BUSHFIRE SMOKE IMPACT SURVEY 2019-2020: OUTCOMES SNAPSHOT

ASTHMA AUSTRALIA

Between July 2019 and March 2020, Australia experienced an unprecedented number of bushfires known as the Black Summer Bushfires, particularly affecting populations in New South Wales, Queensland, the Australian Capital Territory, Victoria and South Australia. The bushfire smoke caused a public health emergency, adding to the direct bushfire impacts already felt by communities, which saw major sporting matches, flights and outdoor events cancelled due to poor air quality. Bushfire smoke contains high concentrations of fine particulate matter, which is harmful to human health. The effects of smoke are unevenly distributed across the population, with people with asthma or other chronic conditions, very young children, pregnant women and the elderly particularly vulnerable to the impacts.

At its worst the smoke resulted in the Air Quality Index reaching more than 25 times the hazardous level in Canberra on the 1st of January 2020[1]. Between November 2019 and January 2020, the Air Quality Index reached greater than 10 times the hazardous rating on multiple occasions in certain areas of Sydney[2]. It is estimated the bushfire smoke was responsible for more than 400 deaths, 2,000 respiratory hospitalisations and 1,300 presentations to the Emergency Department for asthma[3].

Survey Aims and Methodology

In response to the unfolding public health emergency caused by poor air quality, Asthma Australia developed and disseminated a survey to give a voice to people with asthma, and the broader community, about their experiences during the prolonged periods of bushfire smoke exposure. It included both quantitative and qualitative questions to provide insights into who was affected and how. The survey was open for six weeks and for anyone to complete, regardless of their asthma status. It was disseminated via Asthma Australia networks and media articles.

Key findings

These six key findings highlight the devastating impact of bushfire smoke on individuals at high risk, and the need for better protection, particularly for vulnerable people.

1 PEOPLE WITH ASTHMA HAVE SERIOUS HEALTH IMPACTS FROM BUSHFIRE SMOKE

94% of people with asthma reported symptoms during the Bushfire Crisis

70% of people without asthma reported symptoms during the Bushfire Crisis

People with asthma were **4 times more likely to attend Emergency Departments** or be hospitalised and **7 times more likely to report steroid use** (oral or injection) inferring a flare up

2 CHILDREN AND YOUNG PEOPLE WITH ASTHMA WERE MOST IMPACTED BY BUSHFIRE SMOKE

2x They were **twice as likely to report attending the Emergency Department** or being hospitalised because of asthma symptoms

43% of children aged 0-17 reported being absent from work or school

[1]ACT Government 2020, PM2.5 AQI real time graph, Canberra: ACT Government. https://www.data.act.gov.au/Environment/PM2-5-AQI-real-time-graph/jdqg-uq2d?referrer=embed | [2] NSW Department of Health 2020, search for and download air quality data, Sydney: NSW Government. https://www.dpie.nsw.gov.au/air-quality/search-for-and-download-air-quality-data | [3] Borchers et al 2020, Unprecedented smoke-related health burden associated with the 2019-20 bushfires in eastern Australia, Medical Journal of Australia. Doi: 10.5694/mja2.50545

3 PERIODS OF BUSHFIRE SMOKE EXPOSURE INCREASES ANXIETY AND DEPRESSION IN PEOPLE WITH ASTHMA

"**I have been on edge**. Unable to exercise which increased my anxiety."

"Quite anxious, I worry about getting sicker with my asthma, **my work capabilities have been reduced**."

"**I sometimes feel useless**, seeing how other people seem to be able to function normally **when I'm struggling to do basic tasks.**"

4 SUSTAINED EXPOSURE TO BUSHFIRE SMOKE REDUCED PARTICIPATION IN EVERYDAY ACTIVITIES, PARTICULARLY FOR PEOPLE WITH ASTHMA

People with asthma were significantly more impacted physically, financially and socially, compared to people without asthma

Two thirds (66%) **of people with asthma reported they had reduced capacity** to participate in daily activities

33% of people with asthma reported being **sick for longer than a week**

29% of people with asthma reported having to **miss work or school**

35% of people with asthma reported needing to **cancel important sporting or social engagements**

