

A FENTANYL OVERDOSE PREVENTION INTERVENTION INVOLVING DISTRIBUTION OF FENTANYL TEST STRIPS ON NON-FATAL OVERDOSE: A RANDOMIZED CLINICAL TRIAL

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Background: Prior observational research has demonstrated that fentanyl test strips (FTS) have high acceptability among people who use drugs (PWUD), and that FTS use is associated with increased engagement in harm reduction practices. This randomized clinical trial evaluated the efficacy of a fentanyl overdose prevention intervention involving the distribution of FTS on non-fatal overdose among PWUD.

Methods: We randomly assigned participants in a 1:1 ratio to receive the RAPIDS intervention, which included motivational interviewing, FTS role-play and teach back, and distribution of FTS, versus standardized overdose prevention and naloxone education. Participants received up to three monthly booster sessions and were followed prospectively for 15 months. The primary efficacy analysis compared the incidence of non-fatal overdose from three data sources: self-reported overdoses at six and 12-month visits, and linked administrative data to statewide EMS records and emergency department encounters for non-fatal overdose. Kaplan-Meier methods were used to compare the cumulative incidence of non-fatal overdose between study arms, and accelerated failure time (AFT) models were used to estimate hazard ratios for primary and secondary study endpoints.

Results: Among 487 participants eligible for inclusion in the modified intention-to-treat analysis, 36 (14.7%) and 48 (19.8%) of participants experienced at least one non-fatal overdose in the control and intervention arm, respectively ($p=0.133$). The 15-month cumulative incidence of non-fatal overdose in the control and intervention arms were 14.9% (95%CI: 11.0%-20.1%) and 20.1% (95%CI: 15.6%-25.8%), respectively ($p=0.144$). Multivariable AFT models suggested no statistically significant effect of the intervention on non-fatal overdose (adjusted hazard ratio = 1.27, 95%CI: 0.79-2.023, $p=0.323$).

Conclusions: A fentanyl overdose prevention intervention involving distribution of FTS did not decrease rates of non-fatal overdose among PWUD. Additional research is ongoing to examine per-protocol and subgroup effects.

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