Australian Academy
of Health and
Medical Sciences

Climate change: an urgent health priority

Acknowledgements

The Academy acknowledges the traditional custodians of the land on which our offices stand and on which we hold our meetings and events across the country. Aboriginal and Torres Strait Islander peoples were the nation's first scientists, and they remain the spiritual and cultural custodians of their land. We pay our respects to elders past and present.

Climate change: an urgent health priority

Climate change represents one of the greatest threats to human health and wellbeing in the 21st century.[1,2] A growing body of scientific evidence demonstrates unequivocally the risks of a warming climate, revealing potentially devastating health impacts on the people of Australia, our region, and the world. This is no distant threat to population health: it is already happening and will continue to worsen as global temperatures rise.

The Sixth Assessment Report from the Intergovernmental Panel on Climate Change (IPCC) found that global surface temperature will continue to increase warming of 1.5°C expected over the next 20 years.[3,4] At the current trajectory, the predicted level of global warming due to human activity will threaten the health and wellbeing of all the world's population, particularly people living in disadvantaged circumstances. Australia is not exempt from the impacts of global warming through increased ambient temperatures and more extreme weather events. Moreover, many of our neighbours in the Indo-Pacific region are on the climate change front line and face particular health hazards.

Global warming has emerged as an unprecedented practical and ethical challenge to the health sector in Australia and elsewhere, presenting risks to human health that demand urgent action. This has become a high priority biosecurity hazard: our health and wellbeing are under immediate threat. It is no longer a time for healthcare as usual. We are already seeing increased demands on sections of the healthcare system arising from extreme climate-related events. For the health sector, global warming necessarily expands the ethics of care beyond the sickness, suffering and population health of current generations, to encompass the care of future generations and the care of the planet and its ecosystems.

Recognising these challenges, The Australian Academy of Health and Medical Sciences convened a series of roundtables during 2020 and 2021 that brought together multidisciplinary sector leaders to inform a path forward for the health and medical research sector. A common theme across these meetings was that urgent action is necessary to address the causes of climate change, to mitigate the current and future threats to human health, and to monitor these dynamic risks and adaptations. Examples of these health-related challenges include, but are not limited to, heat stress and heat stroke caused by increasing temperatures, respiratory illness and burns from a more frequent and intense bushfire season, shifting patterns of insect-borne infections resulting from heavier rainfall, temperature increases and river floods, and mental health challenges linked to changing and uncertain environments.[4,9,10,11,12]

The Australian Academy of Health and Medical Sciences welcomes the Australian Government's commitment to achieve net zero emissions by 2050. We recognise that scientific evidence, as highlighted by other Australian Learned Academies, demands urgent action.[5,6,7,8] A well-defined, quick, and staged path to a net-zero world is therefore needed to ensure the health and wellbeing of all Australians.

To achieve net zero and realise the associated health benefits, the health and medical research sector can play an important role by:

1. **Promoting recognition among decision-makers, across sectors, within their institutions, and to the public, that climate change is a major and urgent Australian health issue with implications for health equity.**
2. **Delivering health and medical research that further advances knowledge of the direct and indirect health impacts of climate change and enables monitoring and management of these impacts.**
3. **Supporting cross-sector, interdisciplinary and ecological investigations that will bring about health co-benefits and prevent disease and debility resulting from the causes of climate change.**
4. **Collaborating with First Nations communities and experts to learn from Indigenous knowledge practices that can inform Australia's path forward and ensuring First Nations voices are amplified in each of the areas above.**

The health and medical research sector will need to work in tandem with health and other sectors more broadly to achieve the outcomes listed above. The health sector, supported by research, has an ethical imperative to deliver a fully sustainable healthcare system and develop a skilled and engaged health workforce properly equipped to manage the health impacts of climate change. A focus on environmental sustainability should be embedded within health system leadership.

We, the Australian Academy of Health and Medical Sciences, will take specific steps to:

- Support and promote health and medical research that rises to the challenge of understanding the complex relationships between climate and health and how to mitigate health and equity impacts.
- Collaborate with national and international learned Academies, and other stakeholders, to drive adequate and timely progression of the actions for the health and medical research sector outlined above.
- Develop and execute a strategy to minimise the Academy's carbon footprint.
- Through our Fellowship, promote the message that the reduction of the carbon footprint in clinical, research and public health settings in Australia is a priority.
- Utilise the expertise of our Fellows to support and advise the Australian community, including governments, on the development of fair and equitable policies and programs that address the health impacts of climate change at a local, national, and international level.
- Review progress annually to ensure we are delivering on these commitments.

Role of the health and medical research sector

Priority action 1:
Promoting recognition among decision-makers, across sectors, within their institutions, and to the public, that climate change is a major and urgent health issue with implications for health equity.

