



## Australasian College for Emergency Medicine

# Position Statement

### Climate change and health

This document is a statement of the Australasian College for Emergency Medicine (ACEM, the College) that articulates the College's position on climate change and its impact on human health and Emergency Departments (EDs) in Australia and Aotearoa New Zealand.

The Australasian College for Emergency Medicine considers climate change and associated health impacts to be a population health emergency.

Climate change presents an immediate risk to the capacity and durability of EDs, health systems and the medical workforce.

ACEM calls for urgent action to establish mechanisms to mitigate and adapt to this threat.

ACEM calls on governments at all levels, including the Commonwealth of Australia and the Aotearoa New Zealand Government, to take immediate and sustained action to address and mitigate the impacts that this climate emergency presents.

ACEM supports efforts to minimise the impact of climate change and actively supports measures to reduce the carbon footprint of hospitals and health systems.

## Document review

---

Timeframe for review:	Every three (3) years, or earlier if required.
Authoring group:	Public Health and Disaster Committee
Document authorisation:	Council of Advocacy, Practice and Partnerships
Document implementation:	Department of Policy, Research and Partnerships
Document maintenance:	Department of Policy, Research and Partnerships

## Revision history

---

Version	Date	Revisions
V1	Mar-12	Position statement developed.
V2	Oct-19	Entire document revised in line with current evidence.
V3	Jul-22	Document further revised in line with current evidence. Supporting evidence moved into Appendix 1.

## Copyright

---

2022. Australasian College for Emergency Medicine. All rights reserved.

# 1. Scope

---

This statement outlines the key challenges that climate change will present to the capacity of EDs, and emergency physicians coping with such additional demands.

The document makes recommendations that can be applied within the ED, and throughout the health system, to support adaptation and mitigation against the negative health impacts of climate change.

# 2. Background

---

Climate change presents the greatest risk to global population health.<sup>1</sup> The planet is on a trajectory to unprecedented global warming and immediate action is needed to mitigate irreversible change to the environment and the deleterious effects on population health.<sup>2</sup>

Since the turn of the century, weather-related disasters such as heatwaves, droughts, floods, storms and bushfires have increased in intensity and frequency causing increased injury, morbidity and mortality.<sup>3</sup> Ongoing climatic changes resulting in rises in global temperatures and extremes of precipitation have both immediate and delayed health impacts.<sup>4</sup> EDs in Australia and Aotearoa New Zealand are at the forefront of these ever-worsening impacts.

Projections show that climate change will cause a significant rise in the number of overall ED presentations, an increase in the complexity of presentations as well as surges resulting from climate disasters.<sup>5</sup> In addition, increased heat and aeroallergens have led to global increases in asthma and COPD attributed ED presentations.<sup>6</sup> Climate change also impacts indirectly on human health, with a clear association between increased heat, mental illness and ED presentations.<sup>7</sup> Given the challenges that many EDs face in terms of access block, overcrowding and ambulance ramping, climate change presents a risk to the ability of EDs and hospital systems to cope.<sup>8</sup>

For more background information, see Appendix.

# 3. Recommendations

---

## 3.1 Government

- ACEM calls for a national and bi-national commitment to achieving a zero-carbon economy by 2050, with investment in renewable energy sources to protect population health now and into the future.<sup>9</sup>
- ACEM supports the implementation of a National Strategy on Climate, Health and Wellbeing.<sup>9</sup>
- Further investment in robust research is needed to understand the additional ED workload as a result of climate change and evaluate the economic cost and resource implications.
- All jurisdictions should be required to conduct climate change risk assessment and adaptation plans with a focus on risks to health infrastructure, population and community health, the health workforce, emergency and disaster preparedness, and the safety and quality of care.<sup>9</sup>
- The Australian and Aotearoa New Zealand Governments have a responsibility to be leaders in the Pacific region, to ensure health systems have the capacity to address the evolving risks climate change poses to communities in the Pacific.

## 3.2 Health systems

- Health systems should actively minimise their carbon footprint by decreasing Scope 1, 2 and 3 emissions, including reviewing their energy sources and consumption practices to reduce waste.<sup>9</sup>
- Responses to climate change, and disaster preparedness, should be incorporated into the National Health Performance Framework (Australia) and the National Health Targets (Aotearoa New Zealand).

- All hospitals and emergency services require disaster management plans which establish early warning systems and account for surges in service demand, destruction of infrastructure and equipment, and interruptions to supply chain.<sup>9</sup>
- Local jurisdictions should provide community education with respect to the health impacts of climate change. This should include a focus on vulnerable populations within those communities, and the building of mechanisms to support community resilience to and recovery from climate-related events.

