



The Health Advocate

Your voice in health care

Climate action in the
Australian health sector

A snapshot of sustainability
and decarbonisation activities
in Australian healthcare

Green care for high quality care

Tackling the tricky stuff

National Health and Climate
Strategy Update

Building a sustainable system

**+MORE
INSIDE**

This issue of The Health Advocate features
articles from the HEAL (Healthy Environments
And Lives) Network



HEAL

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Australian Healthcare and Hospitals Association

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KYLIE WOOLCOCK
Chief Executive
AHHA

Building a sustainable system

Many challenges face health and health systems right now, and there are more ahead. The issues impacting us are not unique to Australia and the increasingly complex problems of the future will need more collaboration, agility and wider networks than ever before. Climate change, natural disasters, pandemics, infectious diseases and issues of health care access and equity will continue to threaten local health security over the coming decades. But as we face shared threats, we have a shared responsibility to act.

This sentiment was at the forefront during our recent John Deeble Lecture and Panel Discussions (Canberra), themed Beyond Boundaries: Leadership for health, where panellists reflected on what it means to be a leader during a time when global challenges have become a threat to local health security. The importance of relationships and collaborative networks in the absence of evidence were highlighted as being critical.

Keynote Jonathon Gray (Director, Commonwealth Leadership Institute, UK) spoke to the roles of

emerging and experienced leaders in the new era, where emerging leaders will need to connect differently, including across borders and boundaries. The Commonwealth Leadership Institute provides one such mechanism, connecting emerging leaders from across the 56 Commonwealth Countries – and we are exploring what a chapter for our region might look like.

“This issue of The Health Advocate brings together the activity happening within Australia across research, policy and practice to drive sustainability.”

The visit of King Charles III to Australia continued the focus on climate change, and in joining the Parliamentary Reception held, I welcomed Prime Minister Anthony Albanese endorsing the King’s




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passion stating, ‘You take seriously the threat that it represents, as well as the necessity – and, crucially the capability – of humanity to take meaningful and effective action against it’.

From the Parliamentary Reception, I then went on to represent AHHA at the Commonwealth Heads of Government Meeting (CHOGM) 2024 in Samoa, and while this meeting includes the Commonwealth, the outcomes will go far beyond the Commonwealth. Echoing the conversations at our recent event, other countries are also facing the impacts of climate change and natural disasters as well as other global challenges. So too are they exploring the connections, cooperation and new opportunities that emerging leaders will need to tackle global challenges that are already at our

doorstep for the wellbeing of future generations.

This issue of The Health Advocate brings together the activity happening within Australia across research, policy and practice to drive sustainability. There is much to be achieved, and we all have a role. As the issue is published, we welcome announcements about the establishment of the Centre for Disease Control, as well as the release of the independent inquiry into Australia’s response to the COVID-19 pandemic and review of Commonwealth Disaster Funding (the Colvin review) to inform system reform. We look forward to continuing to work with members driving the collective action across the health system for reform that improves the health and wellbeing of Australians. 

AHHA in the news

24 JULY 2024

**deeble
institute**


Deeble Institute for Health Policy Research

Issues Brief

Timely data is key for planning the future of oral health workforce

Restorative and wellbeing care is essential for enhancing independence and self-confidence in older Australians and improving their quality of life. In Australia, residential aged care (RAC) residents are not receiving the recommended quantities and types of allied health care to support restorative and wellbeing care. A Policy Issues Brief released by AHHA's Deeble Institute for Health Policy Research, examines the barriers to providing restorative and wellbeing care for our ageing population.

The Policy Brief, coauthored by Isabelle Meulenbroeks, recipient of the Deeble Institute's 2024 Jeff Cheverton Memorial Scholarship, and PhD Candidate at the Australian Institute of Health Innovation, Macquarie University, recommends bringing Australia into line with world leading health systems in delivery of restorative and wellbeing care in RAC.


The Jeff Cheverton Scholarship is supported by North Western Melbourne and Brisbane North Primary Health Networks. The Issues Brief '[Restorative and wellbeing care in Australian residential aged care facilities](#)' can be accessed via the AHHA website. 

31 JULY 2024



Eye care practitioners key to preventing falls in older adults

Falls are a leading cause of hospitalised injuries and injury-related deaths among older Australians with the causes of these incidents being multifactorial. However, older adults with impaired vision are twice as likely to fall than those without impaired vision. More Australians visit an optometrist than any other non-medical health professional, but we're not seeing the full benefits this sector can bring when it comes to preventing falls in older adults.

Released by AHHA's Deeble Institute for Health Policy Research, the Issues Brief '[Reinforcing the role of eye care practitioners in falls prevention among older adults](#)', highlights the importance of including eye care practitioners, such as optometrists, as part of a multi-disciplinary team of health professionals working towards fall prevention. 

HAVE YOUR SAY...

We would like to hear your opinion on these or any other healthcare issues.
Send your comments and article pitches to our media inbox: communications@ahha.asn.au

19 SEPTEMBER 2024




Australian Collaborative Commissioning program supporting frail and elderly recognised internationally

AHHA congratulated Northern Sydney Local Health District (NSLHD) and Sydney North Health Network on their partnership to support frail and elderly people in the community, which received an honorary mention at the prestigious International Hospital Federation Awards in September.

Frailty affects about 25% of the population aged over 70, and those living with frailty have poorer outcomes in hospitals. Focusing on both identifying and reducing frailty and minimising admissions to

hospital is crucial for improving health outcomes for these people.

James Inglis, NSLHD Director of Operations Integration, said the Collaborative Commissioning program works by supporting GPs to identify patients at risk of presenting to the emergency department by providing them with faster access to specialists and community-based care. Read more on the [AHHA website](#). 

AHHA in the news


26 SEPTEMBER 2024



2024 Sidney Sax Medal recipient Dr Walid Jammal

AHHA awarded the 2024 Sidney Sax Medal to Dr Walid Jammal, for outstanding contributions to the development and improvement of Australia's healthcare system.

Dr Jammal's dedication to quality and safety in health care, along with his expertise in health system policy and reform, has made him an invaluable asset to the healthcare sector, and his decades-long commitment to strengthening primary care in Australia was recognised by this prestigious award.

A well-respected leader within the healthcare system, Dr Jammal has worked with both NSW Health and the Commonwealth Government testing and developing integrated care models. The 2024 Sidney Sax Medal award presentation took place on the 15th of October at the National Museum of Australia, Canberra, at a lunch presentation during the John Deeble Lecture and Panel Discussions. Read more on the [AHHA website](#). 


17 OCTOBER 2024



Susan McKee appointed Chair – Australian Centre for VBHC Advisory Group

AHHA's, Australian Centre for Value-Based Health Care was pleased to announce the appointment of Ms Susan McKee as Chair of the Centre's Advisory Group.

As an internationally recognised leader in the implementation of system-wide value-based health care (VBHC), Ms McKee brings to the role a wealth of experience across the hospital and health sector and, more recently, through navigating the achievements and pitfalls of implementing VBHC transformational change over many years at Dental Health Services Victoria.