Since Hippocratic times, it has been recognised that human health and wellbeing are intricately connected to the state of the environment. As the climate and environment change, the health of the planet's inhabitants will inevitably be threatened. Australia's 'Black Summer' bushfire season of 2019/20 provided a stark example of the acute health effects that can arise from extreme weather events. As global temperatures increase, Australia is likely to see a longer, more frequent, and more intense fire season. Models also forecast higher levels of extreme heat, continued sea level rises, heavier rainfall and river floods, and more sand and dust storms, all of which have major diverse health implications that will increasingly affect our communities.[3,4,9] Indeed, we are already facing increased health challenges because of these changes.

Direct health impacts linked to climate change range from respiratory and cardiovascular illness to heat stroke, heat stress and the shifting patterns of food-, vector-, air- and water-borne diseases—to name only a few.[10,11,12] The indirect health impacts of climate change, while not as easily quantifiable, present even more far-reaching risks to human health and wellbeing.[13] Global warming will imperil water availability, food security, access to healthcare and housing, employment and economic stability, especially among those living in disadvantaged circumstances within Australia and in the Indo-Pacific.[13-18] Mental health consequences will likely follow from all these outcomes.

Through these direct and indirect impacts, climate change affects the health of all Australians, but populations living in vulnerable circumstances will suffer the greatest burden, compounding the impact of existing health inequities. Socioeconomic disadvantage, Indigeneity, age, race, gender, and disability are key intersections between social vulnerability, health, and climate.[13] There are opportunities to empower these vulnerable groups through partnerships that can enhance the development of collaborative strategies to support their health needs and pay attention to the deficiencies in their access to the determinants of good health.

Widespread action is needed to protect the health of all Australians from the short and long-term impacts of climate change. The health and medical research sector is ideally placed to play a central role in identifying and communicating the health co-benefits of such action (and reciprocally, the human and economic costs of not taking action) and supporting the development of climate-related policy and planning. Health should be a crucial consideration in all climate policy—and equally, climate change should play an important role in health policy. To help achieve this, the health and medical research sector should ensure that our current understanding of climate-related health impacts is promoted among decision makers, other key stakeholders, and to the public.

Priority action 2:
Delivering health and medical research that further advances knowledge of the direct and indirect health impacts of climate change and enables monitoring and management of these impacts.

Robust scientific research has underpinned global understanding of climate change, its causes, and impacts. In the same way, health and medical research is crucial to advancing knowledge of direct and indirect climate-related health risks and their implications for public health more broadly. While there is a growing body of national and international evidence examining the health impacts of climate change, more work is needed to strengthen existing analysis and address gaps, particularly those related to Australia and our region.

Climate change is damaging human health now and therefore needs to be addressed urgently. [1,2] Coordinated and strategic research efforts that acknowledge and address the complexity of the issues will help to identify timely and dynamic solutions suited to Australian conditions. To achieve this, research should be co-designed across sectors and with the communities that will be most at risk. In addition, collaboration with key stakeholders, including policy makers, can help ensure Australian research is driven by urgent priorities and is translatable into policies that have the most direct and immediate mitigation impact. The Australian Council of Learned Academies' work on an Australian Energy Research agenda provides an important example of the necessary level of inclusive collaboration that enables the promotion of research on the health effects of an energy transition.[19]

Priority action 3:
Supporting cross-sector, interdisciplinary and ecological investigations that will bring about health co-benefits and prevent disease and debility resulting from the causes of climate change.

The health impacts of climate change cannot be addressed in isolation because the causes of climate change and ecosystem degradation are systemic, complex, and interconnected. Ecological and interdisciplinary approaches that target the drivers of climate change and environmental destruction provide opportunities to benefit human health. The health and medical research sector is well placed to promote cross-sector and interdisciplinary understanding of the significant health co-benefits of climate action. Direct and indirect health improvements will derive from better air-quality, increased access to green spaces, sustainable transport systems, foresightful building planning and clean-energy work environments.[20] In addition, communicating and conducting further research on the health co-benefits of just transitions towards renewable energy systems should be prioritised. Transitions across society should be comprehensive throughout all regions of the country to ensure the health benefits of sustainable ways of living are equitable and not concentrated in urban areas alone. Addressing the root causes of climate change, with specific focus on the health-related consequences of human activity that also contribute to the deteriorating environment, and transitioning effectively to net-zero carbon emissions, should safeguard the health, employment and economic stability of the Australian workforce and protect the wellbeing of Australian families.[21]

The health and medical research sector must utilise its expertise to place health at the centre of the climate change narrative. From a health perspective, the case for climate action is rooted in three major areas which position the problem as urgent, personal, and positive.[22] Health and wellbeing are tangible and relatable values prioritised by individuals. Consequently, it is important to share personal accounts of the harmful impacts already occurring today to demonstrate the ethical imperative and urgency of climate action to protect human health. A health lens can also provide an optimistic view for the future because there are positive co-benefits for health that will result from clear, decisive, and immediate action – for instance, the benefits of green spaces and active travel.[22]

Priority action 4:
Collaborating with First Nations communities and experts to learn from Indigenous knowledge practices that can inform Australia's path forward and ensuring First Nations voices are amplified in each of the areas above.