### 3.3 Emergency departments

- ACEM is committed to the ongoing education of our Fellows and Trainees of the impacts of climate change on population health, EDs and our health systems.
- EDs and emergency physicians should advocate for action at hospital organisation, emergency department and individual levels to minimise healthcare contribution to climate change. These actions include practices and policies for environmentally sustainable purchasing of supplies, pharmaceuticals, food and transportation, waste reduction, improved efficiency and sustainability in water and energy utilisation, and monitoring and goal setting for environmental targets across all these aspects of healthcare operations.<sup>10</sup>
- ACEM also supports the sharing of resources and ideas to promote change within individual EDs and hospital systems.

## 4. Related documents

---

- ACEM [Environmental Strategy](#)
- ACEM [Policy on Heatwaves](#)
- ACEM [Heat Health Resource](#)

## 5. Appendix

---

### 5.1 Statistics on hospital presentations due to increased temperature

In Australia, extreme heat conditions are linked with large increases in hospital ED presentations, admissions and deaths.<sup>11</sup> As an example, the 2009 Victorian heatwave resulted in a 12% increase in overall ED presentations compared to the same time in the five years prior. However, the largest increase was seen in people aged over 75, where presentations increased by 37%.<sup>12</sup> In terms of the acuity of all presentations, resuscitation presentations (ATS 1) increased by 64%, emergency presentations (ATS 2) increased by 26%, and presentations considered urgent (ATS 3) increased by 25%. The number of excess ED presentations due to heatwaves in Brisbane have been forecast to double by 2030 which will place increasing pressure on the health system and on the workforce if appropriate planning does not occur.<sup>13</sup>

### 5.2 Increased natural disaster rates and the effect on health systems

Climate disasters such as cyclones, floods and bushfires also lead to significant surges in ED presentations. For example, Townsville Hospital reported a 40% increase in ED presentations as a result of cyclone Yasi compared to the two years prior. The closure of community health, primary care services and loss of power to homes also contributed to increased presentations.<sup>14</sup> Given that climate disasters will only continue to increase in intensity and frequency, EDs will need to be staffed and equipped with resources including space and an appropriate surge response to cope.<sup>15</sup>

Research has also shown that climate change will exacerbate existing health inequities as certain groups are more vulnerable to climate-related events.<sup>6</sup> In particular, Aboriginal and Torres Strait Islander people, Māori, children, people with disability, older people and people of a lower socioeconomic status will be the least able to cope with the health impacts of climate change.<sup>9</sup> Urban populations, particularly those of a lower socioeconomic status, are at risk of adverse health outcomes due to the 'heat island effect' which results in densely populated and urbanised areas being warmer than surrounding areas due to city design. Rural, remote and isolated communities are also vulnerable to the impacts of climate change due to the social and economic impacts of drought and bushfires compounded by increased isolation and poorer infrastructure.<sup>9</sup>

In addition to this, health systems in Pacific Island nations are already under threat by climate change.<sup>16</sup> Therefore, Australia and New Zealand will need to prepare for an influx of climate-change refugees from Pacific Island nations who have been displaced by rising sea levels and climate disasters. ACEM is committed to advancing emergency care in the region and will provide support when and where it is needed.

### **5.3 International Action to Mitigate Climate Change**

#### **5.3.1 UN Climate Change COP26**

In 2021, the UN Climate Change COP26 led negotiations with multiple nations to ensure that the goals of global energy transition towards net zero and reducing planet-warming emissions will be met. COP26 led to increased commitments for action to reduce emissions, adaptation to help those already impacted by climate change, finance to enable countries to deliver on their climate goals, and collaboration to work together to deliver even greater action. Key actions include an agreement to keep the global temperature rise to no more than 1.5 degrees Celsius from pre-industrial times, accelerating action on pivoting away from coal power, halting and reversing deforestation, speeding up the switch to electric vehicles and reducing methane emissions.<sup>17</sup>

#### **5.3.2 The Glasgow Climate Pact**

The Glasgow Climate Pact which was created as a result of COP26, covered these areas. This included recognising that collective progress to date to reduce emissions has not been sufficient, highlighting the gap on adherence to sustainability from nation to nation. Key actions include accelerating action on coal power, halting and reversing deforestation, speeding up the switch to electric vehicles and reducing methane emissions. In order to reduce the impacts of the already present changes on climate changes, \$508.67 million AUD was committed to support communities across Asia and the Pacific to take climate change action.<sup>17</sup>

#### **5.3.3 Sustainable Development Goals**

Australia and Aotearoa New Zealand are two of 193 Member States that agreed to the Sustainable Development Goals (SDG) at the United Nations General Assembly in 2015 and signed the Paris Agreement in 2016.<sup>18,19</sup> Achieving these goals and targets is essential to reducing further global warming to a safe level for the sustainability of our planet. Sustained action and commitment are needed to protect human health and the associated impact on EDs.