Throughout her time leading Dental Health Services Victoria's value-based transformation, Ms McKee has made many connections nationally and internationally that will support the Centre to continue to grow and advance the VBHC movement in Australia. 



Climate action in the Australian health sector: turn down the heat

Amid record-breaking temperatures, is the Australian health sector doing enough to decisively confront climate change?



SOTIRIS VARDOULAKIS,
Director of the HEAL (Healthy Environments And Lives) National Research Network, and Professor of Environmental Public Health at the University of Canberra

The most devastating direct impact of climate change is extreme heat. Increasing temperatures and heatwaves, i.e. periods of very hot days and nights, can cause major impacts on human health, the healthcare infrastructure, emergency services, and the natural and built environment. The risk of hospitalisation and death due to extreme heat increases with age, with older people living alone being at higher risk. Many heat-related fatalities occur in cities, where urban heat islands (i.e. built-up areas with little vegetation and higher temperatures relative to their surrounding area) exacerbate the problem.

It is likely that 2024 is going to be Earth's warmest year on record, with the 10 warmest years all having occurred during the last decade. In response to the rapid rise of extreme heat, United Nations Secretary-General António Guterres recently called for urgent action to address extreme heat in four critical areas: caring for the vulnerable, protecting workers, boosting resilience of economies and societies using data and science, limiting global temperature rise to 1.5°C by phasing out fossil fuels and scaling up investment in renewable energy.

Rising temperatures significantly increase the risk of bushfires and smoke, and contributes to >



“A stronger focus on preventive health and policies outside the remit of the health system aiming to reduce emissions and improve climate resilience in cities can bring multiple environmental and health benefits.”

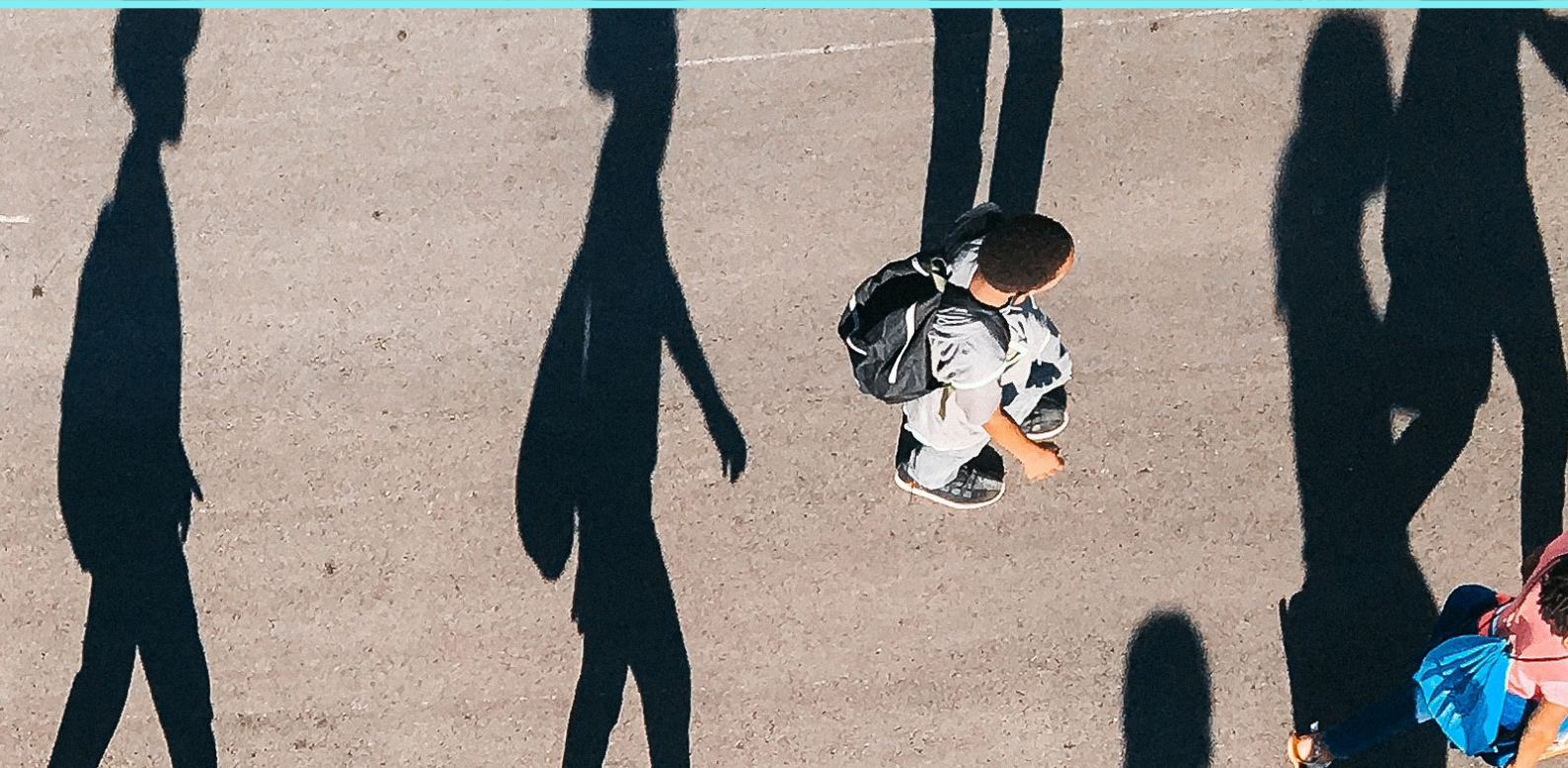
other more subtle changes in our environment, such as earlier and longer pollen seasons and more ozone pollution, which contribute to poor respiratory health. Extreme heat and pollution disproportionately affect the health of people in vulnerable situations: the very old and the very young, pregnant women, people with disabilities, migrant communities, and low-income households, amplifying existing health inequities in our communities.

Climate change, the underlying cause of these extremes, is already affecting every Australian region in multiple ways. Australia’s average temperature for the last winter was 1.48°C above average. This was the second-warmest winter on record since national observations began. Australia’s spring weather forecast predicts unusually warm weather, particularly for the northern of the country. Many climate extremes depend on the level of warming, but what people in Australia experience can be very different to the national average.

Effective adaptation to extreme heat is urgently needed, focusing on those who are at higher risk. Heat-health action plans that coordinate health system and local government’s response to heatwaves are in place in Victoria and other jurisdictions. These plans become activated when predefined temperature thresholds are exceeded. Although they mainly focus on the public health response, healthcare services also need to prepare for patient surges, as well as for impacts on their workforce and infrastructure.

Australia’s domestic greenhouse gas emissions per capita are amongst the highest in the world. The health sector contributes around 7% of Australia’s total carbon footprint. Although there have been positive steps in recent years, there is still large scope for reductions in greenhouse gas emissions, particularly by drastically reducing low-value health care and decarbonising clinical practices.

