



### E94 Illicit Drug Deaths in Older Adults: The Need for Comprehensive Scene Investigation

*Stanislaw T.J. Bielous, BS\**, Syracuse, NY 13210; *Dennis J. Chute, MD*, Dutchess County Medical Examiner's Office, Poughkeepsie, NY 12601; *Veronica Salvas, MPH*, Dutchess County Medical Examiner's Office, Poughkeepsie, NY 12601; *Robert J. Bready, MS*, Dutchess County Medical Examiner's Office, Poughkeepsie, NY 12601; *Kia K. Newman, MD\**, Dutchess County Medical Examiner's Office, Poughkeepsie, NY 12601

**Learning Overview:** After attending this presentation, attendees will: (1) have an increased awareness of the often-overlooked area of older adult illicit drug use, (2) understand the importance of approaching every death scene with a reasonable amount of suspicion, and (3) understand the need for comprehensive scene investigation.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by shining a light on the growing trend of illicit drug use in older adults and will present case studies demonstrating how a thorough scene investigation can prevent the misclassification of substance abuse-related deaths.

Drug use in older adults is a growing issue within both the legal and medical communities. Studies conducted in the early 2000s predicted that the number of adults over 50 years of age with substance abuse issues would almost triple from 1.7 million in 1995 to an estimated 4.4 million in 2020.<sup>1,4</sup> This dramatic rise is attributed to both a 50% increase in the over-50 population and a 70% increase in the rate of substance abuse.<sup>1</sup> It is thought that due to pharmacokinetic changes associated with age, older individuals are more sensitive to adverse side effects of drug use, such as reduced physical functions and an increased risks of falls.<sup>2,3</sup> In a review of all substance abuse-related deaths in Dutchess County, NY, between 2010 and 2017 ( $n=436$ ), it was found that adults over 50 years of age accounted for 29% of all accidental drug overdose deaths; the oldest illicit drug case was 75 years old.

Death scene investigations are an integral step in establishing the circumstances and causes of sudden and unexpected deaths investigated by medical examiner and coroner offices. Many times, death of individuals over 50 years old appear natural due to concurrent health conditions. However, it is critical that each scene be approached with an appropriate level of suspicion. In such cases, the possibility of illicit drug abuse may seem unlikely at first, and paraphernalia may have been removed or hidden from view by family or friends. Presented here are three cases that may have been released at the scene and attributed to natural causes. However, a comprehensive scene investigation revealed evidence of drug use and an autopsy was performed.

**Case 1:** A 67-year-old female was found naked on the toilet. She had a history of chronic obstructive pulmonary disease and recent complaints of body aches. Without proper scene investigation, this decedent's cause of death may have been erroneously attributed to her natural disease. A meticulous scene investigation revealed white powder in a covered, decorative bowl, marijuana, juice box straws with white residue, and other paraphernalia. An autopsy showed pulmonary emphysema, bronchiolitis, and atherosclerotic cardiovascular disease. However, toxicology revealed THC, cocaine, and codeine in her blood; her death was certified as due to acute cocaine intoxication.

**Case 2:** A 66-year-old male was found on his knees in his apartment. A careful review of the decedent's medications revealed a white plastic straw, white residue, and several glassine envelopes hidden within a prescription bottle. Autopsy revealed hypertensive and atherosclerotic cardiovascular disease and obesity. Toxicology results showed numerous substances and his death was certified due to acute fentanyl, heroin, and alprazolam intoxication.

**Case 3:** A 61-year-old male with a history of diabetes and mental health issues was found dead, lying supine on the floor of his bedroom. A careful investigation of the scene revealed a white powder that appeared to be either crushed medication or cocaine and signs of oxycodone abuse. An autopsy showed coronary artery atherosclerosis. However, toxicology revealed alprazolam, cocaine, morphine, oxycodone, and fentanyl, and his death was certified due to acute opioid, alprazolam, and cocaine intoxication.

Illicit drug use in older adults is an issue that will continue to grow and subsequently be reflected in the caseloads seen by medical examiners. These case studies highlight examples of how comprehensive scene investigation helped identify illicit drug use in atypical scenarios and thus averted the incorrect assumption of an older adult death as being natural. These circumstances present just one reason well-trained medicolegal death investigators are needed to perform comprehensive scene investigations. It is vital that investigators understand the growing prevalence of drug use in older adults and become proficient in recognizing the signs of drug use within this population.

#### Reference(s):

1. Gfroerer, J., M. Penne, M. Pemberton, and R. Folsom. Substance Abuse Treatment Need Among Older Adults in 2020: The Impact of the Aging Baby-Boom Cohort. *Drug and Alcohol Dependence* 69, no. 2 (2003): 127-35. doi:10.1016/s0376-8716(02)00307-1.
2. Colliver, J., W. Compton, J. Gfroerer, and T. Condon. Projecting Drug Use Among Aging Baby Boomers in 2020. *Annals of Epidemiology* 16, no. 4 (2006): 257-65. doi:10.1016/j.annepidem.2005.08.003.
3. Dowling, Gayathri J., Susan R.B. Weiss, and Timothy P. Condon. Drugs of Abuse and the Aging Brain. *Neuropsychopharmacology* 33, no. 2 (2007): 209-18. doi:10.1038/sj.npp.1301412.
4. Lofwall, Michelle R., Alyson Schuster, and Eric C. Strain. Changing Profile of Abused Substances by Older Persons Entering Treatment. *The Journal of Nervous and Mental Disease* 196, no. 12 (2008): 898-905. doi:10.1097/nmd.0b013e31818ec7ee.

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