### **5.4 Impact of the health system on climate change**

ACEM also believes that EDs and hospitals have a role in mitigating climate change. The hospital system is a significant source of greenhouse gas emissions and Australia's healthcare system has the second highest per capita emissions after the United States.<sup>19,20</sup> Australia's health system accounts for 7% of all emissions, with public and private hospitals accounting for half of all these emissions.<sup>21</sup> The majority of healthcare emissions are considered to be Scope 3 emissions, that is, indirect emissions which occur in the supply chain and can be mitigated through procurement practices. Hospitals should also seek to reduce their Scope 1 (direct emissions from the production of energy) and Scope 2 (indirect emissions from the purchasing of energy).<sup>21</sup>

ACEM, along with other specialty medical colleges and stakeholders in the health profession, has the ability and responsibility to act. Hundreds of organisations including health institutions from around the world with billions of dollars of assets – such have made divestments from fossil fuel sources.<sup>22</sup> ACEM made a commitment to divest from fossil fuels in December 2018. In line with this commitment, ACEM will be divested its business banking from the Commonwealth Bank to Bank Australia in 2022.

### **5.5 Mitigation and adaptation for climate change**

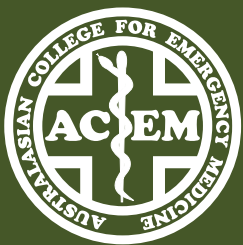
While mitigation is critical, adaptation is essential to minimise the harms that climate change already poses to human health. For example, in Adelaide, heat warning systems have been shown to be an effective mechanism to reduce ED presentations and hospitalisations.<sup>21</sup> Adaptation strategies, at the national and jurisdictional levels are needed which recognise the impact of climate change on health and EDs and actions that should be undertaken to address these threats to the sustainability of the system and the emergency medicine workforce.<sup>22</sup> ACEM also recognises that emergency physicians have a role as resource stewards and advocates in their departments and healthcare organisations to reduce waste and emissions.