Building workforce capacity and capability for the net zero transition in the health sector is essential. The NSW Health program of appointing senior



clinicians as [Net Zero Leads](#) to embed low-carbon models of care in their service is a promising initiative which could be replicated in other jurisdictions. A stronger focus on preventive health and policies outside the remit of the health system aiming to reduce emissions and improve [climate resilience in cities](#) can bring multiple environmental and health benefits.

To achieve this, the [HEAL Network](#) is supporting the implementation of the [National Health and Climate Strategy](#) and the [National Climate Risk Assessment and National Adaptation Plan](#) by drawing together existing research, policy and community collaborations and creating new ones across Australia and internationally. We are investing in a new generation of future research leaders by strengthening their scientific and influencing skills through training, networking, and research initiatives. Importantly, HEAL brings together Aboriginal and Torres Strait Islander knowledge of adapting to environmental change

with Western science and data to develop innovative climate and health solutions.

Many of our initiatives will be showcased at the [HEAL 2024 conference](#), *Healing with Country for a Sustainable Future for Everyone*, which is taking place online and in-person in all Australian capital cities on 26-28 November 2024 (free [registration](#)).

UN Secretary-General's call to action on extreme heat couldn't be more timely. Unless there are large-scale and rapid reductions in global greenhouse gas emissions and effective adaptation measures in all sectors, including the health system, the current pattern of increasing heat will continue to cause much harm and disruption. ^{ha}

The HEAL (Healthy Environments And Lives) Network receives funding from the National Health and Medical Research Council Special Initiative in Human Health and Environmental Change (grant no. 2008937).



Green care for high quality care: practical actions and pathways for climate-responsive health systems



PROF ADITYA VYAS
Associate
Professor of Public
Health & Deputy
Director, Healthy
Environments and
Lives (HEAL) Centre,
University
of Canberra



**DR CAROLYN
HULLICK**
Chief Medical
Officer, Australian
Commission on
Safety and Quality
in Health Care

International and national agreements to reduce the carbon impact of health systems are gaining momentum – with important milestones reached recently by the health community

Health leaders around the world have called for action on climate change by the health sector for several decades. There is now much greater awareness of the fact that health care delivery contributes to greenhouse gas emissions and therefore exacerbates climate change. The role of national health systems and individual health organisations in addressing climate change has been elevated in United Nations climate negotiations. The 26th Conference of Parties (COP26) held in

Glasgow in 2021 resulted in the development of the Alliance for Transformative Action on Climate and Health (ATACH). There, some 50 countries committed to building climate resilient and low carbon health systems, and several countries committed to reaching net zero health sector greenhouse gas emissions by 2050.

Two years later, COP28 in Dubai featured the first-ever Health Day. It had a number of major outputs: the UAE Declaration on Climate and Health, endorsed by 123 countries ahead of the Climate-Health Ministerial; establishment of the Guiding Principles for Financing Climate and Health Solutions, with \$1B in funding commitments for health; and a Prospectus of Climate & Health

Solutions demonstrating how the health sector can address climate change.¹ Since then, the World Health Assembly has made a landmark resolution on climate change and health, and international health professionals' associations have made concerted efforts to build capacity in their membership to address this defining challenge of our time. The International Society for Quality in Health Care (ISQua) Green Paper on Environmentally Sustainable and Climate Resilient Health Systems, launched in September 2024, is just one example of such efforts.²

Closer to home, the Australian government produced the National Health and Climate Strategy in 2023 with 49 actions across four objectives: health system resilience, health system decarbonisation, international collaboration and health in all policies. The National Health and Medical Research Council (NHMRC) increased its investment in climate and health research through a \$10M Special Initiative in 2021 and a \$5M Targeted Call for Research in 2024. Three national bodies – the Australian Commission on Safety and Quality in Health Care (ACSQHC), Interim Australian Centre for Disease Control, and Council of Presidents of Medical Colleges (in conjunction with all member colleges) – produced a Joint Statement on working together to achieve sustainable high-quality health care in a changing climate in October 2024, as a first step to further combined action.³

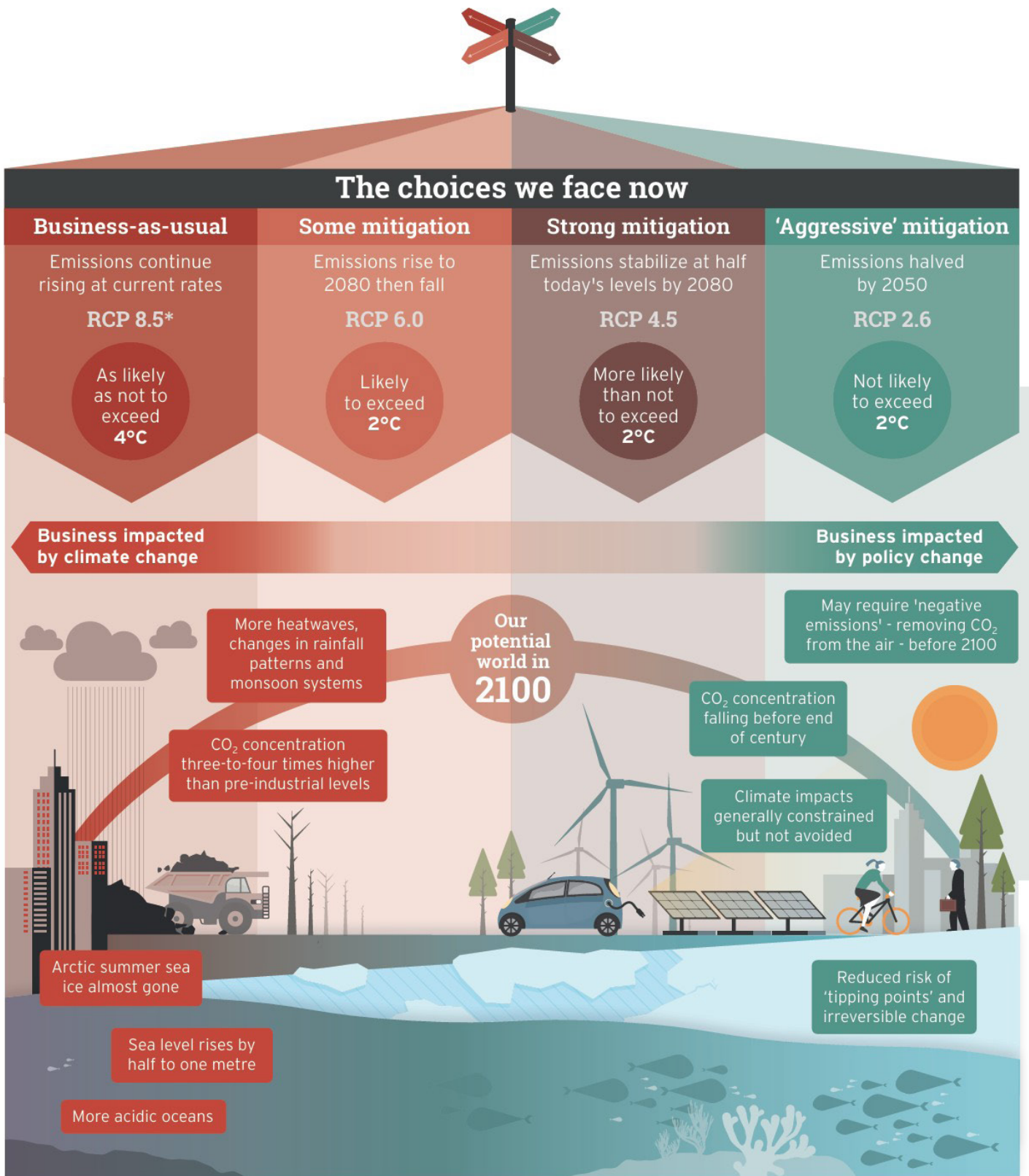
These national and international developments show how far the health community has come in understanding and starting to address climate change and health. It also complements the efforts of many individuals across the health system – from clinicians and sustainability officers, to health

