

Long-term mortality following burn injury: a population-based study of adults 45 years and older

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Objective: To assess the impact of burn injury on long-term all-cause mortality in adults 45 years and older and to estimate any increased risk of death attributable to burn injury.¹

Methods: A population-based matched longitudinal study using record linkage of health administrative data from the Western Australian Hospital Morbidity Data System and Death Register. A cohort of burn injury cases aged 45 years and older, hospitalised for burns during 1980-2012 (n=6,014) was identified. A non-injured comparison cohort was randomly selected from the Western Australia Electoral Roll (n=25,759) and frequency matched to burn cases. Kaplan Meier plots and Cox proportional hazards regression were used and mortality rate ratios (MRR) and Attributable Risk percent (AR%) were generated.

Findings: The adjusted all-cause MRR for burn injury was 1.4 (95% confidence interval (CI): 1.3-1.5); adults 45 years and older hospitalised with burn injury had a 1.4 times greater rate of mortality than those with no injury. The excess long-term mortality associated with burn injury was estimated to account for 29% (AR%) of the total deaths during the study period, accounting for 725 deaths. Mortality was increased for both severe and minor burns with adjusted MRRs (95%CI) of 1.3 (1.1-1.9) and 2.1 (1.9-2.3), respectively.

Conclusions: Burn injury is associated with increased long-term mortality. Mortality based on in-hospital deaths alone would lead to an underestimate of the total mortality burden associated with burn injury in this adult population. These findings have implications for clinical management and longer-term patient surveillance, as well as burn injury prevention.¹

¹ Duke et al. 2015 Long-term mortality among older adults with burn injury: a population-based study in Australia. Bull WHO (accepted 16 Feb 2015; published online 20 April 2015).

Key Words

Burn injury; long-term mortality; population-based; cohort study.

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