



## Australasian College for Emergency Medicine

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# ACEM Submission to Climate Health WA Inquiry September 2019

## Introduction

The Australasian College for Emergency Medicine (ACEM, The College) welcomes the opportunity to provide a submission to the Climate Health WA Inquiry. We commend the WA Department of Health in recognising the impacts of climate change on human health and in seeking to develop effective, evidenced-based strategies to mitigate and adapt to the negative effects of climate change.

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 in Australia and New Zealand.

Emergency departments (EDs) are at the forefront of the impacts of climate change and health. EDs in WA and nationally are already experiencing the effects of climate change; this is only going to worsen with the increasing intensity and frequency of weather-related events and disasters. Our submission focuses on the need to understand and proactively address the risks climate change poses to the functioning of EDs.

### 1. Role of the Department of Health

ACEM notes the extensive work that has been undertaken by the WA Department of Health over the years in understanding and developing solutions to the health impacts of climate change, for example the comprehensive *Health Impacts of Climate Change: Adaptation Strategies for Western Australia* in 2008 and the *Sustainable Health Review* of 2018. While ACEM supports these activities, ACEM considers climate change to be a population health emergency. As a result, we emphasise the urgency at which action must be taken to prevent further global warming. In particular, we are concerned that Adaptation Strategies for WA were proposed in 2008, yet there has been limited implementation at a policy and practice level. Such inaction is only putting the health of current and future generations at risk and prohibits the realisation of substantial social and financial benefits that action against climate change can bring. ACEM therefore impresses upon the WA Health Minister the need to lead urgent change at a state and national level.

### 2. Strengthening preparedness

#### 2.1 Mitigation and Adaptation Plans

ACEM notes that many local councils in WA have already developed Climate Change Adaptation Plans and are taking action to mitigate and adapt to climate change. In particular, local councils such as the Cities of Perth, Subiaco, Fremantle, Cockburn and Wanneroo recognise the impact of climate change on the health

of their local communities. However, there is an absence of climate change references in the Annual Reports and Strategic Plans of the Metropolitan and Non-Metropolitan Health Services.

ACEM recommends that each Health Service, with the support of the Department of Health, develop a climate change mitigation and adaptation plan for their jurisdiction. In addition, the WA Department of Health should develop a Climate Change and Health Adaptation Plan, similar to that developed by Queensland Government.<sup>1</sup> These plans should establish ambitious targets to reduce waste and emissions to mitigate the negative effects of climate change. As the UK has demonstrated such actions are possible whilst maintaining a healthcare system that is patient-centred, socially responsible and financially sound.<sup>2</sup> ACEM recommends that climate-related ED presentations and hospital admissions should be a key measure in evaluating any actions against climate change.

To adapt to the deleterious effects of climate change, the health system should plan for increased overall demand on hospital services (including ED presentations and hospital admissions), seasonal variation of demand, and management of disasters as explored below.

### 2.1.1 Planning for increased overall demand

[Overcrowding](#) and [ED access block](#) continue to be a persistent issue in WA hospitals, compromising patient care and increasing the risk of patient mortality. ACEM considers that there are already large gaps in knowledge about the drivers of increasing ED demand and hospital workloads. Therefore the need for research and planning is even more pressing with the anticipated growth in climate-related presentations to WA EDs in the coming years. Planning will also need to factor in the pressures that increasing heat will place on the emergency medicine workforce including pre-hospital and retrieval teams as extremes of heat may make it dangerous for such teams to operate.

Investments should be made to anticipate and plan for increased demand as well as the workforce and resources needed to accommodate this. While there are some examples of modelling and projections of increased ED presentations, ACEM considers there to be a significant gap in the knowledge base of how climate change will impact on ED presentations.<sup>3</sup> This is critical to ensuring proactive demand management within the health system. Projections should also account for increased population growth and account for a range of scenarios (high and low emissions).

### 2.1.2 Seasonal planning

There will be seasonal increases in health service demand due to climate change. Any projections that are conducted should account for the seasonality of different presentations to support adaptation plans.<sup>4</sup> For example, WA research has shown the interrelations between heatwaves and air quality resulting in increased ED presentations from respiratory conditions.<sup>5</sup> In addition, climate

<sup>1</sup> Armstrong, F., Cooke, S., Rissik, D. and Tonmoy, F. (2018) Queensland Climate Adaptation Strategy: Human Health and Wellbeing Climate Adaptation Plan for Queensland, Queensland Government, Available from: [https://www.qld.gov.au/data/assets/pdf\\_file/0022/64237/h-cap-qld.pdf](https://www.qld.gov.au/data/assets/pdf_file/0022/64237/h-cap-qld.pdf)

<sup>2</sup> Malik, A., Lenzen, M., McAlister, S. and McGain, F. (2018), 'The carbon footprint of Australian health care', *The Lancet Planetary Health*, vol. 2, no. 1, pp.e27-35.