## 6. References

---

1. Zhang Y., Briggs, P., Bambrick, H. et al. (2018), 'The MJA-Lancet Countdown on health and climate change: Australian policy inaction threatens lives', *Medical Journal of Australia*, vol. 209, no. 11, e474.
2. Allen MR, Connors S, de Coninck H, Chen Y, Babiker M, Dube OP, et al. Summary for policymakers [Internet]. Global Warming of 1.5 °C. The Intergovernmental Panel on Climate Change (IPCC); 2018 [cited 22nd December 2021]. Available from: <https://www.ipcc.ch/sr15/chapter/spm/>
3. The Lancet countdown on health and climate change: From 25 years of inaction to a global transformation for public health. *The Lancet*, vol. 391, no. 10120, pp. 581-630; WHO (2018) Climate change and health, available from: <http://www.who.int/mediacentre/factsheets/fs266/en/>
4. WHO. 2021. *Climate change and health*. [online] Available at: <https://www.who.int/en/news-room/factsheets/detail/climate-change-and-health> [Accessed 22nd December 2021].
5. Ghazali, D., Guericolas, M., Thys, F., Sarasin, F., Arcos González, P. and Casalino, E., 2018. Climate Change Impacts on Disaster and Emergency Medicine Focusing on Mitigation Disruptive Effects: an International Perspective. *International Journal of Environmental Research and Public Health*, 15(7), p.1379.
6. Hess, J., Heilpern, K., Davis, T. and Frumkin, H., 2009. Climate Change and Emergency Medicine: Impacts and Opportunities. *Academic Emergency Medicine*, 16(8), pp.782-794.
7. Berry, H., Waite, T., Dear, K., Capon, A. and Murray, V., 2018. The case for systems thinking about climate change and mental health. *Nature Climate Change*, 8(4), pp.282-290.
8. Australasian College for Emergency Medicine. Position Statement on Access Block. 2021. [online]. Available at: [https://acem.org.au/getmedia/c0bf8984-56f3-4b78-8849-442feaca8ca6/S127\\_v01\\_Statement\\_Access\\_Block\\_Mar\\_14.aspx](https://acem.org.au/getmedia/c0bf8984-56f3-4b78-8849-442feaca8ca6/S127_v01_Statement_Access_Block_Mar_14.aspx) [Accessed 22nd December 2021].
9. Hughes, L., Rickards, L., Steffen, W., Stock, P. and Rice, M. (2016) On the frontline: Climate change and rural communities, available from: <https://www.climatecouncil.org.au/uploads/564abfd96ebac5cbc6cf45de2f17e12d.pdf>
10. Linstadt H, Collins A, Slutzman J, Kimball E, Lemery J, Sorensen C et al. The Climate-Smart Emergency Department: A Primer. *Annals of Emergency Medicine*. 2020;76(2):155-167.
11. Hughes, L., Hanna, E., Fenwick, J. (2016) *The Silent Killer: Climate Change and the Health Impacts of Extreme Heat*, The Climate Council of Australia, available from: <https://www.climatecouncil.org.au/uploads/b6cd8665c633434e8d02910eee3ca87c.pdf>
12. January 2009 Heatwave in Victoria: an Assessment of Health Impacts [Internet]. Victorian Department of Health. 2012 [cited 22 December 2021]. Available from: <https://www.health.vic.gov.au/publications/january-2009-heatwave-in-victoria-an-assessment-of-health-impacts>
13. Toloo G, Hu W, FitzGerald G, Aitken P, Tong S. Projecting excess emergency department visits and associated costs in Brisbane, Australia, under population growth and climate change scenarios. *Scientific Reports*. 2015;5(1).
14. Aitken P, Franklin R, Lawlor J, Mitchell R, Watt K, Furyk J et al. Emergency Department Presentations following Tropical Cyclone Yasi. *PLOS ONE*. 2015;10(6):e0131196.
15. Valipour S, Hakimjavadi H, De Portu G. Design Strategies to Improve Emergency Departments' Performance During Mass Casualty Incidents: A Survey of Caregivers. *HERD: Health Environments Research & Design Journal*. 2019;13(1):206-220.
16. Smith, K., Woodward, A., Campbell-Lendrum, D., Chadee, D., Honda, Y., Liu, Q. et al. (2014). Human health: Impacts, adaptation, and co-benefits' in Field, C., Barros, V., Dokken, D., Mach, K., Mastrandrea, M., Bilir, T., et al., (editors) *Climate Change 2014: Impacts, Adaptation, and Vulnerability Part A: Global and Sectoral Aspects Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge and New York: Cambridge University Press, pp. 709-54.

17. COP26: The Negotiations Explained [Internet]. UK Government; 2021 [cited 22nd December 2021]. Available from: <https://ukcop26.org/wp-content/uploads/2021/11/COP26-Negotiations-Explained.pdf>
18. WHO (2018); Climate and Health Alliance (2018); Royal Society Te Apārangi (2017) *Human Health Impacts of Climate Change for New Zealand: Evidence Summary*, available from: <https://www.royalsociety.org.nz/assets/documents/Report-Human-Health-Impacts-of-Climate-Change-for-New-Zealand-Oct-2017.pdf>
19. Sustainable Development Goals [Internet]. 2019 [cited 22 December 2021]. Available from: <https://www.dfat.gov.au/aid/topics/development-issues/2030-agenda/Pages/sustainable-development-goals>
20. Health Care's Climate Footprint: How the Health Sector Contributes to the Global Climate Crisis and Opportunities for Action [Internet]. Healthcare Without Harm; 2019 [cited 22 December 2021]. Available from: [https://noharm-global.org/sites/default/files/documents-files/5961/HealthCaresClimateFootprint\\_090619.pdf](https://noharm-global.org/sites/default/files/documents-files/5961/HealthCaresClimateFootprint_090619.pdf)
21. Zhang Y, Beggs P, Bambrick H, Berry H, Linnenluecke M, Trueck S et al. The MJA–Lancet Countdown on health and climate change: Australian policy inaction threatens lives. *Medical Journal of Australia*. 2018;209(11):474-474.
22. Rychetnik L, Sainsbury P, Stewart G. How Local Health Districts can prepare for the effects of climate change: an adaptation model applied to metropolitan Sydney. *Australian Health Review*. 2019;43(6):601.



**Australasian College for Emergency Medicine**  
34 Jeffcott St  
West Melbourne VIC 3003  
Australia  
+61 3 9320 0444  
[admin@acem.org.au](mailto:admin@acem.org.au)

**[acem.org.au](http://acem.org.au)**