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Reflections on climate change and the Australian health system

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Without the COVID-19 pandemic, 2020 may have been remembered as the world's hottest year on record (together with 2016), and as a year of devastating bushfires in Australia, California and other parts of the world fuelled by climate change.^{1,2} The recent Royal Commission into National Natural Disaster Arrangements report explicitly recognised that climate change has increased the risk and impact of bushfires.³ The State of the Climate report released by the Bureau of Meteorology (BOM) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) in November 2020 reported that warming across the country is now up to 1.44 (\pm 0.24) °C since 1910.⁴

The challenges for the Australian healthcare sector in 2020 have been unprecedented, with surges in demand for primary, secondary and tertiary healthcare services during the Black Summer⁵ and later during the surge of COVID-19.⁶ There were some symbolic similarities – and differences – in the health sector's response to these two crises. Facemasks were recommended under certain circumstances early in the year to reduce personal exposure to smoke,⁷ and later to prevent community transmission of COVID-19.⁶ Residents, particularly those with pre-existing health conditions, were advised to stay indoors with closed windows during the worst periods of smoke, but to avoid poorly ventilated enclosed spaces later during the pandemic.

Environmental as well as health crises focus the attention of policymakers and response services on immediate risk reduction interventions. However, as the smoke or disease outbreaks dissipate, it is crucially important to shift attention to the longer-term preparedness, resilience and responsiveness of the health sector to climate change. The increasing frequency and severity of extreme events, such as bushfire, heatwaves, floods and droughts, highlight the urgent need for evidence-based adaptation plans for health services and for society as a whole. Many of the adaptation 'solutions' reside in policies related to the housing, transport, and urban and rural planning sectors.

Adapting to climate change across our society is necessary but not sufficient to protect the health and wellbeing of the population in the long-term. Risk reduction measures should be combined with ambitious targets to curb carbon emissions from all sectors. While the healthcare sector in Australia is not one of the major emitters (it generates 7% of national carbon emissions⁸) compared to other industries such as energy generation, mining and agriculture, there is considerable scope for the sector to reduce its carbon footprint and operating costs.⁹ This can be achieved by reducing the carbon footprint of health services, for example by improving the energy efficiency of hospital buildings, and by reducing medical waste and unnecessary pathology testing.¹⁰ Alternative models of care, such as telehealth, also need to be developed for an environmentally sustainable healthcare system.¹¹ Importantly, reducing health care demand through preventive health will reduce emissions and improve health outcomes.¹²

Health professionals have an important role to play by raising public awareness of the damaging health effect of climate change, as well as by supporting and advocating policy action within the healthcare sector and more broadly within our society to reduce greenhouse gas emissions. Decisive action on climate change adaptation and mitigation will avoid disruption in health care delivery and improve physical and mental health outcomes now and into the future.

Competing interests

The author declares that he has no competing interests.

References

- I Vardoulakis S, Marks G, Abramson MJ. Lessons learned from the Australian bushfires. *JAMA Intern Med* 2020; 180: 635–6. doi:10.1001/jamainternmed.2020.0703
- 2 Xu R, Yu P, Abramson MJ, Johnston FH, Samet JM, Bell ML, Haines A, Ebi KL, Li S, Guo Y. Wildfires, global climate change, and human health. *NEngl J Med* 2020; 383: 2173–81. doi:10.1056/NEJMsr2028985
- 3 Commonwealth of Australia. Royal Commission into National Natural Disaster Arrangements report. 2020. Available at: https://naturaldisaster. royalcommission.gov.au/system/files/2020-11/Royal%20Commission %20into%20National%20Natural%20Disaster%20Arrangements%20-%20Report%20%20%5Baccessible%5D.pdf [verified 12 January 2021].
- 4 BOM and CSIRO. State of the climate. 2020. Available at: http://www. bom.gov.au/state-of-the-climate/documents/State-of-the-Climate-2020. pdf [verified 12 January 2021].
- 5 Borchers Arriagada N, Palmer AJ, Bowman DM, Morgan GG, Jalaludin BB, Johnston FH. Unprecedented smoke-related health burden associated with the 2019–20 bushfires in eastern Australia. *Med J Aust* 2020; 213: 282–3. doi:10.5694/mja2.50545
- 6 Vardoulakis S, Sheel M, Lal A, Gray D. COVID-19 environmental transmission and preventive public health measures. *Aust N Z J Public Health* 2020; 44: 333–5. doi:10.1111/1753-6405.13033

Policy reflection on climate change and health

- 7 Vardoulakis S, Jalaludin BB, Morgan GG, Hanigan IC, Johnston FH. Bushfire smoke: urgent need for a national health protection strategy. *Med J Aust* 2020; 212: 349–53.e1. doi:10.5694/mja2.50511
- 8 Malik A, Lenzen M, McAlister S, McGain F. The carbon footprint of Australian health care. *Lancet Planet Health* 2018; 2: e27–35. doi:10.1016/S2542-5196(17)30180-8
- 9 Australian Healthcare and Hospitals Association. Health Policy Research Institute policy brief: Australian healthcare services and the climate change debate. 2012. Available at: https://ahha.asn.au/system/ files/docs/publications/120726_greening_hospitals_and_healthcare_ services_-policy_brief.pdf [verified 12 January 2021].
- 10 McAlister S, McAlister S, Barratt AL, Bell KJ, McGain F. The carbon footprint of pathology testing. *Med J Aust* 2020; 212: 377–82. doi:10.5694/mja2.50583
- 11 Skinner I, Cheek C, Jaffray L, Skinner T. Making a case for telehealth: measuring the carbon cost of health-related travel. *Rural Remote Health* 2013; 13: 2723.
- 12 Salas RN, Maibach E, Pencheon D, Watts N, Frumkin H. A pathway to net zero emissions for healthcare. *BMJ* 2020; 371: m3785. doi:10.1136/ bmj.m3785