service managers and executives, college and health association members, health advocates, and beyond.

Human society stands at the carbon crossroads – so sustainable healthcare choices that embrace both adaptation and mitigation of climate change are needed

Despite our collective progress, the challenge of addressing climate change through the health system remains. Major research such as the *Medical Journal of Australia-Lancet Countdown on Health and Climate Change* continues to highlight the health and economic costs of inaction to Australia. For example, severe floods across the four eastern states of Australia in 2022 saw insured losses of \$7.168 billion – the highest ever recorded, and even more than the devastating 2019-20 summer bushfires.⁴ While the health impact of these events is not fully quantified, we know that the health of the planet determines human health, and that human society ignores its impacts on the environment at our own peril (Figure 1).

Improving human health involves action across the whole of society. The role of health practitioners and health systems can seem hard to fathom when faced with such a large and cross-cutting problem. However, there are a number of pathways for practical action at the disposal of clinicians and health system managers. The Joint Statement on working together to achieve sustainable high-quality health care in a changing climate³ outlines three principles of sustainable health care: investing in prevention, minimising potentially harmful and wasteful care, and minimising emissions associated with the delivery of high-value care. The ISQua Green Paper² sets out potential pathways, and >



*The four RCP (Representative Concentration Pathway) scenarios each project a certain amount of carbon to be emitted by 2100, and as a result lead to a different amount of human-driven climate change. Climate change will continue after 2100 and elevated temperatures will remain for many centuries after human CO₂ emissions cease.

Figure 1

12 practical actions, that health organisations can take across the spectrum of clinical care delivery through to system-wide actions (Figure 2).

The Australian healthcare system must embed sustainable, high quality and low carbon models of care – while also reducing low value care

Health organisations need to drive change, for example, by embedding actions from the ACSQHC Environmental Sustainability and Climate Resilience Module⁵ in their clinical governance framework.

Many guides for practical action are available, such as the ISQua Green paper and the Joint Statement.

The ISQua Green Paper shows the multiple pathways a health organisation can take to deliver climate-responsive health care. For example, an organisation can start from the ‘bottom up’ by forming a Green Team within a hospital (action 2), which can host a Green Ward Competition (action 3) and then embed this practice through the Sustainable Quality Improvement tool (action 1). A different organisation may take a ‘top down’ approach with organisational leadership establishing a chief sustainability officer (action 5), who can lead measurement, monitoring and evaluation efforts (action 4), which can then inform the organisation’s performance (action 6). These actions occur against the backdrop of four domains of practice – by improving knowledge, establishing networks, using the health professionals’ voice for advocacy, and ultimately taking action.

The Joint Statement builds on the extensive evidence of unwarranted clinical variation in health care documented in the Australian Atlas

of Healthcare Variation Series.⁶ The focus areas of the Joint Statement provide a framework for achieving sustainable high-quality health care in a changing climate. Integrating care by connecting care providers, and ensuring that care is patient centred and high value reduces fragmentation of care, minimises waste from low value alternatives and better focuses innovation on *developing low emission models of care*. This will require changes to the ‘business as usual’ of health care practice, together with thoughtful review of practice and data to identify opportunities for optimising patient care. However, the current tight fiscal environment and ongoing national health reforms provide the ideal incentive and context to pursue these objectives. We now need to scale up these actions across different disciplines of clinical care, and at a rapid rate.

Mobilising and supporting the health workforce to lead the health system response to climate change can be achieved by embedding the principles of sustainable health care throughout clinical education. Medical colleges and healthcare associations have a vital role to play in this regard. However, health workforce mobilisation can also take place at a small scale and individual level – each and every practitioner can contribute to reducing medication errors; avoiding unnecessary patient re-admissions; communicating with patients, families and carers to ensure that care is aligned to their goals; communicating with colleagues for patient safety and effective treatment; and ensuring effective handover of care across a fragmented >

