

The relationship between opioid agonist therapy and cessation of injecting drug use: Evidence from a prospective cohort study of people who inject drugs

Authors: Agius, P. A.^{1,2}, Hickman, M.^{2,3}, Maher, L.^{2,4}, Stoove, M.², Higgs, P.², Curtis, M.^{2,5}, Stewart, A.^{2,6}, Rathnayake, K.², Colledge-Frisby, S.^{2,5}, Hellard, M.^{2,6}, Petrovic, R.², Ward, B.^{2,7}, Crawford, S.⁸, Kerr, T.⁹, Dietze P^{2,5}.

1. Deakin University, Burwood, Victoria, Australia
2. Disease Elimination Program, Burnet Institute, Melbourne, Victoria, Australia
3. University of Bristol, Bristol, United Kingdom
4. Kirby Institute, UNISW, Sydney, New South Wales, Australia
5. National Drug Research Institute, Curtin University, Melbourne, Victoria, Australia
6. School of Public Health and Preventive Medicine, Monash University, Melbourne, Australia
7. School of Rural Health, Monash University, Bendigo, Victoria, Australia
8. Harm Reduction Victoria, Brunswick, Victoria, Australia
9. University of British Columbia, Vancouver, British Columbia, Canada

Introduction. Previous research shows that periods of injecting drug use are associated with multiple harms such as overdose. We sought to model transitions between states of drug injecting and non-injecting over time and the impact of opioid agonist therapy (OAT) on these transitions in a community-based cohort of people who inject drugs.

Methods. Data come from SuperMIX, a prospective cohort study involving annual interviews with people who inject drugs in Melbourne. We used DAGs to set out how a causal effect between OAT engagement and cessation and resumption of any injecting drug use between annual interviews could be tested. We then modelled transitions between states of injecting and non-injecting to test for effects of any recent OAT engagement and sustained OAT engagement on these transitions.

Results. From 1496 participants with 4875 person-period follow-up (FU) observations, we observed 281 injecting cessation and 139 injecting resumption events. Preliminary analyses provide evidence of a time-dependent positive association between any recent OAT engagement and injecting cessation (adjusted Hazard Ratio [aHR]=2.29, 95% confidence interval [95%CI] = 1.08, 4.84 at 7-years follow up). Similarly, sustained engagement in OAT increased likelihood of cessation (aHR=1.12, 95%CI=0.99, 1.26). Any recent OAT was found was associated with cessation among those who identified as Aboriginal or Torres Strait Islander compared to those who did not (aHR=5.99, 95%CI=1.07, 33.6). There was a small to moderate correlation (r=.28) between each of the state-specific random effects suggesting two distinct participant groups: frequent transition (high probability of short periods of cessation and relapse) or less frequent transition (longer periods of cessation and relapse).

Conclusion. We found evidence of a causal relationship between any recent OAT and sustained OAT and cessation of injecting drug use which would contribute to the reduction of drug and injecting related harm, in a community-based cohort of people who inject drugs.