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Royal Commission into National Natural Disaster Arrangements Issues Paper: Health arrangements in natural disasters

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Introduction

The Australasian College for Emergency Medicine (ACEM, The College) welcomes the opportunity to provide a submission to the Royal Commission into National Natural Disaster Arrangements (the Royal Commission) Issues Paper on health arrangements in natural disasters. ACEM is the peak body for emergency medicine and has a vital interest in ensuring the highest standards of emergency medical care for all patients. ACEM is responsible for the training and ongoing education of emergency physicians and the advancement of professional standards in emergency medicine (EM) in Australia and New Zealand.

Emergency departments (EDs) represent the first stage of the hospital system's response to multiple casualty incidents and disasters, and disaster health services require appropriate resources to ensure disaster health response teams are trained and equipped to safely perform required tasks. Fellows of ACEM (FACEMs) are key players in the initial care of patients affected by disasters, and thus are very active in disaster management throughout the prevention, preparedness, response and recovery continuum.

Increasingly and inevitably, natural disasters are climate change disasters. It is ACEM's position that climate change and the associated health impacts are a population health emergency.[1] Climate change, through heat related events and other natural disasters, presents an immediate risk to the capacity and ability of EDs, health systems and the EM workforce to safely manage increased demand as a result of more frequent and intense climate disasters. ACEM recognises that EDs and hospitals need to be resourced and supported to respond to and manage increased presentations, including surges in demand that occur secondary to natural disasters.[2,3,4] Alongside this, ACEM actively supports efforts to minimise the impact of climate change including measures to reduce the carbon footprint of hospitals and health systems. Given the scale of climate change, ACEM recognises the vital need to support and partner with other organisations and actors to both mitigate and adapt to climate change.

[1] Australasian College for Emergency Medicine. Position Statement on Climate change and health. Melbourne: ACEM; 2019. Available from: https://acem.org.au/getmedia/ee8940b8-46fb-42c1-bd14-66ec9007c58b/S68-Position-Statement-on-Climate-Change

[2] Australasian College for Emergency Medicine. Policy on disaster health services. Melbourne: ACEM; 2012. Available from: https://acem.org.au/getmedia/f955b382-891c-46d1-aaf6-11f9a695ee35/P33-Policy-on-Disaster-Health-Services-Mar-12-v02.aspx

[3] Australasian College for Emergency Medicine. Policy on the disposition of patients in the emergency department on notification of a mass casualty incident. Melbourne: ACEM; 2014. Available from: https://acem.org.au/getmedia/0de94d2c-1cda-4986-ae3f-94f8b1327488/P66-ED-Management-of-Medical-and-Nursing-Volunteers-in-Disasters-Jul-13-v01.aspx

[4] Australasian College for Emergency Medicine. Policy on emergency department management of medical and nursing volunteers during disasters. Melbourne: ACEM; 2013. Available from: https://acem.org.au/getmedia/0de94d2c-1cda-4986-ae3f-94f8b1327488/P66-ED-Management-of-Medical-and-Nursing-Volunteers-in-Disasters-Jul-13-v01.aspx

In August 2019, the Australian Medical Association (AMA) declared a climate health emergency, recognising that 'climate change is real and will have the earliest and most severe health consequences on vulnerable populations around the world, including in Australia and the Pacific region'.[5] In this declaration the AMA recognises that climate change is linked with a litany of natural disasters through more extreme weather events. These include significantly higher mortality and morbidity from heat stress, injury and mortality from increasingly severe weather events, increases in the transmission of vector-borne diseases, food insecurity resulting from declines in agricultural outputs, and a higher incidence of mental ill-health.[6] Of note, in November 2019 ACEM declared 'climate change and the threats it poses, a medical emergency'.[7]

In preparing this submission, ACEM has drawn upon relevant literature and the expertise and knowledge of its Public Health and Disaster Committee, and a cohort of FACEMs who are passionate about supporting the capacity of EDs and the broader community to be prepared for and respond to natural disasters. Given that the greatest response to natural disasters in Australia from a national coordination standpoint is mitigation by addressing climate change, we echo the call of the AMA to the Australian Government to:

- Adopt mitigation targets within an Australian carbon budget;
- Promote the health benefits of addressing climate change;
- Develop a National Strategy for Health and Climate Change;
- Promote an active transition from fossil fuels to renewable energy, and;
- Establish a National Sustainable Development Unit to reduce carbon emissions in the healthcare sector.

