



Individuals' Health Protection Responses to Hazardous Bushfire Smoke in the Australian Capital Territory

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BACKGROUND AND AIM

Bushfire smoke can have considerable adverse effects on human health, mental health and quality of life. For prolonged periods during the 2019–20 bushfire season hazardous levels of bushfire smoke-related air pollution affected major metropolitan areas, including the Australian Capital Territory (ACT). Public health advice focused on avoiding smoke exposure by remaining indoors, but this becomes difficult over prolonged periods and when smoke infiltrates homes and workplaces as occurred here.

This study aimed to understand how these prolonged, severe bushfire smoke conditions experienced in the ACT impacted activities of daily living and determine what measures community members took to reduce their exposure to smoke and factors that influenced this.

METHODS

An online survey captured information from 2,084 adults living in and around the ACT (40% male, median age 45 years) about their experiences during the 2019-20 bushfire season including basic demographics, the impacts of bushfire smoke on lifestyle, and health protection behaviours employed and factors influencing or inhibiting these (described in Rodney et al., 2021).

KEY FINDINGS

Smoke reduced overall physical activity for most respondents (74%), including walking, vigorous physical activity, and gentle recreation (reduced for 88%, 78% and 59% of people, respectively). Many also reduced the amount they went to work and study, were social, and travelled during the period of smoke (reduced for 22%, 69% and 59% of people, respectively).

Almost all community members (>98%) participated in at least one activity to protect their health from smoke-related air pollution. The proportion of participants that regularly did these included:

- 88% shut windows and doors
- 85% stayed inside
- 45% sealed doors and/or windows
- 49% used air-conditioning
- 22% used air purifiers
- 20% wore face masks
- 25% spent time in a place other than their home
- 3% regularly left town entirely (19% at some point).

Availability, cost, lifestyle and/or self-consciousness were barriers for some. Inhalers were also used to mitigate the respiratory effects of smoke by 20% of people at any point and 13% regularly.

Following the 2019-20 bushfire season only 41% of participants felt confident that they knew how to protect their health from bushfire smoke, leaving much of the population remaining uncertain.

CONCLUSIONS AND IMPLICATIONS

The prolonged period of hazardous smoke affected community members' lives in a range of ways, and almost all took measures to protect their health from smoke. However, barrier such as cost and availability prevented some from undertaking health protection behaviours. The level of uncertainty that existed about protecting health from bushfire smoke suggests there may be a need for both better information and education to empower people to protect their own health from smoke. Public health strategies need to be appropriate for prolonged periods of bushfire smoke and be effective and feasible within community constraints, ensuring the provision of appropriate and timely support and resources to minimise smoke and fire exposure.

