A retrospective review of hospital admissions for opioid toxicity in South Australia: A 3-year, state-wide study

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Introduction and Aim: Opioid use and opioid toxicity-related morbidity and mortality have been increasing in Australia. Literature characterising opioid-toxicity related hospital admissions in Australia is scarce, thus this study aimed to quantify and describe opioid toxicity-related hospital admissions in SA over approximately 3 years.

Design and Methods: International Classification of Diseases, 10th Edition codes (T40.0-T40.4 per local coding practice) were used to identify admissions involving opioid toxicity across all public hospitals in SA between 01/06/17-31/08/20. Only admissions where the condition onset flag was coded as “condition not noted as arising during the episode of admitted patient care” were included. Demographic and episode of care data were extracted. Data were summarised using descriptive statistics. Total admission cost estimates were calculated using Independent Hospital Pricing Authority data.

Results: 2046 admissions met the criteria for inclusion, 56% were for male patients and the most common age at presentation was 40-49 years. Where opioid toxicity was the primary diagnosis, the responsible opioid was unspecified for 70% of admissions. Heroin-related toxicity was the primary diagnosis in 23% of admissions where the opioid responsible was identified. One fifth of admissions occurred outside of metropolitan Adelaide. Individuals living in an area of relative socioeconomic disadvantage and Aboriginal and Torres Strait Islander people were over-represented. Over half of admissions required a stay >24hours, 19% were admitted for ≥5days, 22% required intensive care and almost 10% required mechanical ventilation. In total admissions were estimated to cost $18,230,546.50, equal to approximately 5.6million annually.

Discussions and Conclusions: Although potentially an underestimate due to coding limitations and not capturing non-admitted emergency presentations, these findings highlight the significant burden opioid-toxicity related hospital presentations place on the healthcare system and individuals involved.

Implications for Practice or Policy: This study demonstrates the critical need for opioid-related harm minimisation strategies, such as take-home naloxone.

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