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

The Australian Health Protection Principal Committee (AHPPC) is the most appropriate body to lead Australia's health response. It includes the Chief Health Officers of each jurisdiction who have the legislative authority to declare public health emergencies and is supported by an advisory structure with appropriate key officials who can provide high level technical advice. We have seen this played out very actively in the recent national response to COVID 19. However, as an advisory *committee* the AHPPC currently lacks the ability to capture the lessons learned from disasters and use that information to inform prevention and preparedness strategies. It is ACEM's view that Australia's response to health aspects of disasters and to national public health emergencies (such as pandemics) would be best served by the establishment of a national network of centres for disease control. This would provide the organisational capacity to not only capture the lessons to be learned from disasters around the world, but also to use that information to help inform public policy and preparedness.

While not a specific reference in this question, we believe that it is not possible to consider health coordination arrangements in isolation of national disaster management arrangements. Over recent years, there has been a significant weakening of these arrangements through dissipation of the policy, capability development and operational arms of Emergency Management Australia (EMA), including outsourcing of the research, education and training functions. In ACEM's view, this has resulted in a loss of coordination between these components and a loss of national standardisation. ACEM believes that there is a strong case to revisit this and to reconstruct EMA into a national authority that incorporates the full range of research, education and training functions, and networks the national, state and territory capabilities. Creation of these two new national authorities, jointly owned, operated, and funded by the Commonwealth, States and Territories would improve the development of national standards, capturing the research and lessons learned by experience with disasters to inform policy, research and training, and provide a resource to advise governments and key health officials during a major event. As has been seen in the current COVID-19 crisis, a single 'point of truth' must be established to facilitate rapid communication and dissemination of reliable clinical information at state and national levels.

[5] https://ama.com.au/media/climate-change-health-emergency
[6] Australian Medical Association. AMA formally recognises climate change as a health emergency. Barton: AMA; 2019. Available from: https://ama.com.au/sites/default/files/documents/030919%20-%20AMA%20Calls%20Climate%20Change%20A%20Health%20Emergency_1.pdf
[7] Australasian College for Emergency Medicine. ACEM declares climate change a medical emergency. Melbourne: ACEM; 2019. Available from: https://acem.org.au/News/November-2019/ACEM-declares-climate-change-a-medical-emergency

The establishment of a national Centre for Disease Control would serve this function, as well as share information and resources across a national level. We have, for example, seen a variation in physical resources and ability to test during the COVID-19 crisis between states, which could be minimised by a national body overseeing all aspects of management of a health emergency.

2. Should primary care providers and primary health networks be better integrated in natural disaster preparedness, response and recovery? If so, how should this be done?

There is a lack of primary care representation on local, state and federal disaster planning committees; this must be rectified by representation from those involved with primary care on these committees to ensure adequate information input, and advocacy for planning decisions. This must involve those from all different aspects of primary care, including general practitioners and emergency medicine specialists.

Additionally, there has been poor coordination and communication between the medical colleges on the potential for symbiotic connections for the provision of primary care (for example, between ACEM and RACGP). There is a demonstrable lack of a clear pathway or framework on the responsibility of care in natural disasters. There needs to be a clear understanding of roles for primary care providers, and this must be agreed upon across medical colleges and specialties. This divide was especially evident during the recent bushfires, where there was a maldistribution of EM specialists and general practitioners (GPs) to bushfire affected regions; in many areas there was a surplus of EM specialists offering their services, when the need of the community was for GP-based care and management of chronic health conditions. This can be addressed with transparent and coordinated planning, involving government departments (for example, the department of public health) as well as GPs, EDs and emergency services, with all stakeholders involved in the development of policy regarding response and recovery phases.

There must also be development and coordination of clear lines of communication in primary care networks (encompassing GP and hospital frontline care) at a local, regional, state-wide and national level. This will involve the development of clinical pathways and triggers for intervention that are shared between all primary care networks. Additionally, coordination and cohesive referral and communication pathways (including telehealth) between rural, regional and larger metropolitan sites must be developed. Agreed communication pathways between frontline clinicians and governance networks to inform of rapidly changing policy are critical, as are agreed public and private healthcare network communication strategies to coordinate responses.

Hospitals must have disaster plans that are regularly tested, and which reflect the fact that effective disaster planning is a multidisciplinary, multi-agency exercise. Whilst this often occurs, it is usually in the setting of a simulated 'single event' disaster (for example, a stadium collapse) and often involves only EDs or frontline healthcare workers. Disaster planning for natural disasters needs to follow a surge response model, encompassing a whole of hospital and system response.

3. What approaches could be adopted to better support primary care providers to provide health services in the response and recovery phases of a natural disaster?

