

What We All Can Learn from the Typical Tasmanian Teenager Burn Injury

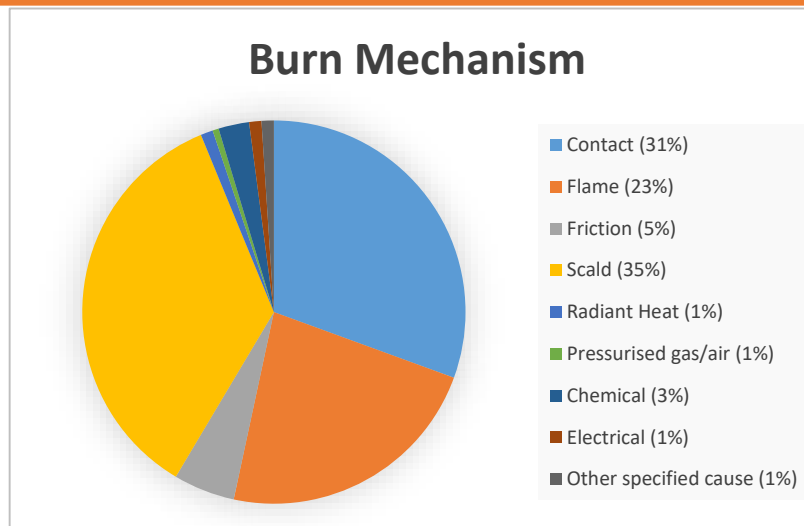
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Background: Children & older adults sustain burns that warrant hospitalisation disproportionately more than other age groups¹; however adolescent & young adults have also been identified as a group at higher risk of burn related injury. The incidence, injury characteristics, & outcome have not yet been precisely defined.

Aim: To look at the epidemiology of the teenage burn injury in Tasmania over the last five years.

Methods: Retrospective review from The Burns Registry of Australia & New Zealand in those aged 11-19 years of age in Tasmania, who presented in the last five years.

Results: 194 teenagers have presented to the Tasmanian Burns Unit at the Royal Hobart Hospital. This included 147 to outpatients and 47 managed initially as an inpatient. The average age was 16 years, with a larger proportion of patients in the 16-19-year-old age group (64%). The number of presentations per year remained consistent, at an average of 38 per year. Peak incidence was January to March. The most common mechanisms of injury was scald (35%) and contact (30%), similar to BRANZ published data² during leisure activity excluding sports (19%), followed by cooking/preparing food/drink (19%) and working for income (12%). Burn injuries occurred most commonly in the teenager's home (47%, $n=91$), followed by other residence (e.g. friend's home in 14%).



There were only a small number of injuries occurring in school or other institution (5%). There were six self-harm injuries (3%), five of whom were female and nearly all occurring from flame. The average TBSA burn was 1.8%, with half of these being superficial & only 2% being described as full thickness in depth. Hand(s) were most commonly affected (36%), followed by upper limb (25%).

Discussion: Epidemiological data can target burn safety prevention & management. Tasmania can expect one new teenager to burn themselves every 1.5 weeks, most commonly in males aged around 16 years from scalds. Half occur in the home in summer months.

Currently prevention activities in Tasmania include the School Fire Education Program for primary school students, and the focus in high school students including provision of resources for teachers³. Further research into subtype and timing could focus these preventative activities. Even though the numbers are smaller than in adults², there is a high number of deliberate self-harm (DSH) burn injury in teenagers. Increased research in this area may offer a chance to understand and intervene in subsequent associated elevated risk of suicide⁴.

Conclusion: Tasmanian teenagers need ongoing education for preventing burn injuries, especially inside the home leading up to school holidays. Further research is required to reinforce and improve the current preventative activities, including DSH burn injuries.

References:

- 1 Wasiak J, Spinks A, Ashby K, Clapperton A, Cleland H & Gabbe B (2009). The epidemiology of burn injuries in an Australian setting, 2000-2006. *Burns*;35:1124-1132.
- 2 Burns Registry of Australia and New Zealand: Annual Report July 2016-June 2017.
- 3 <https://www.tfseducation.com.au>
- 4 Olfson M, Wall M, Wang S, Crystal S, Bridge JA, Liu S, Blanco C (2018). Suicide after deliberate self-harm in adolescents and young adults. *Pediatrics*;141(4);1-12.