<sup>3</sup> Toloo, G., Hu, W., Fitzgerald, G., Aitken, P. and Tong, S. (2015), 'Projecting excess emergency department visits and associated costs in Brisbane, Australia, under population growth and climate change scenarios', *Scientific Reports*, vol. 5, no. 12860; Xiao, J., Spicer, T., Jian, L., Yun, G., Shao, C., Nairn, J., Fawcett, R., Robertson, A. and Weeramanthri, T. (2017) 'Variation in Population Vulnerability to Heat Wave in Western Australia', *Frontiers in Public Health*, vol. 5, no. 64.

<sup>4</sup> Aboagye-Sarfo, P. and Mai, Q. (2018) Seasonal analysis of emergency department presentations in Western Australia, 2009/10–2014/15, *Journal of Applied Statistics*, vol. 45, no.15, pp.2819-2830

<sup>5</sup> Patel, D., Jian, L., Xiao, J., Jansz, J., Yun, G. and Robertson, A. (2019), 'Joint effect of heatwaves and air quality on emergency department attendances for vulnerable population in Perth, Western Australia, 2006 to 2015', *Environmental Research*, vol. 174, pp. 80-87.

change is having an impact on the presence of aeroallergens with subsequent presentations due to asthma, COPD and cardiac arrests.<sup>6</sup>

Planning should account for the seasonality of such presentations and the impact on healthcare utilisation. However, some areas or populations may be more resilient to these impacts.<sup>7</sup> Therefore more detailed research and planning is needed to account for the dynamics of climate change on local populations.

Primary care and public health campaigns should be important components of these plans to reduce preventable ED presentations, through vaccination and community education. Further to this, each ED and hospital needs to be prepared and understand the demographics and other factors driving demand. ACEM welcome the opportunity to work with the WA Department of Health to support this planning across the State.

### 2.1.3 Disaster management planning

Alongside seasonal planning, the health system will also need to be prepared for climate-related disasters by developing disaster management plans.

Extreme heat conditions are linked with large increases in hospital emergency department (ED) presentations, admissions and deaths. Without abatement, ED presentations due to heatwaves (particularly in south-western WA) will only grow.<sup>8</sup> The Climate Council projects that in Perth the number of days over 35 degree Celsius will increase from 27 in 2008 to 56 in 2070.<sup>9</sup> If climate change is left unchecked, heat related deaths in Perth could double by the end of the century.

While EDs and health system across Australia are regularly accustomed to preparing and managing heatwaves. Comprehensive heat warning systems have been an effective mechanism to reduce ED presentations and hospitalisation in Adelaide.<sup>10</sup> However, given the dynamic nature of heatwaves, Heatwave Response Plans should be updated and evaluated every 5 years and should be supported by vulnerability mapping.<sup>11</sup>

It is vital that disaster management, extends beyond heatwave management. For example, the growth in severity and frequency of heatwaves also exposes south-western WA to longer bushfire seasons and associated respiratory illnesses due to poor air quality. In the northern part of the state, the Pilbara and Kimberley region will be more vulnerable to the devastating impacts of cyclones<sup>12</sup> which not only lead to increased ED presentations but may also destroy critical health infrastructure. By way of example, Townsville Hospital reported a 40% increase in ED presentations as a result of cyclone Yasi in 2011 compared to the two years prior.<sup>13</sup> The closure of community health, primary care services and loss of power to homes also contributed to increased presentations.<sup>14</sup> Northern WA is also vulnerable to changing patterns of vectorial diseases of which communities are more susceptible to,

<sup>6</sup> Beggs, P. (2018) 'Climate change and allergy in Australia: an innovative, high-income country, at potential risk', *Public Health Research and Practice*, vol. 28, no. 4, pp. e2841828

<sup>7</sup> Xiao et al. (2017)

<sup>8</sup> Public Health Association of Australia (2018); Xiao et al. (2017)

<sup>9</sup> Hughes, L. and McMichael, T. (2011) *The critical decade: climate change and health*, Climate Commission.

<sup>10</sup> Zhang et al. (2018)

<sup>11</sup> Hess, J., Ebi, K. (2016), 'Iterative management of heat early warning systems in a changing climate', *Annals of the New York Academy of Sciences*, vol. 1382, no. 2, pp. 21-30.

<sup>12</sup> Xiao et al.

<sup>13</sup> Aitken, P., Franklin, R.C., Lawlor, J., Mitchell, R., Watt, K., Furyk, J., Small, N., Lovegrove, L., Leggat, P. (2015) 'Emergency Department Presentations following Tropical Cyclone Yasi', *PLOS One*, vol. 10, no. 6, pp. e0131196.

