

## **Examining the recurrent risk of health service access for suicidal behaviours and suicidal death following residential treatment for substance use disorders: a recurrent event analysis**

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**Introduction / Issues:** Suicidal behaviours are a serious concern among individuals with substance use disorders (SUDs), with higher rates of suicides when compared to the general population. Residential treatment is a common intervention for individuals with severe SUDs, yet little is known about the characteristics of suicide among this population following discharge from treatment. Using administrative data linkage, we aimed to examine suicide-related presentations and suicides in health services and the registry of deaths following discharge from residential substance use treatment.

**Method:** Participants included 1056 individuals admitted to three residential treatment facilities in Queensland, Australia from January 1 2014-December 31 2016. Participant administrative data was linked to EDs, mental health services, hospitals, and the registry of deaths. ICD-10 codes were used to identify suicide-related events. The Anderson-Gil model with time to event was used to analyse recurrent events of suicidal behaviour.

**Key Findings:** Within 2-years post-discharge, 16.57% of individuals had a suicide-related episode (n=298 episodes), including 64 episodes of suicidal ideation, 215 episodes of suicidal behaviour, and 19 suicides. The highest proportion of episodes (11%) occurred within 1-month of discharge and the service with the highest number of presentations was ED (n=166, 57.70%). Receiving a Disability Support Pension (aHR=1.69 (95%CI:1.10,2.59), p=0.016), having two or more episodes of residential AOD treatment (aHR=1.49 (95%CI:1.30,2.15), p=0.032) and having previous suicide-related episodes (p<0,001) was associated with a higher risk of recurrent suicide-related events. Completing residential treatment was associated with a lower risk of a suicide-related events (aHR=0.54 (95%CI:0.35,0.83), p=0.005)

**Discussions and Conclusions:** Suicide-related presentations among this population is high after leaving treatment. Understanding suicidal behaviours following discharge from residential treatment is crucial for developing effective suicide prevention and intervention targets among this high-risk population.

**Implications for Practice or Policy:** Suicide-related presentations across various healthcare services represent key opportunities to provide intervention aimed at reducing the risk of subsequent suicidal events and deaths in people who use substances.

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