changing patterns of alcohol and drug use in fatally injured drivers in washington state 1992-2002

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we previously reported on patterns of drug and alcohol use in fatally injured drivers in washington state [logan bk, schwilke ew, drug and alcohol use in fatally injured drivers in washington state, j forensic sci. 1996 may; 41(3):505-10]. we revisit that population here to examine how patterns have changed in the intervening nine years, by examining drug and alcohol data from drivers killed in crashes between february 1, 2001 and january 31, 2002. blood and serum specimens from drivers who died within 4 hours of the traffic accident were collected from coroners and medical examiners offices from all 39 washington counties. of the 657 traffic related deaths in washington state, 397 (60.4%) were drivers. samples suitable for testing were received in 370 (93%) of these. specimens were screened by immunoassay for cocaine metabolite, opiates, benzodiazepines, barbiturates, cannabinoids, amphetamines, pcp, propoxyphene, methadone, and tricyclic antidepressants using an olympus au400® emit analyzer. basic drugs were confirmed by gc/ms following an n-butyl chloride extraction. acidic and neutral drugs were confirmed by gc/fid and gc/ms following an xad extraction at neutral pH. Benzoylecgonine and morphine were analyzed by GC/MS following a chloroform/isopropanol extraction at pH 9. Cannabinoids were confirmed by GC/MS following a hexane/ethyl acetate extraction at pH 4.5. Of the 370 cases analyzed, 277 (75%) were male and 93 (25%) were female. The average age for males was 38 (range 15 to 87), and the average age for females was 47 (range 16 to 91). Alcohol was detected above 0.01 g/100 mL in 41% of cases. The mean alcohol concentration for those cases was 0.17 g/100 mL (range 0.02 to 0.39 g/100 mL). Central nervous system (CNS) active drugs were detected in 144 (39%) of cases. CNS depressants including carisoprodol, diazepam, citalopram, hydrocodone, diphenhydramine, amitriptyline, and others were detected in 52 cases (14.1%), cannabinoids were detected in 47 (12.7%) cases, CNS stimulants (cocaine and amphetamines) were detected in 36 (9.7%) cases, and narcotic analgesics (excluding morphine which is often administered iatrogenically in trauma cases) were detected in 12 (3.2%) cases. Drug and alcohol use continues to be a significant finding among fatally injured drivers. The data reveal that over the past decade, while alcohol use has declined, some drug use, notably methamphetamine, has increased significantly from 1.89% to 4.86% of fatally injured drivers between 1992 and 2002.