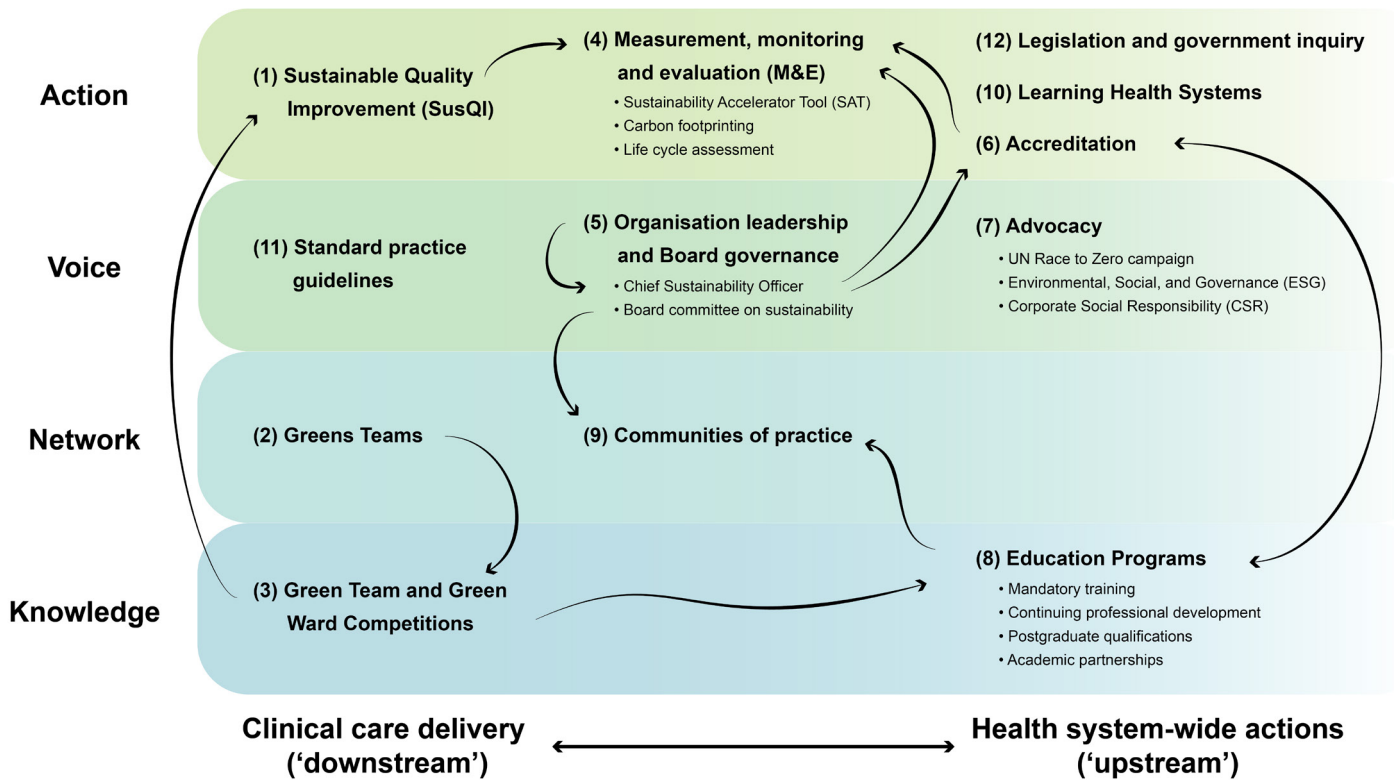


Figure 2

health system. These actions all lead to better value care, which has an associated reduction in the carbon footprint of care.

Ten years ago, at the 2014 United Nations Climate Summit, President Barack Obama stated ‘we are the first generation to feel the impact of climate change and the last generation that can do something about it.’ While this statement holds as true today as it did ten years ago, our window for action is rapidly narrowing. But the health community has the means, methods and moral obligation to act – we can be part of the solution in delivering a better planet and better health for future generations. ■

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A snapshot of sustainability and decarbonisation activities in Australian healthcare



DR KRISTA VERLIS
Program Manager
and Research Officer,
Wisser HealthCare



**ADJ APROF
REBECCA HADDOCK**
Executive Director
of Knowledge
Exchange, AHHA,
Co-Lead Investigator,
HEAL



**PROF ALEXANDRA
BARRATT**
Professor of Public
Health, University
of Sydney, Co-Lead
Investigator, HEAL

Climate change is a significant threat to the health of both humanity and the environment, with healthcare being a notable contributor to climate change. Globally, healthcare accounts for around 4-5% of global greenhouse gas emissions and in Australia, around 7% of carbon emissions.¹ Clinical care accounts for the biggest portion of healthcare carbon emissions.² While action is occurring within the healthcare sector to address its carbon footprint, and 80 countries, including Australia, now committed to sustainable, low-carbon health systems through the Alliance for Action on Climate Change and Health (ATAACH) Programme,³ it is not well known exactly what actions were being undertaken in this sustainability space in Australia.

Therefore, to improve our understanding of what sustainability and decarbonisation actions were occurring within the Australian healthcare system, we mapped activity across Australia,⁴ including identifying the various healthcare stakeholders and carrying out an extensive search to locate relevant documents; including position statements, policy documents, frameworks, strategies, reports, and action plans. Key content data regarding sustainability and/or decarbonisation was then extracted with attention to specific actions in clinical care or in the broader healthcare system.


Table 1: Summary of healthcare stakeholder sustainability and decarbonisation activities in Australia

STAKEHOLDER	HIGHLIGHTED ACTIVITIES
Federal Government	National Health Sustainability and Climate Unit within the Department of Health and Aged Care established (Dec 2022). National Health and Climate Strategy released (Dec 2023).
New South Wales (NSW)	Created a Climate Risk and Net Zero (CRNZ) unit in 2022 to focus on reducing carbon emissions and addressing low-value care. The CRNZ strategy includes initiatives to decarbonise clinical care.
Queensland (QLD)	QLD Health is working towards a climate-ready public health system, including the proposed establishment of an Office of Hospital Sustainability and a working group to support sustainable initiatives in clinical healthcare including activities to quit Desflurane anaesthetic gas and promote measures to reduce nitrous oxide leaks.
Western Australia (WA)	WA developed a blueprint for climate response, established a Sustainable Health Unit, and was the first state to remove desflurane (a high-carbon anaesthetic gas) from public hospitals. WA is focused on reducing emissions, building staff skills, and shifting from reactive to preventive healthcare
Victoria (VIC)	VIC has developed strategies addressing environmental sustainability, climate change impacts on health, and social determinants of health. Existing legislation supports the reduction of the healthcare sector's carbon footprint.
Tasmania (TAS)	TAS has set ambitious net-zero targets and released a framework of action focusing on emission reduction and delivery models that reduce unnecessary medical tests.
South Australia (SA)	SA aims to reduce healthcare carbon emissions through prevention and improved wellbeing, with plans for Australia's first all-electric major hospital. Climate change is also acknowledged as a determinant of health.
Australian Capital Territory (ACT)	The ACT has strategies to achieve net-zero emissions by 2045, focusing on resource management, infrastructure, digital health, workforce, and procurement. Canberra will have Australia's first all-electric critical care facility.
Northern Territory (NT)	NT Health established a Sustainable Healthcare Committee to address waste, emissions, and climate change adaptation.
Primary Health Networks (PHNs)	Two PHNs, both in NSW, have included environmental sustainability in their strategic plans, with some focus on decarbonising clinical care.
Public Hospitals	Various hospitals have developed sustainability plans, with notable initiatives in NSW, QLD, WA, and VIC focusing on environmental sustainability and decarbonisation. For instance, NSW supports Net Zero Clinical Leads and QLD created the SWAPNet Environmental Accountability Working Group.
Private Health Providers	Some private hospital groups have sustainability strategies incorporating aspects of decarbonised clinical care. For example, Ramsay Healthcare, St John of God Health Care, St Vincent's Health Australia and HealthScope all have various sustainability reports. However, publicly available information is limited for many private providers, especially around clinical care activity emissions.
Professional Organisations	Most medical colleges and dental associations have adopted policies supporting sustainability actions. For Example, RACP's Environmentally Sustainable Healthcare Position Statement that recognises carbon footprint of clinical care.
Non-Government Organisation	Numerous non-government and professional organizations are engaging with policymakers to develop and implement sustainability strategies. For example, Doctors for the Environment and the Climate and Health Alliance (CAHA) are very active, with CAHA administering the Global Green and Healthy Hospitals program in Australia.



“It is clear that the focus of activity to date on general sustainability measures needs to shift towards specific decarbonisation efforts. The establishment of the National Health Sustainability and Climate Unit offers a significant opportunity for national leadership and coordination in achieving low-carbon, environmentally sustainable healthcare.”