<sup>14</sup> Ibid.

following disasters and destruction of homes<sup>15</sup> Disaster management plans must therefore be integrated with primary care, community health services, aged care facilities and local councils to ensure a comprehensive and coordinated response.

## 2.2 Improving access to climate data and research

While the Bureau of Meteorology has a heatwave forecast, the Department of Water and Environmental Regulation monitors air quality and surveillance occurs of other emerging issues (such as changing vectors), there is no consistent manner in which ED presentations are connected with such alerts. Much of the data associating climate-related disasters (heat waves, cyclones, bushfires etc.) to ED presentations is retrospective. Data collection could be enhanced so that data linkage occurs between environmental alerts and ED presentations (as well as ambulance call-outs). This would support future projections of demand and would position WA as a leader in this space.

## 2.3 Enhancing community resilience

ACEM notes that certain groups are more vulnerable to the health impacts of climate change, exacerbating existing health inequities. In particular, Aboriginal and Torres Islander people, children, older people, people with existing chronic conditions and mental illness and people with disability will be the least able to cope with the health impacts of climate change. Urban populations, particularly the homeless and people 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.<sup>16</sup> ACEM supports the implementation of community education campaigns to raise awareness of the dangerous impacts of climate-sensitive diseases.

## 3. Reduce the contribution of health services to climate change

While climate change impacts health and EDs, ACEM acknowledges that EDs and hospitals also have the potential to mitigate the negative effects of climate change. Australia’s health system accounts for 7% of all emissions, with public and private hospitals accounting for half of all these emissions.<sup>17</sup> In 2016, health institutions from around the world – including Australia’s Hospitals Contribution Fund – made divestments from fossil fuel sources to the value of \$2.4 billion.<sup>18</sup>

ACEM supports recommendations that were developed as part of the consultation for the Sustainable Health Review such as the introduction of enforceable benchmarks and target for zero-emissions, waste and consumption and sustainable measures that are linked to health care quality. In addition, ACEM supports the establishment of a Sustainability Unit, similar to that of the UK, within Department of Health to lead such changes. Such initiatives can be implemented rapidly and make a substantial difference to the carbon footprint of the healthcare system.

ACEM also acknowledges that Fellows and trainees of ACEM have a role in reducing waste and consumption by being resource stewards in their workplaces and avoiding unnecessary tests and practicing responsible resource use. In addition, some EDs are seeking to change their overall consumption practices to become “low waste EDs”. The Department of Health should actively encourage and facilitate such practices and encourage all hospitals to be involved in *Choosing Wisely* programs. *Choosing Wisely* is a national initiative seeking to minimise unnecessary tests, treatments and procedures, which in themselves contribute to the

<sup>15</sup> Hess, J., Heilpern, K., Davis, T., Frumkin, H. ‘Climate Change and Emergency Medicine: Impacts and Opportunities’, *Academic Emergency Medicine*, vol. 16, no. 8, pp. 782-794.

<sup>16</sup> Dalip et al. (2012)

<sup>17</sup> Zhang et al. (2018)

<sup>18</sup> Smith K, Woodward A, Campbell-Lendrum D, Chadee D, Honda Y, Liu Q, et al. 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; 2014. p. 709-54.

carbon footprint of the health system and waste.<sup>19</sup> ACEM also acknowledges our role in encouraging our members to join initiatives such as Doctors for the Environment and advocating to all levels of government to tackle climate change.

#### 4. Final comments

While ACEM commends the Department of Health in taking a forward stance on climate change, we believe that climate change requires a whole of government approach. ACEM recommends that the WA Government adopt a Climate Change Framework similar to that of Victoria and NSW.<sup>20</sup> Integral to such frameworks are the interconnected and integral roles of urban planning, building codes, waste management and health. Similarly, in both NSW and Victoria these frameworks set legislation to ensure accountability alongside zero-emissions targets for the entire economy, not just the health system, leading to greater improvements to population health.

Thank you for the opportunity to provide a submission to this inquiry. If you have any questions please do not hesitate to contact [REDACTED], [REDACTED] on [REDACTED] or [REDACTED]



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<sup>19</sup> NPS Medicine Wise (2019) *Choosing Wisely Australia* available online at: <http://www.choosingwisely.org.au/home>

<sup>20</sup> Environment, Land, Water and Planning (2016) Victoria's Climate Change Framework, available online at: [https://www.climatechange.vic.gov.au/data/assets/pdf\\_file/0021/55254/DELWPClimateChange\\_Framework.pdf](https://www.climatechange.vic.gov.au/data/assets/pdf_file/0021/55254/DELWPClimateChange_Framework.pdf) NSW Department of Planning, Industry and Environment (2016) NSW Climate Change Policy Framework available online at: <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/nsw-climate-change-policy-framework-160618.pdf>;