



K10 Methadone Related Deaths in the City and County of San Francisco

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The goal of this study was undertaken to determine whether there had been any change in the incidence of methadone related deaths, as either the principal cause of death, or as a contributing factor, since the publication of an earlier report in 1999.

This presentation will impact the forensic community and/or humanity by demonstrating that despite a continuing increase in the amount of methadone prescribed, and increased concerns about methadone diversion and toxicity, neither the demographic profile, nor the rate of methadone related deaths in the City and County of San Francisco have changed since 1997. Whether this is due to changes in either prescribing and clinical care or other unique features of drug takers in San Francisco is, at this time, impossible to say.

Goal: Public concern about methadone diversion and the accidental fatalities that may result is a cause of great concern. In spite of extensive media attention, however, the true magnitude of the problem is not known with any certainty, and the frequency of the problem seems to vary widely from city to city. The SFOCME serves a population of approximately 750,000, and this number has been stable for several decades. In 1999 records were reviewed for all deaths occurring in the City of San Francisco, from 1997 through 1998, where methadone was detected in blood or urine samples (*West J Med.* 2000 Jan;172(1):11-14). This new study was undertaken to determine whether there had been any change in the incidence of methadone related deaths, as either the principal cause of death, or as a contributing factor, since the publication of an earlier report.

Design: Retrospective analysis of all death investigations carried out by the San Francisco Office of the Chief Medical Examiner, from January 1, 2002 until December 31, 2002.

Findings: In 2002, 1,463 cases came under the jurisdiction of the SFOCME office; methadone was detected in blood or urine of 35 cases, giving an incidence of 4.4 per 100,000 compared to a rate of 5.0 per 100,000 in the 1997-1998 study (presuming a constant population base of 750,000). The median age of decedents was 44.9 years (SD=10.4, SE = 1.8, range 23-61 years). Decedents were overwhelmingly male (85%), and predominantly white (66%). In 2002, death was attributed to trauma or underlying medical disorder in 24 (72%) of cases. In the remaining nine cases the diagnosis was given as poly-drug abuse (6), or methadone. Cocaine was present in five of the nine cases, methamphetamine in two, and morphine in three. In each of the three cases where morphine was detected, cocaine was also present. The rate for co-abuse of cocaine was slightly higher than in an earlier study, and the rate for morphine use was slightly lower, but the small sample size precludes definite conclusions. Individuals dying of methadone toxicity were significantly younger than individuals where presence of the drug was an incidental finding (42.0 vs. 45.8 years vs. 48.3 and 46.3 years in the first study), and suffered from fewer underlying disorders. Chronic illnesses, including alcoholism, HIV, and Hepatitis B and C infection, were common in the group where methadone was an incidental finding. The mean methadone blood concentration was 835 ± 170 ng/mL compared with a mean of 957 ± 140 ng/mL in the earlier study.

Conclusion: Despite a continuing increase in the amount of methadone prescribed, and increased concerns about methadone diversion and toxicity, neither the demographic profile, nor the rate of methadone related deaths in the City and County of San Francisco have changed since 1997. Whether this is due to changes in either prescribing and clinical care or other unique features of drug takers in San Francisco is, at this time, impossible to say.

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