Australian Government
Australian Institute of Health and Welfare

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Short-term health impacts of the 2019–20 Australian Bushfires

Background

In 2019–20, Australia experienced its worst bushfire season on record. With climate change predicted to increase the frequency and severity of bushfires, there has been increasing interest in the health impacts of bushfire events. Bushfires and associated impacts such as smoke pollution, can affect large parts of the population and a range of aspects of health such as respiratory, cardiovascular and mental health. Because of the duration of impact of the 2019–20 bushfire season, analysis of the health impacts of these kinds of fire events is of considerable interest.

Analyses

In 2020, the Australian Institute of Health and Welfare analysed a range of data sources to assess the short-term impacts of the 2019–20 bushfires, including NSW emergency department presentations, visits to GPs, bushfire-specific mental health Medicare Benefits Schedule (MBS) services and respiratory medication sales and dispensing.

A 2021 data update complemented these data by analysing data on hospitalisations, emergency department presentations and MBS mental health data for all jurisdictions, as well physical activity tracking (Strava) data in the Australian Capital Territory.

Key findings

- During periods of poor air quality and/or fire activity there were distinct increases in emergency department presentations and hospitalisations for respiratory conditions such as asthma (Figure 1), as well as in sales of prescription and other medication for the relief of respiratory symptoms.
- Bushfire-specific mental health MBS items introduced in January 2020 were being accessed at a rate of around 500–600 services per week in mid-2020 and service use declined to about half this magnitude by February 2021.
- There were increases in hospital admissions and emergency department presentations for burns at specific times associated with significant fire activity (e.g. in South Australia).
- Decreases in MBS claims for GP services and in physical activity (based on AIHW analysis of aggregated and de-identified data from Strava Metro) suggests that people may have taken steps to avoid air pollution caused by bushfires.

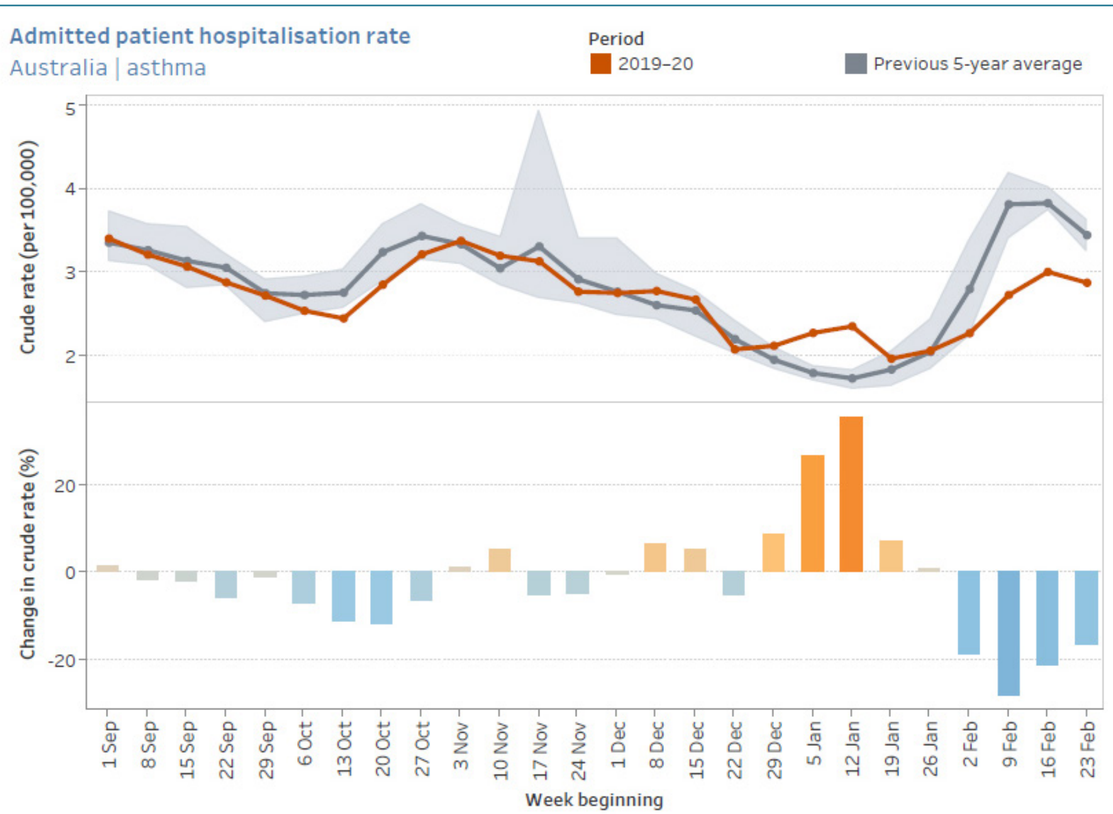

Figure 1: Hospital admission rate for asthma among Victorian residents, 2019–20 compared with previous 5-year average (light grey shading is previous 5-year rate range).

Application

Understanding the likely health impact of natural disasters offers the potential to better prepare for events that may occur in the future. Data may assist communities and local, state and federal governments, with disaster preparedness, response and resilience.

Future work

There is scope to examine the medium and long-term effects of the bushfires on health, and to further investigate topics such as cardiovascular health, perinatal health and vulnerable populations, as well as to explore options to analyse or publish data at finer spatial and temporal scales.

Acknowledgements

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Further Information

Australian bushfires 2019–20: exploring the short-term health impacts

Data update: Short-term health impacts of the 2019–20 Australian bushfires

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