



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 & Aims

- Around half of methadone maintenance treatment (MMT) participants choose the tapering phase (41-57%).
- The guidelines on tapering differ between countries and only include the tapering rate, physicians need more evidence to guide clinical practice.
- To explore a specific tapering strategy to decrease concurrent heroin use among MMT participants.

Methods

Data collection

- De-identified electronic medical records from 2006 to 2017 at nine MMT clinics in Guangdong, China, involving 853 participants with 961 treatment episodes.

Measures

- **Dependent variables:** participants who did not have any positive urine morphine test results during the tapering phase belonged to the “heroin abstinence” group, others belonged to the “concurrent heroin use” group.

Independent variables:

Tapering phase characteristics

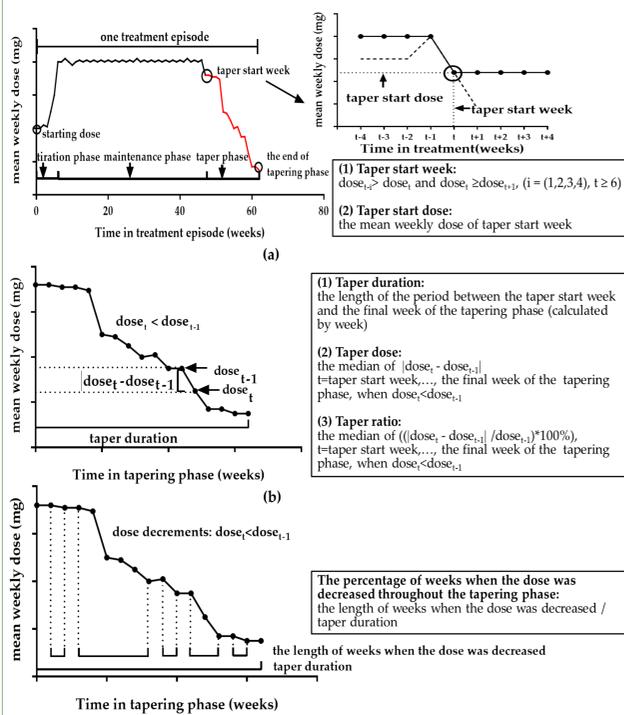


Fig.1. Definition of tapering phase characteristics

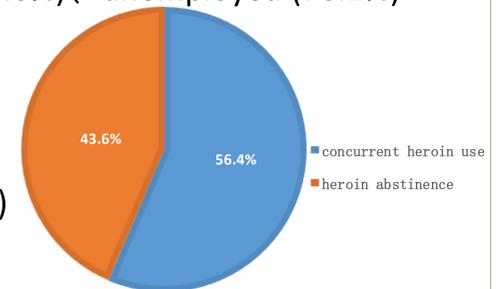
Statistical analysis

- A hierarchical structure resulted from the clustering of treatment episodes among different participants: two-level hierarchical logistic regression models.
- All variables with a $P < 0.20$ in univariable regression and all tapering phase characteristics were included in the multivariable regression.
- Due to the collinearity and conceptual overlap between taper dose and taper ratio, we produced two separate multivariable regression models.

Results

Summary characteristics

- A total of 853 participants with 961 treatment episodes were included in this study.
- Mainly male (90.6%)、unmarried (57.0%)、unemployed (76.1%)
- Mean age: 37.2 ± 6.72
- The HIV prevalence: 7.0%
- The HCV prevalence: 79.2%
- Treatment attendance: $> 80\%$ (72.8%)



Tapering phase characteristics

- Taper start week: < 16 (51.4%)
- Taper start dose: < 60 mg (65.9%)
- Taper duration: > 52 weeks (44.3%)
- Taper ratio: $> 10\%$ /week (50.4%)
- Taper dose: < 5 mg/week (77.1%)
- % weeks when the dose was decreased in the tapering phase: 25-49% (43.1%)

Association between tapering phase characteristics and heroin abstinence

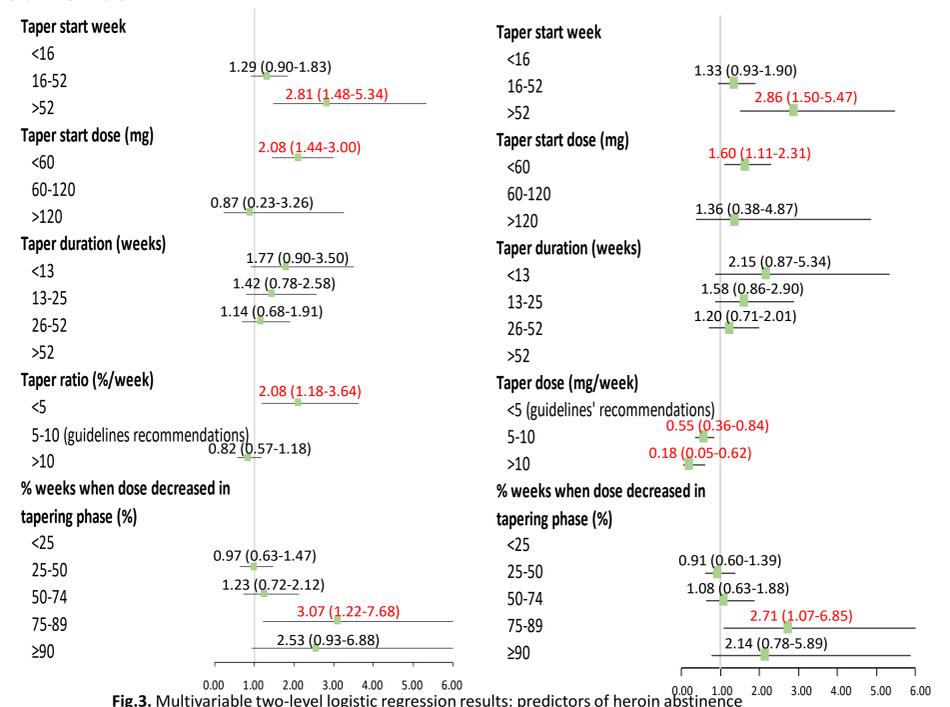


Fig.3. Multivariable two-level logistic regression results: predictors of heroin abstinence

Conclusions

- Concurrent heroin use among MMT participants during a tapering phase was common.
- Those who start the tapering phase later, have a lower dose of methadone, with a more gradual rate of taper, and a dose reduction in 75-89% of the tapering phase increased the odds of heroin abstinence.

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