations based on overlapping demographics, geographic areas and urbanicity.

Significance Using a health equity lens, we will provide nuanced suicide data needed for a multifaceted approach to inform suicide prevention strategies in the US.

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0031 RIDESHARING TRIPS AND ALCOHOL-INVOLVED MOTOR VEHICLE CRASHES

C Morrison, A Kamb, G D'Ambrosi. Columbia University, New York, USA

10.1136/injuryprev-2021-SAVIR.16

Statement of purpose Rideshare companies such as Uber and Lyft have facilitated over 20 billion trips worldwide since the technology launched in 2010. Ridesharing could theoretically reduce alcohol-involved motor vehicle crashes by replacing drunk driver trips.

Methods/Approach This case control study used highly spatially and temporally resolved trip-level rideshare data and motor vehicle crash data for Chicago from November 2018 to December 2019. The units of analysis were motor vehicle crashes in the city of Chicago. Cases were crashes that police indicated were alcohol-involved. Controls were crashes in the same census tract, matched 1:1. The exposure of interest was the density per square mile of rideshare trips that were in progress at the time of the crash, calculated using a kernel density function around active trip route lines. Control variables were taxi trip density, time of day, day of week, public holiday, temperature, precipitation, and month. A conditional