Issues Paper:
Health arrangements in natural disasters
The Royal Commission into National Natural Disaster Arrangements was established on 20 February 2020 in response to the extreme bushfire season of 2019-20 which resulted in devastating loss of life, property and wildlife, and environmental destruction across the nation.

The Letters Patent for the Royal Commission set out the terms of reference and formally appoint Air Chief Marshal Mark Binskin AC (Retd), the Honourable Dr Annabelle Bennett AC SC and Professor Andrew Macintosh as Royal Commissioners.

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Terms of Reference (a), (b) and (f):

(a) the responsibilities of, and coordination between, the Commonwealth and State, Territory and local Governments relating to preparedness for, response to, resilience to, and recovery from, natural disasters, and what should be done to improve these arrangements, including with respect to resource sharing;

(b) Australia’s arrangements for improving resilience and adapting to changing climatic conditions, what actions should be taken to mitigate the impacts of natural disasters, and whether accountability for natural disaster risk management, preparedness, resilience and recovery should be enhanced, including through a nationally consistent accountability and reporting framework and national standards; ...

(f) ways in which Australia could achieve greater national coordination and accountability – through common national standards, rule-making, reporting and data-sharing – with respect to key preparedness and resilience responsibilities ...

Introduction

Natural disasters not only take lives, but can also have a serious effect on the health and wellbeing of those who survive. These effects may be felt most strongly by those in close proximity to the disaster, but, as the bushfire smoke that blanketed large parts of Australia in early 2020 may demonstrate, the effect of natural disasters can be widespread.

This Issues Paper explores some of the health and mental health arrangements in relation to natural disasters in Australia. It provides an overview of Australia’s health care arrangements and discusses the role of primary care providers, the health effects of bushfire smoke, and whether there is a need for greater research into any particular health effects of natural disasters.

The paper does not seek to cover every health issue that the Royal Commission may consider. Further issues may be explored in relation to health arrangements in natural disasters.

This paper poses six questions on which the Royal Commission invites comment by 26 June 2020. To comment, please use the response form on the Royal Commission’s website: https://rcndasubmissions.lawinorder.com.au/

Overview of health arrangements

Australia’s health system is made up of many different services, including primary health care services, specialist services, and hospitals.¹

Responsibility for the health system is based on Australia’s federal system of government, and incorporates both public and private structures. The Australian Government is responsible for leading the development of national health policy, administering Medicare and the Pharmaceutical Benefits Scheme, providing funding to states and territories for public hospital services, regulating private health insurance, funding community-controlled Indigenous primary health care, organising veteran health services and funding health and medical research.

The Australian Government also funds primary health networks. These are independent organisations made up of general practitioners, nurses and other health workers. Each network is overseen by a board of

medical professionals and, among other things, works to improve coordination between primary health care services, hospitals and local communities. There are 31 primary health networks across Australia.²

State and territory governments are responsible for funding and managing public hospitals, regulating and licensing private hospitals, delivering many primary health services, delivering preventive services such as cancer screening and immunisation programs, and funding and managing ambulance services and health complaints services.³

State and territory governments also provide oversight of local hospital networks, which manage single or small groups of public hospital services and are directly responsible for hospital performance under the Performance and Accountability Framework. There are 143 local hospital networks across Australia.⁴

Health and emergency disaster arrangements

In Australia, state and territory health authorities manage health emergencies, which are coordinated between state and territory health departments, local hospital networks and, to varying degrees, primary health networks. Commonwealth health authorities become involved only when there is a national or international impact, or where the emergency has the potential to overwhelm or exhaust a state or territory’s health assets and resources.⁵

The Australian Health Protection Principal Committee⁶ is the peak national health emergency management committee. This committee provides advice on Australia’s preparedness for health emergencies and coordinates the national health response to significant incidents. It is comprised of all state and territory Chief Health Officers and is chaired by the Australian Chief Medical Officer. The committee oversees five standing committees, one of which is the National Health Emergency Standing Committee.

The National Health Emergency Response Arrangements (NatHealth Arrangements) describe how Australia responds to national health emergencies. It covers how the Australian health sector, including Commonwealth and state and territory authorities, work together to respond to these situations. The arrangements are part of the Australian Government’s National Security Framework and operate in conjunction with the Australian Government Disaster Response Plan.

The NatHealth Arrangements are supported by a number of systems and structures, including the National Incident Room, Australian Medical Transport Coordination Group, National Health Security Agreement, and the National Critical Care and Trauma Response Centre.

The National Critical Care and Trauma Response Centre (NCCTRC) coordinates Australian Medical Assistance Teams (AusMAT) – multi-disciplinary teams specially trained to deploy at short notice to provide medical treatment. These teams are drawn from the states and territories and include doctors, nurses, paramedics, logisticians and allied health staff such as environmental health staff, radiographers and pharmacists.⁷ In 2016, AusMAT was verified by the World Health Organisation’s Emergency Medical Teams

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⁴ National Health Funding Body, Annual Report 2018-19, <https://www.publichospitalfunding.gov.au>. Some jurisdictions have different names for local hospital networks. For example, in New South Wales they are known as local health districts.
Secretariat as able to deploy and set up a fully staffed field hospital in the event of a natural disaster or other emergency. The NCCTRC is federally funded.

AusMAT was deployed domestically during the 2019-20 bushfires. For example, a team of eight specialists – two doctors, two nurses, two paramedics and two logisticians – were deployed to RAAF Base East Sale in Victoria to provide immediate clinical and logistical assistance to evacuees, and additional medical and health support services.