The mapping exercise revealed that while Australian healthcare stakeholders are supporting sustainability, there is a notable lack of action towards decarbonising clinical care practices. This is a rapidly evolving space with constant new developments including the October 2024 joint statement on achieving sustainable high-quality healthcare led by the Australian Commission on Safety and Quality in Health Care, Australian Government and Medical Colleges.⁵ It is clear that the focus of activity to date on general sustainability measures needs to shift towards specific decarbonisation efforts. The establishment of the National Health Sustainability and Climate Unit offers a significant opportunity for national leadership and coordination in achieving low-carbon, environmentally sustainable healthcare.

Future efforts should include more focus on decarbonisation of health systems, improved evaluation of sustainability activities, encouragement of private sector involvement, and increased transparency and coordination across the sector to effectively address carbon emissions and achieve net-zero healthcare. 

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Decarbonising Healthcare Buildings

PROF PRIYA RAJAGOPALAN
Director, Post Carbon
Research Centre, RMIT
University

STEFANO SCALZO
Director, Frontend Advisory

DR SHILPI TEWARI
Research Fellow, HEAL
Network, RMIT University

Healthcare facilities present major sustainability challenges, as their energy usage intensity (EUI) is much higher, 2.6 times, than that of commercial office buildings¹. Healthcare buildings are significantly different from other building typologies due to their 24/7 operations and the high energy demands of medical equipment, lighting, HVAC systems, and water supply, as well as a high standard of indoor environmental requirements. For example, hospitals adhere to stricter ventilation standards to protect patient health and well-being. Most of the electrical energy used in hospitals is for HVAC systems (around 37%), electrical processes (34%), and lighting (24%)².

In Australia, healthcare buildings come in various types, reflecting the diverse needs of the population and the complexity of the healthcare system. These facilities range from small local clinics for community health organisations, including those dedicated to Aboriginal and Torres Strait Islander communities, to large, specialised hospitals and research centres for public and private acute and sub-acute health provider organisations.

In the face of climate change, healthcare facilities themselves are vulnerable to the effects of extreme weather, impacting both their infrastructure and ability to deliver care. Conversely, many health environments in community settings are also refuges of last resort during extreme weather or disaster events. Thus, decarbonising healthcare buildings is an urgent, actual, and existential priority as the healthcare sector grapples with the dual challenge of reducing its environmental impact, while also addressing the health consequences of climate change. Decarbonising is not only a moral imperative for the healthcare sector to address the climate crisis, but also a strategic move that can lead to improved operational efficiency, cost savings, and better health outcomes. Buildings that embrace decarbonisation are better equipped to respond to climate-related health challenges, remain resilient in the face of disruptions, and operate more sustainably in the long term. Decarbonising healthcare buildings requires a systemic approach that integrates energy efficiency, renewable energy, sustainable building materials, and optimised operations. This must be done without >



compromising patient safety, care quality, or the regulatory standards that healthcare buildings are subject to.

The Post Carbon Research Centre

The Post-Carbon Research Centre at RMIT

University offers an innovative, holistic approach to this challenge, leveraging its interdisciplinary expertise across design, engineering, planning, construction, and social sciences to address the complex task of decarbonising the built environment. Drawing from its core research themes of transition, design, and production, the Centre presents a framework that can be applied to decarbonising healthcare buildings while ensuring resilience, operational efficiency, and improved health outcomes for communities. The Post-Carbon Research Centre's multidisciplinary approach offers a pathway forward, aligning the goal of decarbonisation with the need for resilient, efficient, and healthy hospital environments. Cutting across three main research themes, the Centre's research is organised within four clusters, providing a collaborative research environment to support cross-disciplinary research. Research under the *Buildings* cluster focuses on the informed implementation of automation and digital technologies in buildings which are important for the design, construction and operation of healthcare buildings that are complex in nature.

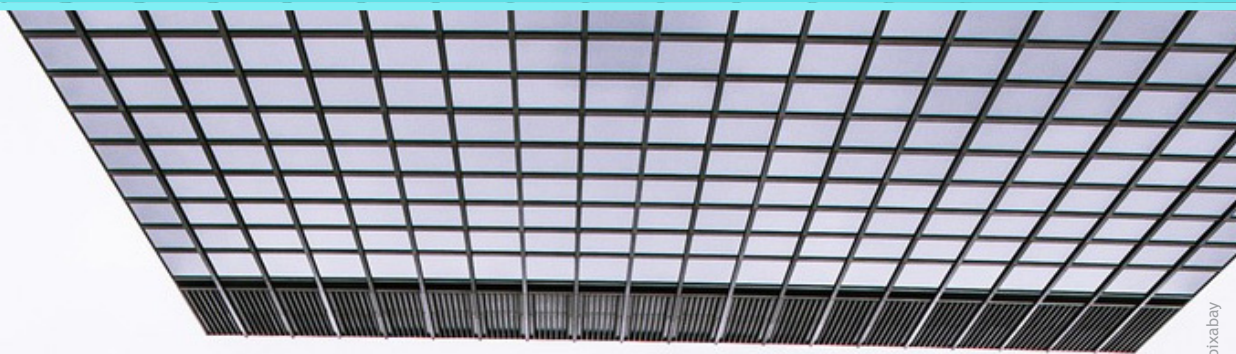
How are we assessing existing buildings?

Existing programs, such as the National Australian Built Environment Rating System (NABERS)³, enable public hospitals to maintain high energy efficiency standards, thereby serving as examples for the wider market. NABERS evaluates the environmental performance of public buildings based on actual

operational data over a 12-month period. For the commercial building sector, NABERS and Commercial Building Disclosure (CBD) programs have helped slash energy use in the commercial building sector, where buildings that began disclosing their energy performance under CBD in 2012 have cut their energy use by an average of 42%⁴. Currently, a program to expand CBD to other buildings, including hospitals, before 2030 is being planned by the Federal Government.

In Victoria, 133 public hospitals have participated in the 2024 NABERS Sustainable Portfolio Index, where the Victorian Health Building Authority (VHBA) rated the energy and water efficiency of 133 public hospitals, representing approximately 2.9 million sqm of area and 6.5 million occupied bed-days⁵. While VHBA records this information in Victoria, similar agencies in other Australasian jurisdictions collect this data under the auspices of the Australasian Health Infrastructure Alliance (AHIA). Valuable real-world data on the energy performance of hospitals have been captured through such programs. As a result, more and more building stakeholders are acknowledging the benefits of being transparent about the environmental performance of healthcare buildings. However, many private hospitals and small healthcare facilities and community health centres are yet to embrace these programs.

