

## DEFINING DOSING-RELATED TAPERING CHARACTERISTICS TO DECREASE CONCURRENT HEROIN USE: A RETROSPECTIVE COHORT STUDY OF METHADONE MAINTENANCE TREATMENT PARTICIPANTS IN GUANGDONG, CHINA

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**Background:** Proper tapering strategies for dosing contribute to reduce heroin relapse among methadone maintenance treatment (MMT) participants. But there exist diversified and general tapering strategies in different countries. We aimed to explore a specific tapering strategy that is associated with lower risks of concurrent heroin use among MMT participants.

**Method:** We conducted a retrospective study from 2006 to 2017 in nine MMT clinics in Guangdong, China. Tapering characteristics included taper start week, the duration of taper phase, the proportion of taper phase over the duration of MMT, the proportion of weeks in dose decreasing throughout taper phase, dose change ratio. We performed logistic regression to identify tapering characteristics associated with concurrent heroin use.

**Results:** This study included 961 participants, with 56.4% reported concurrent heroin use. Participants who started tapering later after enrollment in MMT (>52 weeks vs. <16 weeks: OR=0.464, 0.227-0.945), had a shorter taper phase (<13 weeks vs. >52 weeks: OR=0.299, 0.123-0.719; 13-25 weeks vs. >52 weeks: OR=0.380, 0.172-0.832), a lower proportion of taper phase over the duration of MMT treatment (25-49% vs. ≥90%: OR=0.325, 0.123-0.844; 50-74% vs. ≥90%: OR=0.446, 0.207-0.949), more proportion of weeks in dose decreasing throughout taper phase (75-89% vs. <25%: OR=0.266, 0.102-0.655; >90% vs. <25%: OR=0.337, 0.120-0.905), less than 5% of dose change ratio per week (<5% vs. 5-10%: OR=0.410, 0.231-0.720), and less than 5 mg/week of dose change (<5 mg/week vs. 5-10 mg/week: OR=0.569, 0.368-0.873) were less likely to have concurrent heroin use.

**Conclusion:** Starting tapering late, a shorter taper phase, gradual dose tapering decreased concurrent heroin use.

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