**Question 1**
Are the current national health coordination arrangements appropriate to respond to natural disasters in Australia? If not, how should they be improved?

**Role of primary care providers in disaster planning, response and recovery**

It has been observed that when responding to, and recovering from, a natural disaster, a ‘whole of community’ approach is essential to ensuring good health outcomes are achieved. For many people, primary health care providers (such as general practitioners, pharmacists, nurses and dentists) are the first point of contact with the health system. Local general practitioners and pharmacists have been identified as having strong connections with local communities and understanding the local context and patient experience.

During the 2019-2020 bushfires, general practitioners provided locum services to support impacted communities. However, public reporting suggests that operational barriers may have hampered the involvement of primary care providers in some locations.

The Royal Commission has also received evidence that general practitioners have not always been incorporated into disaster planning and response arrangements. Both the Pharmacy Guild of Australia and the Royal Australian College of General Practitioners have called for the inclusion of pharmacists and general practitioners in disaster and emergency planning groups, committees and forums.

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9 National Critical Care and Trauma Response Centre, AusMAT Handbook (version 3) (22 May 2020) <https://www.nationaltraumacentre.nt.gov.au>


12 Ibid.


15 Evidence of Dr Penelope Burns, Royal Commission Transcript, 26 May 2020, T100.1-19; Witness Statement of Dr Penelope Burns, 22 May 2020, [77], [78] and [81].


17 Royal Australian College of General Practitioners, *Submission to Royal Commission into National Natural Disaster Arrangements* (April 2020).
Related health impacts – air quality

The Commission has received a substantial number of submissions from members of the community, health organisations and charities, in relation to the impacts of bushfire smoke on Australians. Many in the community were concerned with the impact of prolonged exposure to bushfire smoke on their health and the health of their families.

Bushfire smoke contains a mixture of toxic pollution including carbon monoxide, sulphur dioxide and nitrogen dioxide and particulate matter (PM$_{2.5}$ and PM$_{10}$). Poor air quality, for example as the result of bushfire smoke, may be harmful to health and may present a greater risk to vulnerable populations, including those with pre-existing conditions, the elderly, pregnant women, children, and people preparing to undergo surgery or anaesthesia.

The National Environment Protection (Ambient Air Quality) Measure provides national standards for ambient air quality. Schedule 1 of the Measure sets out the six pollutants that are measured: carbon monoxide, nitrogen dioxide, ozone, sulphur dioxide, lead, and particles (as PM$_{10}$ and PM$_{2.5}$). Schedule 2 sets out the standards for pollutants present in air to allow for the adequate protection of human health and wellbeing.

State and territory government departments use a range of different air quality reporting metrics, averaging times and thresholds to stratify health messages into colour coded bands (see Table 1 below). There are no national standards for how air quality is graded or the reporting metrics used. The pollutants measured in the air quality indices vary somewhat among the states and territories. For example, some indices do not appear to measure the amount of sulphur dioxide in the atmosphere.

The Commission has also received evidence that various air quality indices represent the average air quality in an area over a 24-hour period, and were not designed to provide the public with real-time information or to help people manage bushfire smoke exposure. This means that an index may not reflect current air quality and may leave the public vulnerable to a sudden deterioration in air quality.

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19 Ibid.
21 Evidence of Associate Professor Fay Johnston, Royal Commission Transcript, 26 May 2020, T110.14-37.
On 15 January 2020, the Minister for Health announced that the Australian Government would provide funding from the Medical Research Future Fund for research into the physiological impacts of prolonged exposure to bushfire smoke and the mental health impacts of bushfires on affected communities.20

There have been numerous studies into the health impacts of bushfire smoke, however, these studies are primarily focused on the immediate or short-term effects.31 The limited research on the longer-term effects of bushfire smoke may mean that it is difficult to provide clear public health information about this topic.32

Research priorities

On 15 January 2020, the Minister for Health announced that the Australian Government would provide funding from the Medical Research Future Fund for research into the physiological impacts of prolonged exposure to bushfire smoke and the mental health impacts of bushfires on affected communities.20

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Question 4
Should a standard approach to reporting and categorising air quality across Australia be implemented, and if so, how?

Question 5
How should public health information about bushfire smoke be improved?

28 Victoria does not have consistent ratings. PM2.5 scale was used in the table. All ratings may be found here: <https://www.epa.vic.gov.au/for-community/monitoring-your-environment/about-epa-airwatch/calculate-air-quality-categories>
31 The Hazelwood Health Study is an example of longitudinal research, but is looking at smoke from a mine fire, not from bush fires. <https://hazelwoodhealthstudies.org.au/about/study-aims>
Similarly, while the short-term impacts of natural disasters on mental health are relatively well known, the long-term impacts are less well known. The majority of longitudinal studies conducted into mental health impacts of natural disasters in Australia related to fires, notably the 1983 Ash Wednesday fires in South Australia, and the 2009 Black Saturday fires in Victoria. These studies tended to focus on general populations, rather than firefighters and other first responders.

**Question 6**
What should be the priority areas of research concerning the physical and mental health impacts of natural disasters?

**Next Steps**

The Royal Commission welcomes submissions from the community on the above questions, and particularly encourages health care providers, health policy departments and agencies, researchers, emergency coordinators and practitioners to provide their views.

Responses to this paper will inform the Royal Commission’s consideration of Australia’s health and mental health frameworks and whether any improvements should be made to these frameworks to make Australia more resilient to natural disasters.

The Commission continues to gather information and analyse evidence relating to health arrangements in natural disasters, and will not make findings or draw conclusions until it has completed this process.