

Heat-related illness in Australia's elderly population: population health and clinical approaches

Georgia Behrens¹

¹ St George Hospital, Sydney, New South Wales, Australia

Background: Heat-related illness is a significant cause of morbidity and mortality in Australia's elderly population.¹ A 'silent killer', heat has caused more deaths in Australia than any other extreme weather event.² Older Australians (aged over 65) are particularly vulnerable to the health impacts of heat due to a variety of physiological, behavioural, and socio-economic factors.³ As global temperatures rise and Australia's population ages in the coming decades, the prevention and management of heat-related illness in the elderly population will be critical challenges for Australia's healthcare system.⁴ Fortunately, heat-related illness is somewhat preventable with adequate behavioural and environmental adjustments by vulnerable groups in periods of hot weather.⁵ It is therefore conducive to individual and population-level interventions across multiple levels of prevention.

Aim: To investigate clinical and population-level approaches to the prevention and management of heat-related illness in older Australians (aged >65).

Method: An online search for reports, guidelines and policies on heat and health in Australia was conducted, to source publications from various medical specialty colleges, state and territory departments of health, and relevant advocacy organisations. A literature search was performed on PubMed, using terms Heat related illness AND elderly AND Australia, published between 2010 – present, and relevant results reviewed. Interviews were also conducted with a variety of relevant clinicians, including GPs, emergency physicians, and public health officials.

Results: Across Australia, GPs, emergency departments, public health units, and government and welfare services share responsibility for all levels of prevention of heat-related illness in elderly people. Public health approaches focus on primary prevention, with risk communication the cornerstone of the public health response. In warmer months, governments and agencies coordinate a variety of health communication initiatives to educate and mobilise the public around healthy behaviours in hot weather. Meanwhile, clinical approaches target secondary and tertiary prevention. General practitioners are responsible for early recognition and management of heat-related illness in older Australians,⁶ while emergency departments often manage more acute instances of heat-related illness.⁷ Clinicians in all areas may also opportunistically educate their patients about heat-health issues.

Conclusion: The prevention and management of heat-related illness in Australia's elderly population is a significant and mounting public health challenge. Clinical and population health approaches to this challenge currently intersect across multiple levels of prevention, complementing one another to minimise heat-related morbidity and mortality. However, current approaches to heat-related illness in the elderly are largely opportunistic and reactive,^{2,8} and do not appear to comply with international recommendations on best-practice heatwave health preparedness.⁹ Although Australia's public health responses to heat-related illness have been scaled up substantially over the past decade, ongoing improvements will be necessary to ensure that the twin threats of climate change and an ageing population do not coalesce to produce significant excess morbidity and mortality.

Word count: 473

References

1. Cheng, J. et al. (2018). Heatwave and Elderly Mortality: An Evaluation of Death Burden and Health Costs Considering Short-Term Mortality Displacement. *Environment International*, June (115), 334-342.
2. The Climate Council. (2016). *The Silent Killer: Climate Change And The Health Impacts of Extreme Heat*. <https://www.climatecouncil.org.au/resources/silentkillerreport/>
3. Nitschke, M., et al. (2013). Risk Factors, Health Effects and Behaviour in Older People during Extreme heat: A Survey in South Australia. *International Journal of Environmental Research and Public Health*, 2013 (10), 6721-6733.
4. Tait, P., Allan, S., & Katelaris, A. (2018). Preventing heat-related disease in general practice. *Australian Journal of General Practice*, 47 (12), 835-840.

5. Hansen, A., et al. (2015). Heat-health behaviours of older people in two Australian states. *Australasian Journal on Ageing*, 34 (1), 19-25.
6. Wilson, L., Black, D., & Veitch, C. (2011). Heatwaves and the elderly: the role of the GP in reducing morbidity. *Australian Family Physician*, 40 (8), 637-640.
7. Australasian College For Emergency Medicine. (2010). *Policy On Heatwave*.
<https://acem.org.au/getmedia/e5f064bc-0e29-493e-9385-206e2fa45315/P59-Policy-on-Heatwave-Nov-10-v01.aspx>
8. Ibrahim, J., McInnes, J., Andrianopoulos, N., & Evans, S. (2011). Minimising harm from heatwaves: a survey of awareness, knowledge, and practice of health professionals and care providers in Victoria, Australia. *International Journal of Public Health*, 2012 (57), 297-304.
9. World Meteorological Organization & World Health Organization. (2015). *Heatwaves and Health: Guidance on Warning-System Development*.
https://www.who.int/globalchange/publications/WMO_WHO_Heat_Health_Guidance_2015.pdf