

The cost of Self Immolation – 20 years of data from Royal Brisbane and Womens' Hospital

Mikaela Seymour B.Med.Sci, MD, Andrew Phillip Maurice B.App.Sc.(Hons) MBBS, Jason Brown BDS(Hons) MBBS FRACS
Professor Stuart Pegg Adult Burns Center,

Royal Brisbane and Women's Hospital, Brisbane, Queensland, Australia

Introduction

Treatment of burns often requires protracted hospital stay, Intensive Care Unit (ICU) admission, significant operative time and resources, as well as extensive Allied Health input equating to significant cost⁽¹⁾. Although previous studies have compared ICU cost for burns patients against non-burns patients and found no disparity⁽²⁾ there is a paucity of evidence comparing Self Immolation patients (severe, self inflicted burns with suicidal intent) to other burns.

Method

A retrospective review of all burns patients that were admitted to the Royal Brisbane and Women's Hospital, Queensland, Australia from 1997 to 2016 with self-immolations was performed. Length of hospital stay was determined from patient records and a literature review was used to identify the average Australian cost of a burns patients ICU and hospital inpatient unit stay.

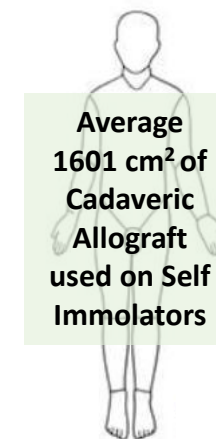
Results

5814 patient were admitted to the Royal Brisbane and Womens' hospital Burns Unit between 1997-2016. Self Immolation patients compromised 2% of all burns admissions however 125 required ICU admission, representing 17% of all ICU admissions.

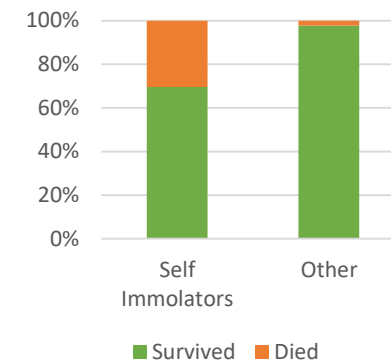
It is known the most significant burden of cost for Burns patients is length of hospital stay, and TBSA⁽¹⁾ both of which were significant in the Self Immolation patients. Over the 20 year period it is estimated Self imolators compromised 8% of all burns patients hospital days, and 24% of all ICU bed days. It was found 200,200cm² of Decellularised cadaver Skin were used in Self immolation patients, each unit at a cost of \$779 with a total of \$779,779AUD. Overall, ~ \$27,599,263.90 was spent on self immolation patients comprising 9% of all health care spending.

	Self Immolation		Other Burns
Total Ward Hospital Days	6216	8%	75260
Cost	\$22,858,407.60		\$276,757,361
Total ICU Days	2245	24%	9436
Cost	\$4,740,856.30		\$19,926,378.64
Total	\$27,599,263.90	9%	\$296,683,739.64

Table: Comparison of cost of self immolations versus accidental burn over 20 year period



Survival to Discharge - Self Immolators vs. Other Burns



Conclusion

Whilst Self immolation patients only contributed to 2% of total burns admissions to the RBWH Burns unit over the past 20 years it is estimated they cost ~9% of total cost based purely on length of Hospital stay and ICU admission. This confirms existing beliefs that although a small cohort, Self immolation patients consume a substantial proportion of burns health care resources.

References:

- (1) Ahn CS & Maitz PKM. 2012. The true cost of burn' Burns, 38(7): 967-974.
- (2) Patil, V et al, 2010, Do burns patients cost more? The intensive Care unit costs of burns patients compared with controls matched for length of stay and acutiy. Burns Care Res. 31(4) 598-602