Australia has a uniquely diverse landscape that has been cared for by Aboriginal and Torres Strait Islander people for over 60,000 years.[23] Australia's First Nations communities have accumulated a nuanced and sophisticated understanding of their individual, local ecosystems over this time. This understanding is unlike any other knowledge of the land that exists today.[24] As Custodians of the land, Aboriginal and Torres Strait Islander people have sustained its distinct ecosystems, maintaining and enhancing its ecological diversity throughout natural fluctuations in the climate.[24]

The interconnectedness to Country described by Australia's First Nations peoples is largely influenced by their holistic or integrated systems of thinking, being and knowing. These systems are fundamental to the cultural determinants of health and include core values such as community, kinship, identity in the collective, language, traditional knowledge, spiritual beliefs, and cultural safety.[25] The holistic nature of this perspective held by many Aboriginal and Torres Strait Islander peoples represents a fundamental lesson for non-Indigenous communities, when examining our relationships to the environment.

First Nations leadership and collaboration will play a crucial role in addressing climate-related health risks for everyone in Australia. Since colonisation, Aboriginal and Torres Strait Islander people have historically been excluded from the decision-making process on matters affecting their health. This must change if Australia is to tackle the health challenges caused by climate change effectively and equitably. The Aboriginal community-controlled health sector must be central to any strategy and it will be essential to acknowledge that Aboriginal communities living in regional and remote areas of Australia will be disproportionally in the frontline. The health and medical research sector should promote and acknowledge Aboriginal and Torres Strait Islander leadership and build partnerships that advance the wide-ranging and tailored Indigenous approaches to caretaking and sustainability that span vast geographic areas and multiple generations.[26]

Research within the broader health sector

The health sector, supported by research, has an ethical imperative to deliver a fully sustainable healthcare system and develop a skilled and engaged health workforce that is properly equipped to manage the health impacts of climate change. A focus on environmental sustainability should be embedded within health system leadership.

Research shows that approximately 7% of Australia's total carbon emissions can be attributed to the healthcare system with hospitals and the pharmaceutical industry being the major contributors.[27] The Australian federal government, along with all States and Territories, have made a commitment to a net zero target by 2050.[28] Transitioning to a fully sustainable and net zero carbon emitting healthcare system will be an essential component to delivering this goal.

Britain's National Health Service (NHS) has provided a model in this area with its ambitious targets to deliver a net zero carbon emitting health system by 2040.[29] The NHS introduced the role of a Chief Sustainability Officer[30] to provide leadership of this agenda and ensure that research and innovation are put to best use in delivering these targets. This approach prioritises collaboration with research partners who can answer important questions on how to practically achieve NHS goals and provide independent scientific evidence to back decision-making.[29] We can similarly build a focus on environmental sustainability within our health system leadership in Australia, underpinned by a health and medical research sector that supports health services to transition successfully to net zero.

The delivery of a fully sustainable healthcare system will require an engaged and capable workforce. In addition, as Australia's climate changes there will be changing demands on the workforce, as has been seen during the COVID-19 pandemic. Dealing with climate-related health consequences may require increased expertise across a range of disciplines from respiratory illness to mental health, biosecurity, emerging infectious diseases, and public health. Health and medical practitioners in primary care and emergency response settings will also need to be able to identify and manage these health risks.[31] To develop a skilled and engaged workforce that is equipped to face these challenges, the health impacts of climate change should be incorporated into health and medical curricula and accreditation standards in Australia. Any actions to achieve this must start now to ensure the workforce is adequately prepared and available.

The health and medical research sector must develop robust, timely and translatable research that will educate and equip Australia's health workforce to confront the challenges of climate change.

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Climate Change and Health Steering Committee

The Academy's Climate Change and Health Steering Committee led the development of this statement. This committee brings together interdisciplinary expertise across the Academy's Fellowship and beyond. The Academy is most grateful for the input of the members of the committee.

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About this statement

This statement was developed based on a series of roundtable and interviews that brought together broad expertise and experience on:

- The Australian bushfires and the impact on health
- Delivering fully sustainable healthcare
- Action on climate change and health – identifying key threats and blockages
- Taking action on the health impacts of climate change – a path forward for Australia
- Climate change, health, and First Nations knowledge practices.

The Academy would like to thank all those who contributed.

This publication has been reviewed and approved for publication by the Academy's Council.

About the Academy

The Australian Academy of Health and Medical Sciences is the impartial, authoritative, cross-sector voice of health and medical science in Australia. We advance health and medical research in Australia and its translation into benefits for all, by fostering leadership within our sector, providing expert advice to decision makers, and engaging patients and the public.

We are an independent, interdisciplinary body of Fellows – elected by their peers for their outstanding achievements and exceptional contributions to health and medical science in Australia. Collectively, they are a representative and independent voice, through which we engage with the community, industry and governments.

The Academy is uniquely positioned to convene cross-sector stakeholders from across Australia to address the most pressing health challenges facing society. We focus on the development of future generations of health and medical researchers, on providing independent advice to government, and on providing a forum for discussion on progress in health and medical research with an emphasis on translation of research into practice.

The Academy is registered with the Australian Charities and Not-for-profits Commission (ACNC) and is endorsed as a deductible gift recipient.

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