<u>Addressing access block</u>

Many Australian EDs already operate at, or beyond capacity, in their day to day business; there is little to no surge capacity to deal with the increase in presentations that occurs as part of a natural disaster. This was evident in the context of data from the Bureau of Health Information[8] showing a dramatic increase in the overall number of critically ill patients presenting to New South Wales EDs during the recent bushfires, and national figures from the Australian Institute of Health and Welfare (AIHW) showing EDs nationally are already struggling to keep up with demand. Access block refers to an admitted patient with a total ED time (or length of stay) that exceeds eight hours.[9] In 2018-19, the period of time until most admitted patients (90%) departed the ED for admission to a ward in the same hospital in 2018-19 was 11 hours and 43 minutes across Australia.[10] Based on the most recently available AIHW data (2017-18) 18% of admitted patients (443,600 patients) experienced an ED waiting time of >8 to ≤24 hours, with an additional 1% (24,600 patients) waiting >24 hours to be admitted from the ED.

[8] Bureau of Health Information. Health observer. NSW; 2020. Available from: http://www.bhi.nsw.gov.au/Healthcare_Observer
[9] Australasian College for Emergency Medicine. Position Statement on Access Block. Melbourne: ACEM; 2019. Available from: https://acem.org.au/getmedia/c0bf8984-56f3-4b78-8849-442feaca8ca6/S127_v01_Statement_Access_Block_Mar_14.aspx
[10] Australian Institute of Health and Welfare (AIHW). Emergency Department Multilevel Data 2011-2019, AIHW, data extracted 3 January 2020.

In the case of COVID-19, it was well recognised that an acute surge of cases would overwhelm the health system and lead to increased morbidity and mortality. The health effects of natural disasters will lead to a similar impact on primary health care and hospital systems. During the recent bushfires, hospitals on the NSW mid-north Coast saw a doubling in the amount of presentations for respiratory issues [11] - similar increases in presentations will occur due to the enormous burden of disease that is caused by natural disasters, such as smoke and heat related illness, infectious disease, mental illness and physical trauma. Many hospital and primary health care systems in Australia already operate at or beyond capacity, and do not have the capability to 'surge' further to meet this demand. Preparedness for the health impact of natural disasters must include addressing the access block and flow issues that are already crippling the health care system.

Education and support

Frontline health care worker training needs to embed the principles that climate change exacerbates health inequities and disproportionately adversely affects those with poor social determinants of health. Mitigation efforts to protect these more vulnerable populations can be put into place before natural disasters occur, and awareness of the connection between public health and poor outcomes is vital for primary health care workers.

The physical and emotional toll of natural disasters on health care workers is significant, as they are required to work arduous hours on the frontlines, whilst often suffering their own personal losses. Strong support systems must be put in place prior to the response and recovery phase, including counselling, peer support, rostered time off and debriefing.

Integration of electronic records across GP practices and hospital networks

Communication of patient information between hospitals and general practices within states is often difficult and incohesive. There remains, in most jurisdictions, an inability for general practices and hospitals to easily share information electronically - most electronic medical records are not automatically accessible outside of their immediate place of use. The magnitude of this problem increases with distance, particularly across state borders. The development of a communication strategy that enables the easy sharing of information between frontline healthcare workers is critical. In the event of a natural disaster it is inevitable that patients will either be displaced and forced to seek care at an alternative primary care location and/or present to a hospital for urgent care, or their primary place of health care will be inaccessible due to the disaster itself. Accessibility of patient information from an appropriate confidential portal within Australia would ameliorate issues that arise from these events.

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

Poor air quality leads to an increased rate of deaths and hospitalisations and this is a highly predicted outcome of climate change and global warming. [12] However, there are also predictable adverse outcomes that occur during bushfires.

We believe there should be a standard approach across Australia with real-time air quality monitoring and reporting and health risk categorisation, which complements other weather-related monitoring including temperature, humidity and rainfall. Reporting on each of these will allow for communication of health risks to the public, both in general and for those with particular risk profiles. This need is evident from the 2016 thunderstorm asthma event in Melbourne. It would allow those at enhanced risk, such as asthmatics, to take additional precautions and to more closely monitor their health. It would also allow health authorities to prepare for potential additional caseloads that may be predicted from poor air quality patterns. Finally, given the anticipated increase in frequency, intensity and duration of bushfires with climate change,[13] the air quality impacts of these 'exceptional events' should be monitored and reported, and subject to standard-setting and mitigation strategies.

