



# *Surviving Burns With Care*

A gender-based analysis of burns epidemiology in Bangalore  
and challenges to the health system

# Surviving Burns With Care - A gender-based analysis of burns epidemiology and health system challenges in Bangalore

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## Executive summary

Death by burns is one of the largest contributors to the number of unnatural deaths cases (*Unnatural deaths include accidents, suicides, homicides, conflict-related deaths, and execution, which are not describable as due to natural causes*) in India. In Bangalore alone, the total number of burn cases far exceeded 1600 and the number of deaths was 854 in 2012. The two dedicated burns ward available to victims in Bangalore are at Victoria Hospital that has a 54 bed burns ward and St. John's Medical College having six beds. While burns admissions in Bangalore has been increasing over time (by 43% between 2001 and 2011), the availability of dedicated beds has remained the same.

The frequency of burns was disproportionately higher among women than men (by 40 to 60%), with admitted women being more severely affected on average (56% body surface area for women, and 36% body surface area for men). Though majority of cases were reportedly accidental (70% and 51% respectively among men and women), a significant number of cases among women were associated with abetted suicides and homicides (at least 38% cases). It is also noted that at least 19% of cases reported as accidents were actually suicidal or homicidal burns. From a statistical perspective, burns as a method of suicide was more common among women as compared to men (more than double). While there were several other associated factors for suicidal burns, homicidal burns were largely associated with dowry cases (at least 15% of all burns deaths among women). Also, a large proportion of victims of all dowry deaths had a single female child as compared to single male child (odds of 2.6 to 9.6).

As several of these cases of intentional burns occur at home, children often become the only witnesses to these tragedies. Such child witnesses require special support to recover from the traumatic experience of seeing their mothers burn. They also require care during judicial proceedings. It has been noted that these children are at a higher risk of suffering from long term impacts such as malnutrition, behavioural and emotional disturbances, and become perpetrators or victims of violence later in life.

Though several burns cases received first aid, there is need for further improvement of management of burns at peripheral centres as for e.g. a delay of over 4 hours was associated with unfavourable outcomes (overall chances of survival reduced from 60% to 40%). Improved coordination between burns centres, peripheral hospitals and the lay public may reduce the time taken for admission of cases of burns.

The number of dedicated burns wards in Bangalore has not increased over the past decades despite the fact that there has been an increase in the number of cases. . The Victoria Hospital burns ward has seen improvements over the past decade through various interventions such as restrictions on the entry of visitors, improved sanitation and diet, air conditioning and curtailing corruption. Keeping in mind that it is one of the largest burns ward in South Asia, there is a need to aspire for higher standards and quality of care that match international standards. Research on burns care has been inadequate, possibly due to the generally poor quality of research at medical colleges as also the lack of hypothesis-driven research and neglect of qualitative research design. Due to this there are large gaps in our knowledge of at-risk groups, quality of care and cost-effective interventions.

Some of the main issues affecting governmental healthcare services in burns care are shortage of human resources (which is a cross cutting issue in most government health centres), especially nurses as they are critical in providing individual attention needed for severe burns cases. As burns ward are not "profit-generating", the resources diverted to it is minimum. While burns care at Victoria Hospital is free, there is also provision for patients from poor financial background to avail the Vajpayee Arogyashree Scheme for necessary care and follow-up (including surgeries) in private hospitals. It is not clear as to how many are availing of this scheme. It has been suggested that improvement in human resources be taken upon priority, and increase the number of "dressers" and nurses to provide efficient nursing care and support to individual cases.

The outcome of burns treatment (which may be recovery or death of the patient) is determined by many factors: percentage of body surface area affected by degree of burns, age of victim, co-morbidities, transport time, asepsis, early surgery and post operative care including good diet. The outcome of moderately and severely burnt patients (those with more than 30% deep burns) is generally poor. At Victoria Hospital, the mortality rate was found to be over 53% among men and over 71% among women. Outcomes were found to be universally poorer among women as they suffer more severe burns on an average.

In families where burns occur, they are affected both financially and emotionally, in addition to the stigma suffered by the victim associated with burns disfigurement. Survivors become dependents, as they often lose their jobs, do not get employment and become socially ostracised. Many of the victims do not get the support of their families for various reasons thus rendering them more vulnerable. There are several other additional long term health impacts on those who have suffered burns due to intimate partner violence, which include depression and other emotional disturbances, eating and gastrointestinal disorders, post traumatic stress, suicide attempts, headache, back pain, abdominal pain and overall poor health.

Police, doctors and tashildars have a critical role in recording statements of admitted cases. However, it has been noted that there is gross neglect and lack of will in making spot visits to corroborate the statements made by victims. In addition, there are several external factors that influence the statements made by victims (such as the presence of husband and his family members, pressures arising out of social norms, fear about children's future etc). While those women who have attempted suicides initially report the burns as accidental, but later choose to change their statement to indict the person responsible for the burns, but such changed statements are often not considered legally "trustworthy". Additionally Court cases take several years to be decided that it discourages family members in pursuing legal redress.

Several recommendations have been made by experts, researchers and social workers to reduce the incidence of burns cases and improve treatment facilities. These recommendations are directed towards healthcare administrators, non-government organizations and most importantly to government departments and officials. The recommendations and levels of intervention include: home (including technical improvement of stoves and electrical appliances), community (creation and presence of support groups, gender sensitization), burns care training (hemodynamic shock management, nurse training, training of burns care assistants), burns care centres (sanitation, funds, human resources), legal procedures (protocol for investigation, fast track courts), and societal interventions (prevention of suicide, support groups, counselling centres, providing economic security for victims). There is a need for all actors associated with the sector – including victims, surgeons, medical students, nurses, paramedical staff, social workers, hospital administrators, public health researchers, police, and policy makers (health and social) to come together to identify and address gaps related to burns care and rehabilitation. While there has been some focus on burns care, there is a need to relook at the issue from a public health perspective so that a renewed vigour is pumped into addressing violence against women in society. Working with burns survivors would give insights into that aspect as well.

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Cite as: Pradyumna A. Surviving Burns With Care - A gender-based analysis of burns epidemiology and health system challenges in Bangalore Vimochana, 2016

**Suggested Contribution: Rs 100/-**