5 PEOPLE WITH ASTHMA ARE TWICE AS LIKELY TO EXPERIENCE FINANCIAL STRESS DUE TO BUSHFIRE SMOKE

25% of people with asthma **reported experiencing financial stress**

13% of **people without asthma reported** experiencing **financial stress**

10% of people with asthma **reported lost salary** during the Bushfire Crisis

2x **People with asthma were twice as likely to report lost salary** compared to people without asthma

6 CURRENT PUBLIC HEALTH MEASURES AGAINST BUSHFIRE SMOKE DO NOT PROTECT PEOPLE FROM EXPERIENCING ASTHMA

People with asthma were more likely to report taking action to reduce their exposure to bushfire smoke including:

- staying inside with doors and windows shut
- using an air conditioner with the recycled setting
- using a facemask
- using a HEPA air cleaner

Despite their efforts, participants who took steps to reduce smoke exposure were **still more likely to report respiratory symptoms, requiring medical attention** and impacts on their quality of life

"Even working inside a shopping centre gave no relief as **the smoke could still be smelt inside. It has been near impossible to avoid.**"

"Still noticed **my son's asthma deteriorate even by staying home in aircon** because houses are not hermetically sealed."

"Currently living by myself without a car so I have to walk everywhere which means **I have to be out in the smoke almost every day walking to work and walking to get food** and other shopping."

ASTHMA AUSTRALIA

Recommendations overview

The survey results indicate the main factors limiting the ability of individuals to avoid smoke during the Black Summer Bushfire crisis were the lack of relevant information, financial constraints and ineffective public health messaging. With fire seasons becoming longer and more intense, the health impacts of smoke must become a policy priority for all jurisdictions. Asthma Australia makes the following recommendations for action that will be necessary to reduce the impact of future periods of smoke on all Australians, particularly those with asthma or other vulnerabilities.

1 Health departments develop and implement an Air Smart campaign including:

- year-round information to improve environmental health literacy;
- funding for non-government health organisations to deliver air quality education;
- targeted information for people with asthma on actions to take to prepare for expected poor air quality events; and
- increased crisis response for periods of sustained poor air quality, such as during bushfires.

2 The Meeting of Environment Ministers develop a uniform approach to measuring and reporting air quality which consists of:

a. separating out PM2.5 in reporting of air quality data;
b. requiring PM2.5 to be reported as an hourly average;
c. using consistent terminology and measures to describe categories of air quality; and
d. introducing strong compliance and enforcement mechanisms to prevent non-compliance.

3 State and territory environmental agencies introduce more air quality monitoring stations, including in regional, rural and remote Australia, and consider the use of temporary air quality stations in further locations during times of extended periods of poor air quality.

4 Building standards be reviewed so that homes can be better protected against air pollution during periods of poor air quality.

5 An accreditation scheme be developed to identify public buildings which meet certain clean air criteria such as: they are well-sealed, have HEPA filter recycled air conditioning and can be easily accessed by community in times of poor air quality.

6 The Chief Medical Officer and State and Territory Chief Health Officers develop and release a national policy framework to guide institutional responses to air quality protection in early learning centres, schools, universities, workplaces, sporting associations and for outdoor events.

7 Health departments provide financial assistance to people with asthma for air purifiers:

a. Health departments develop a scheme to provide subsidies or loans to people with asthma to help with the cost of renting or purchasing air purifiers.
b. The Australian Government Department of Health provide financial assistance to people with asthma towards the energy costs associated with using air purifiers and air conditioning to avoid asthma flare ups by:
   - extending the 'Essential Medical Equipment Payment' to include asthma as an 'eligible medical condition'; and
   - adding air purifiers with a HEPA filter to the list of 'eligible medical equipment'.

8 The Australian Government Department of Health develop a strategy on access to and use of face masks by people with asthma during air pollution events, covering:

a. Maintaining a stockpile of appropriate face masks and developing a strategy to distribute them to people in all areas affected by poor air quality, particularly people in high risk groups.
b. Providing clear guidance on the optimal way to use face masks, including risks and limitations.

9 The Australian Government continue to support telehealth and expand services so people with asthma can access medical care in periods of poor air quality.

10 The Australian Government fund campaigns to increase awareness of Medicare rebates for mental health care and telehealth access to mental health care so people with asthma can access mental health support during periods of prolonged bushfire smoke.

To read the complete Bushfire Smoke Impact Survey 2019-2020 outcomes, visit asthma.org.au/smoke-survey-results