[11] NSW Ministry of Health. Breathing problems up due to bushfires. North Sydney: NSW Health; 2019. Available from: https://www.health.nsw.gov.au/news/Pages/20191113_00.aspx
[12] World Health Assembly, 71. Health, environment and climate change: report by the Director-General. Geneva: World Health Organization; 2018. Available from: https://apps.who.int/iris/handle/10665/276332
[13] Climate Council. Bushfire briefing paper 12 November 2019. Potts Point: Climate Council; 2019. Available from: https://www.climatecouncil.org.au/wp-content/uploads/2019/11/CC-nov-Bushfire-briefing-paper.pdf

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

Aside from public reporting of risk, including health risk categorisation, it would be helpful for public reporting to clearly specify the risk environment. This may be compared to the risk profiling used for toxic plumes and, more recently, for heatwaves. This geographical specification would help with risk warning and service planning.

Secondly, in public information it would be very helpful to include recommended actions for both the general population at risk and those with specific health issues that further heighten their risk (e.g. asthmatics). Greater cooperation between health authorities, emergency management authorities and the Bureau of Meteorology would assist in providing clear and consistent messages.

Finally, there is an urgent need for local research to interrogate the quality and accuracy of current public health messages for the Australian context. These messages largely direct action by "sheltering in place" or sheltering in the home. However, with less sealed housing stock than North American or European counterparts, the efficacy of these messages in the Australian context is poorly understood. Public health information about bushfire smoke in Australia must be based on an understanding of air quality inside average Australian homes when air quality outside is hazardous.

Public health information should incorporate alternative models of care for communities where "shelter in place" is unsafe, like Community Clean Air Shelters. The Canadian model of Community Clean Air Shelters should be implemented as a priority, particularly for areas of socioeconomic disadvantage, where housing stock is typically poorer quality and residents are at greater risk of chronic disease comorbidities that in turn make them more vulnerable to the effects of bushfire smoke. Without access to air conditioners or air purifiers, the negative health effects of smoke disproportionately affect those already at higher risk, exacerbating health inequity. Community Clean Air Shelters are an important model while urgent action is undertaken to improve the quality of social housing and rental stock but may need to be an ongoing consideration to address the needs of those experiencing homelessness.

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

Fire prevention

It is our view that research into fire analytics should guide strategies to prevent and mitigate significant fire events, so that data driven decisions can be made regarding the prevention of fires and the mitigation of fires during an event. It is evident in a range of natural disasters that prevention and mitigation is less costly than reactive interventions from a human health, environment, and monetary perspective, and resources should be allocated accordingly. Inevitably, this must also involve recognising the role of climate as a risk multiplier for all fire events as stated earlier in this submission.

Measuring morbidity and mortality

Deaths and illness from natural disasters must be more accurately reported. Death certificates will reflect heart disease or respiratory failure, but they do not reflect the contribution that environmental factors have on contributing to these outcomes. The current manner of coding disease in electronic medical records, ED tracking systems and death certificates does not adequately allow for the environmental influences that underlie morbidity and mortality to be reported. For example, recent research suggests that up to 2% of mortality in Australia is influenced by very hot temperatures,[14] but this is not evident in our hospital morbidity and mortality data. A reliable mechanism of reporting this data must be developed.

Bushfire smoke

While the immediate effects of bushfire smoke events have been observed in the form of increased hospital presentations (respiratory and cardiac) of adults and children, the longer-term effects of such events on mortality and morbidity are less well known. More transparency around data is needed from state health departments to evaluate and quantitate patterns across different regions. Similarly, retrospective patterns of hospital presentations as well as mortality during bushfire smoke events needs further research.

[14] Longden T, Quilty S, Haywood P, Hunter A, Gruen, R. Heat-related mortality: an urgent need to recognise and record. Lancet Planet Health. 2020:4(5):e171. Available from: https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30100-5/fulltext#articleInformation

Population displacements due to climate change

Displacements of populations due to climate change and associated natural disasters will lead to disconnection from primary care services and poor access to health care for chronic conditions. This must be anticipated, and further research needs to be done to address and mitigate this.

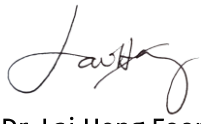
Heat health

It is generally recognised that throughout Australia's history, heat waves are the second most dangerous event to confront human health and wellbeing after pandemics. However, there remains a considerable lack of information in regard to the patterns of weather that place communities (and individuals) at risk, the identification of those most at risk, the patterns of adverse health consequences of heatwave, and the effective community wide and individual interventions required to prevent those adverse effects. There is thus a need for a national effort to better understand the impact of heatwaves and how communities may better adapt to increasing heat that is inevitable under climate change scenarios.

Thank you for the opportunity to provide a submission to this Royal Commission. If you have any questions please do not hesitate to contact Nicola Ballenden, Executive Director of Policy and Strategic Partnerships on 03 9320 0444 or Nicola.Ballenden@acem.org.au.

Yours sincerely

Dr. John Bonning
President



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