

## **The impact of opioid agonist treatment on fatal and non-fatal drug overdose among people with a history of opioid dependence in NSW, Australia, 2001-2018: findings from the OATS retrospective linkage study**

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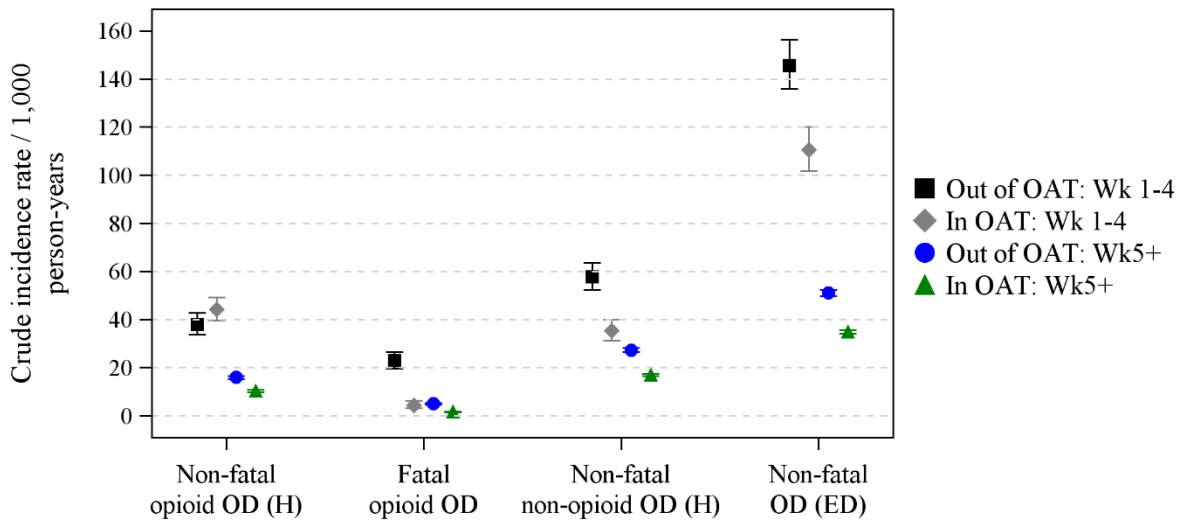
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**Background:** There are critical periods of mortality risk at onset and cessation of opioid agonist treatment. We aim to determine whether non-fatal overdose followed the same pattern as fatal overdose, comparing the first 4 weeks of treatment and treatment cessation and the remainder time off treatment, with the remainder treatment time, to determine intervention markers.

**Methods:** Retrospective cohort study of people with a history of opioid agonist treatment using linked New South Wales data. The incidence of non-fatal overdose hospitalization; emergency department presentation; and fatal overdose from national death records were compared. Rates were calculated using generalized estimating equations adjusting for demographics, year, and recent health and incarceration events.

**Results:** The rate of an emergency department drug overdose presentation was highest. It was more than three-fold the rate of opioid non-fatal overdose hospitalisation and 14 times higher than fatal opioid overdose. It was also twice the rate of non-opioid non-fatal overdose hospitalisation. Fatal overdose was lowest while in treatment. This differed from the measures of non-fatal overdose, the overdose rate was elevated in the first four weeks in treatment as well as the first four weeks post treatment.

**Figure: Drug overdose (OD) rates by opioid agonist treatment (OAT) exposure periods**



Note: (ED) is an emergency department arrival; (H) is hospitalisation

**Conclusion:** Retention on opioid agonist treatment is protective against drug related overdose. There is elevated risk of non-fatal overdose at treatment initiation that is not evident for fatal overdose, however the first month of treatment cessation is a critical period for both non-fatal and fatal overdose. These findings emphasize the importance of treatment retention and interventions for polysubstance overdose at cessation.

**Disclosure of Interest Statement:**

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