The incidence of opioid overdoses among people who inject drugs attended by ambulance: A prospective observational study.

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Introduction: As the front-line professional response, paramedics in Victoria have access to naloxone for rapid reversal of opioid overdo
ses. Effective naloxone administration in situations of clinical need is an appropriate marker of opioid involvement. We present the first examination of the incidence of non-fatal opioid overdose among people who inject drugs as indexed by effective naloxone administration by paramedics.

Method: Longitudinal data from 1,288 participants in the Melbourne Injecting Drug User Cohort Study (SuperMIX) were linked with Ambulance Victoria attendance data from 2008 to 2019. Attendances where naloxone was administered and improvements in respiratory rate and/or Glasgow Coma Scale score were noted and were assumed to be non-fatal opioid overdoses.

Results: The naloxone administration protocol was started for 937 (9.6%) of 9,726 attendances and administered in 784 (83.7%) attendances. Initial and final vital signs were available for 711 (91%) attendances. At least one vital sign improved in 671 (94.4%) cases among 330 individuals over 15,134 person-years (PY), yielding an incidence of 44.3 per 1,000PY. Between 2008 and 2018, the annual incidence of non-fatal opioid overdose increased 1.6-fold from 34.9 to 57.5 per 1,000PY. While there were no significant differences between males and females, incidence was higher among participants aged between 25-45 years compared to other age categories.

Discussions and Conclusions: Results indicate the incidence of non-fatal opioid overdose attended by ambulance is up to 10 times higher than mortality incidence observed in the SuperMIX cohort (5.4/1,000 PY). There is a need for continued opioid overdose prevention in this population.

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