Regular energy audits are another crucial tool for healthcare buildings striving to reduce their carbon footprint and improve operational efficiency. These Decarbonisation audits provide valuable benchmarks, helping healthcare buildings assess their current energy consumption patterns and identify areas where improvements can be made. For example, a recent audit of 161 buildings used to accommodate the provision of holistic care



services amongst Victoria's Aboriginal Community Controlled Organisations undertaken by the VHBA in collaboration with the Victorian Aboriginal Community Controlled Health Organisation, (VACCHO) identified annual abatement opportunities of 174,827 kilograms CO₂-e from reducing gas use and 10,462,397 kilograms CO₂-e from reducing electricity use. Any resulting savings from investment in electrification, behind-the-meter solar, and energy efficiency would deliver more services to Victoria's Aboriginal community that help close the gap. By consistently monitoring energy usage, healthcare buildings can track the success of energy-saving initiatives and make data-driven decisions to enhance efficiency.

Are new buildings designed better?

The Post-Carbon Centre's experts in architecture and engineering are well-positioned to reimagine healthcare building design, incorporating cutting-edge digital tools like Building Information Modelling (BIM) and digital twins to optimise energy performance. There are guidelines such as the 'Guidelines for sustainability in capital works' by VHBA⁴ that provide advice and guidance on how to build sustainable and resilient buildings. The guidelines require all-electric infrastructure for facilities under 10,000 square meters, and for larger facilities to include a plan to transition away from natural gas. The aim is for Victoria's public hospitals and health services to be powered by 100% carbon neutral renewable electricity by 2025

to support the 2050 net zero carbon target by reducing the use of gas.

While guidelines for the design and construction of new hospitals are leading to better outcomes, the gains achieved may be being offset by the scale of newer facilities. With many contemporary hospitals across Australia now exceeding 100,000 sqm, the energy required to run and maintain these significant facilities is escalating. How well utilised are these enormous hospitals? Could the gains in non-bricks and mortar service provision accelerated during COVID lead to more efficient health environments?

Building resilience

Designing healthcare buildings that not only reduce energy use but also create healing environments is essential. While health care facilities care for affected people during disaster events, extreme weather events such as heatwaves and bushfires impact healthcare facilities at all levels affecting, their basic functioning. Many healthcare buildings serve vulnerable populations, and their role in maintaining public health becomes even more critical as climate-related health issues, such as respiratory diseases and heat-related illnesses, become more prevalent. Passive design principles such as daylighting, shading, and the use of appropriate envelope materials can tackle climate resilience to some extent, but ensuring the security of hospital energy supplies and communication infrastructure is equally important. >



Older healthcare assets

Hospitals have one of the highest embodied carbon footprints per square meter in the construction sector⁶. Therefore, reusing existing buildings or refurbishing them with latest energy efficiency technologies is a more sustainable option than building new ones. Renovating older hospital facilities is not straightforward as they are too outmoded for today's patient expectations and fast-advancing medical field and has limited adaptation capability to unforeseen situations like the COVID-19 pandemic. Adaptive reuse of hospital buildings is not a new concept. While the courtyard hospitals built during the miasma period when the healing properties of air flow and daylight were considered essential to good health were superseded by the modern sealed and air-conditioned box, those same court-yard hospitals were coveted for their amenity and became ideal campuses for universities or research parks. Many of Melbourne's pre-deinstitutionalisation asylums, for example, set in large garden settings, built with verandas, openable windows, excellent thermal mass and other passive design features, have been recycled into research buildings, schools and even high-end residential enclaves. Could the same be the future of Victoria's sub-acute hospitals, which are in desperate need of renewal at a time when the provision of sub-acute services is shifting toward more at-home care models? Could these

same sites, located across metropolitan Melbourne and rural and regional Victoria, be a solution to our housing crisis?

Towards a sustainable future for healthcare buildings

The Post-Carbon Centre's commitment to translating research into real-world applications means that its decarbonisation strategies are designed to be implemented at scale, with attention to the social, political, and regulatory contexts in which healthcare buildings operate. This ensures that decarbonisation efforts are equitable, accessible, and aligned with public health goals.

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Minimising nitrous oxide infrastructure leaks in Australian hospitals



PROF EUGENIE KAYAK
Enterprise Professor of Sustainable Healthcare at the University of Melbourne Medical School and co-convenor of Sustainable Healthcare for Doctors for the Environment Australia (DEA) and an anaesthetist. Eugenie is the lead author of the *Detecting and reducing leaks from nitrous oxide in healthcare facilities — A practical guide*.



DR REBECCA MCINTYRE
Secretary of The Department of Critical Care Sustainability and Planetary Health Action Network and an anaesthetist working at the Royal Children's Hospital. Rebecca is a co-author of the *Detecting and reducing leaks from nitrous oxide in healthcare facilities — A practical guide*.



Dr Elizabeth Hu
Sustainability officer for junior medical staff at Austin Health and DEA Victoria member. Liz has a special interest in nitrous oxide advocacy.

THE WHY

Nitrous oxide (N₂O) is a potent greenhouse gas with a global warming potential 265 times that of carbon dioxide. Its average atmospheric lifetime of 110 years means that nitrous oxide released today will have warming effects into the next century. The 2023 National Climate and Health Strategy identified that medical N₂O use contributed 300 kilo tonnes of CO₂ emissions in the 2020-21 financial year, or 20% of the Australian health system's total Scope 1 emissions.

While N₂O continues to have an established role in certain areas of clinical care, such as obstetrics and paediatric procedures outside the operating theatre, its use in anaesthesia has reduced dramatically. In a survey of Australian anaesthetists in 2017, two thirds of anaesthetists reported using N₂O in less than 20% of their anaesthetics. Despite this, Australian hospitals continue to purchase large amounts of N₂O. Multiple studies, in Australia and overseas, have found large discrepancies between hospital purchased N₂O and clinical use. Testing of the N₂O pipeline system in multiple hospitals globally have found at least half (and often more than 70%) of the >

