Self-harm hospitalised morbidity and mortality risk in Australia using a matched population-based cohort

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Introduction

Prior and repeated self-harm hospitalisations are common risk factors for suicide. However, few studies have accounted for pre-existing comorbidities and prior hospital use when quantifying the burden of self-harm.

Objectives and Approach

To quantify hospitalisation in the 12 months preceding and re-hospitalisation and mortality risk in the 12 months post a self-harm hospitalisation. A population-based matched cohort study of individuals ≥18 years using linked hospitalisation and mortality records from four Australian states. Self-harm was identified using a principal diagnosis of injury (S00-T75 or T79) and an external cause of self-harm (X60-X84). The index self-harm hospitalisation was identified and 12-month pre- and post-index injury health service use was examined. The non-injured comparison cohort was randomly selected from the electoral roll and was matched 1:1 on age, gender, and postcode of residence. Comorbidities were identified using diagnosis classifications with a 1-year lookback. Negative binomial regression was used to quantify associations between self-harm and counts of hospital admissions 12-months post the index hospitalisation using rate ratios and 95%CIs.

Results

There were 11,597 individuals with a self-harm hospitalisation in New South Wales, South Australia, Queensland or Tasmania with a matched comparison. Mean age was 38.6 years (SD=14.9) and 57.6% were female. The self-harm cohort had a higher proportion of Charlson comorbidities, mental health diagnoses, alcohol misuse and drug-related dependence than their matched counterparts. The self-harm cohort experienced a higher proportion of health service use in the 12-months preceding (20.5% vs 10.1%) and post (21.2% vs 10.6%) the index admission and a higher mortality rate (2.9% vs 0.3%) than their matched counterparts. The adjusted rate ratios (ARR) for hospital readmission were highest for females (ARR: 2.86; 95% CI: 2.33-3.52) and individuals aged 55-64 years (ARR: 3.96; 95%CI: 2.79-5.64).

Conclusion/Implications

Improved hospitalisation burden quantification for self-harm can inform resource allocation for intervention and after care services for individuals at-risk of repeated self-harm. Better assessment of at-risk self-harm behaviour, appropriate referrals and improved post-discharge care, focusing on care continuity is needed.