

**Title:** WePrOTECT: Wastewater-based Epidemiology for the Prevention of Overdoses through Timely Evidence-based Community action & Treatment -- Marin County, California

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Drug overdose is the leading cause of accidental death, prompting the need for innovative prevention strategies. Marin County conducted a pilot of wastewater surveillance (WWS) for overdose prevention. One wastewater plant collected samples twice weekly to estimate consumption (milligrams per 1,000 people) of substances and their metabolites (e.g., fentanyl, norfentanyl). Weeks were categorized into high ( $\geq 0.5$  standard deviations [SDs] six month average) and low ( $\leq 0.5$  SDs) by substance. The average number of overdose-related 911 calls one week later were calculated and compared (high vs. low). From 2/6 to 8/2/2023, norfentanyl levels were high 9 weeks and low 8 weeks. One week after high levels, the average number of overdose-related 911 calls mentioning fentanyl were 300% (0.4 vs. 0.1) and 20% (1.8 vs. 1.5) greater compared to low weeks. WWS may serve as a useful tool for overdose prevention.