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

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Hospital admissions with opioid toxicity disproportionately involve vulnerable patients, and place a large financial burden on public hospitals

Characteristics of hospital admissions involving opioid toxicity in SA. 01/06/17 – 31/08/20

- Number of admissions: 2046 admissions involving opioid toxicity were identified over 38 months.
- Age and sex: Most common age range on admission was 40-49 years. 56% of patients were female.
- Paediatric admissions: 1.1% of admissions involved patients under the age of 10 years.
- Geographical location: One fifth of admissions occurred outside of metropolitan Adelaide.
- Indigenous patients: 7.3% of admissions were for patients who identified as Aboriginal and/or Torres Strait Islander. (vs 2% of SA population).
- Socioeconomic status: 27.8% of admissions were for people living in areas of lowest relative socioeconomic advantage (vs 2.6% for highest).
- Primary diagnosis: Where opioid toxicity was the primary diagnosis, the responsible opioid was unspecified for 70% of admissions.
- Causative opioid: Heroin-related toxicity was the primary diagnosis in 23% of admissions where the opioid responsible was identified.
- Heroin toxicity: 26.2% of indigenous patients experience toxicity attributed to heroin (vs 11.9% non-indigenous patients).
- Length of stay: Over half of admissions required a stay >24 hours and 19% were admitted for ≥5 days.
- Intensive care: 20% required intensive care, almost 10% required mechanical ventilation and 1.3% died during admission.
- Admission costs: Admissions were estimated to cost approximately 5.6 million dollars annually.

Introduction
- Australia is facing increasing morbidity and mortality from consumption of both prescription and illicit opioid use.
- In 2019, opioids were implicated in three out of five drug-induced deaths.
- Literature characterising opioid toxicity-related hospital admissions in Australia is scarce.

Aim
- To quantify and describe opioid toxicity-related hospital admissions in SA over approximately 3 years.

Method
- International Classification of Disease 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.
- Data were summarised using descriptive statistics.
- Chi-squared tests were used to compare characteristics between admission subgroups.
- Cost estimates were calculated using Independent Hospital Pricing Authority data.

Conclusions
- These findings highlight the significant burden opioid toxicity-related hospital presentations place on the healthcare system and individuals involved.
- Demonstrates the critical need for judicious opioid prescribing, education regarding safe storage of opioids and opioid-related harm minimisation strategies, such as real-time prescribing monitoring safe injecting sites and take-home naloxone.

Graph shows an increased number of admissions involving opioid toxicity (y-axis) for patients living in a postcode region of relative socioeconomic disadvantage, as determined by a lower socio-economic index for areas (SEIFA) score (x-axis)