

Evacuate late at your peril: An assessment of Australian bushfire fatalities

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This presentation will detail the ongoing research between Risk Frontiers and the Bushfire Cooperative Research Centre which explores fire fatality trends within Australia to identify the most vulnerable groups and behaviours.

To date, no detailed quantitative analysis of the circumstances of Australian bushfire-related civilian deaths exists. As part of a larger project on Australian natural hazards, Risk Frontiers (a not for profit research organisation funded by the insurance industry and based at Macquarie University in Sydney) has created a database which utilises historical spatial and temporal fatality trends as reported through printed media over the last 100 years. The fire-death database details the dates, locations and circumstances of fatalities and the age, gender and occupation of the deceased. The newspaper data have been augmented, triangulated and validated using scientific and government reports, Australian Bureau of Statistics data and historical accounts. To further validate the data, death certificates and Coroner's reports have been examined.

The database is a unique opportunity to assess the circumstances in which people perished, as it provides details of each individual fatality, enabling a thorough analysis of their actions as the fire front passed and the demographic relationships present. In addition, unlike most other death data sets, the names and ages of individuals have been recorded, enabling verification with coronial reports.

Analysis of the data aims to answer a number of important questions relating to the nature of Australian fire deaths. Such questions regard age, gender, location and occupational trends; the relationship between deaths amongst children and the elderly and their propensity to evacuate; the circumstances of the fire deaths (whether inside the home or outside) and; whether deaths occurred whilst defending the home or evacuating.

Although the data are still being improved and verified, the existing information convincingly shows the dangers of being caught outside during a bushfire with the majority of fatalities occurring whilst fleeing the flames. The majority of the fatalities occurring inside properties were due to the inhabitants sheltering in place and not actively defending.

In addition to substantiating the evidence for the 'Prepare, then stay and defend or leave early' policy, the analysis has found that most fire deaths are among men. However, the number of women dying in fires has increased over the past 30 years. The relationship between gender and actions suggests that men are often caught outside, while defending their wider property (such as on farms – fences, sheds etc.), whereas most female fatalities occur while sheltering in the house or attempting to flee. This is also true for children and adolescents, with the majority of deaths occurring while attempting evacuation.