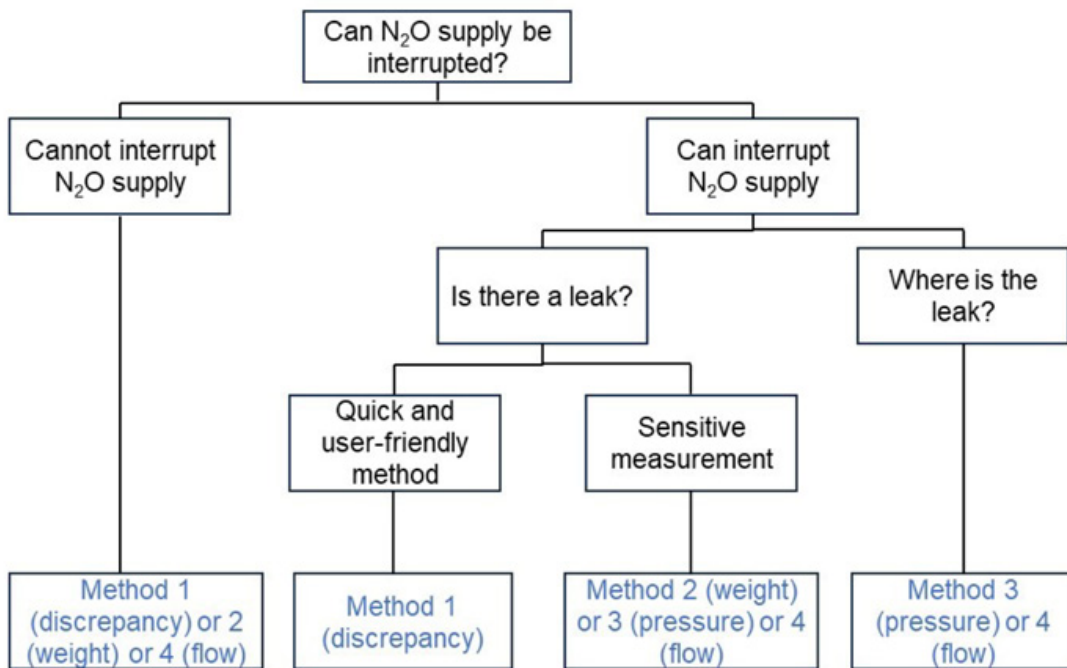


Figure 1. Decision pathway to assist in choice of method to detect N2O leaks (from Detecting and reducing nitrous oxide leaks in healthcare facilities – A practical guide)

N2O supplied to healthcare facilities leaks from infrastructure before ever reaching the patient.

Leaks can occur in multiple locations of the N2O infrastructure, such as along the manifold-pipeline system, connecting valves, wall outlets or at the point of clinical administration, and in both older and newer systems.

The evidence now suggests that all healthcare facilities must consider their N2O infrastructure is likely to contain leaks, which are both financially wasteful and harmful to the environment. Hospitals can consider testing their N2O infrastructure for leaks or may consider moving straight to decommissioning the pipeline and moving to cylinders at the point of care to reduce waste.

THE HOW

The University of Melbourne, in conjunction with the Australian Government’s Department of Health and Aged Care, and the Interim Australian Centre for Disease Control, has published *Detecting and reducing nitrous oxide leaks in healthcare: A practical guide*.

The guide provides information to assist clinicians and health facility managers to identify the most appropriate method for their health service to test for N2O leaks, to make informed choices about N2O supply (piped vs cylinders), reduce and remove N2O supply where not necessary and reduce N2O leaks through regular monitoring of N2O supply.

“Hospitals can consider testing their N2O infrastructure for leaks or may consider moving straight to decommissioning the pipeline and moving to cylinders at the point of care to reduce waste.”



Key recommendations from the guide include:

1. Avoiding the use of N2O where possible
2. Isolating N2O flow for areas in the facility where N2O is no longer in use
3. Avoiding the installation of new N2O infrastructure
4. Decommissioning existing N2O pipelines if appropriate

The Prince Charles Hospital, in Brisbane is the first large tertiary hospital in Australia to decommission its reticulated N2O infrastructure, demonstrating that health services should consider decommissioning as a cost-effective alternative to testing, particularly if they have low clinical use of N2O.

For services where decommissioning N2O infrastructure is currently not considered an option, *Detecting and reducing nitrous oxide leaks in healthcare: A practical guide* describes four methods that have been used successfully in Australia and internationally to detect leaks:

Method 1 Discrepancy: Developed by the United Kingdom’s Nitrous Oxide Project, this method compares the N2O amount purchased to the N2O amount clinically used, to estimate the amount leaked.

Method 2 Cylinder weighing: Developed at Alfred Health, this method weighs a single N2O cylinder attached to the manifold over a period of time to determine the amount of N2O supplied to the N2O reticulated system. Amount of N2O leak is

calculated by change of cylinder weight during no clinical use or using Method 1 if N2O is being used.

Method 3 Pressure testing: Developed by the Green Theatres team in Western Australia, this method detects leaks by measuring pressure decreases in the fix volume pipeline during a period of no clinical use.

Method 4 Flow monitoring: Initially developed at Sunshine Hospital, Melbourne, this method uses purpose-built flow metres to measure the quantity of N2O used in a specific area of the hospital to assist in detecting leaks.

Figure 1, from the *Detecting and reducing nitrous oxide leaks in healthcare: A practical guide* provides a decision pathway to assist in determining which of the above methods are most suitable to detect leaks in your health service.

Addressing and minimising N2O leaks in healthcare is an important step in reducing healthcare’s greenhouse gas emissions that has been ignored for too long. The sector has the ability, and an obligation, to act to minimise unnecessary N2O emissions and the associated wasted financial cost. ¹⁴

Read the ‘Detecting and reducing leaks from nitrous oxide in healthcare facilities – A practical guide’ here: https://www.health.gov.au/sites/default/files/2024-09/detecting-and-reducing-leaks-from-nitrous-oxide-in-healthcare-facilities-a-practical-guide_0.pdf



High burden from chronic respiratory conditions

Room for improvement in quality of care and environmental sustainability



DR LUISE KAZDA
Research Fellow
in Health Systems
Sustainability,
Healthy
Environments and
Lives (HEAL) Global
Research Centre,
Health Research
Institute, University
of Canberra



**DR KRISTEN
PICKLES**
Research Fellow,
Wiser Healthcare
Research
Collaboration,
Sydney School
of Public Health,
University of Sydney



PROF KATY BELL
Professor of Clinical
Epidemiology, Wiser
Healthcare Research
Collaboration,
Sydney School
of Public Health,
University of Sydney

Chronic respiratory conditions in Australia

Chronic respiratory conditions like asthma and chronic obstructive pulmonary disease (COPD) carry a high disease burden in Australia, with around 34% of Australians self-reporting at least one type of chronic respiratory condition (see AIHW: [Chronic respiratory conditions](#)). The burden of disease of both asthma and COPD has been linked to socio-economic disadvantage with a higher prevalence of disease among people from more disadvantaged areas and from more remote regions. Other risk factors for respiratory conditions include [genetic risk and environmental exposures](#) such as [cigarette smoking](#) and air pollution. In recent years, several natural events, such as the severe [Australian bushfires in 2019/20](#) and meteorologically adverse conditions combined with very high pollen counts ('thunderstorm asthma' events) occurred. These have had huge impacts on the Australian population and the health care system, with hospitalisations and emergency department presentations for respiratory conditions spiking and associated economic costs increasing. Climate change is making these adverse environmental conditions more common, further increasing the burden of asthma and COPD on patients and demands on the health care system.



Respiratory inhalers are a carbon hotspot and a health policy priority

In Australia, the healthcare sector is estimated to account for around 7% of total carbon emissions¹, with the majority stemming from the provision of clinical care itself². A [joint statement](#) from the Australian Commission on Safety and Quality in Health Care, the Interim Australian Centre for Disease Control, and the Council of Presidents of Medical Colleges, has called for low-emission, climate-resilient and culturally safe models of care. Australia's first [National Health and Climate Strategy](#) lists 'decarbonisation' as one of four objectives, specifically referring to metered dose inhalers (MDIs) as a significant 'carbon hotspot' in clinical care and as a priority for action. It is estimated that these alone account for 3% of the National Health System's (NHS) carbon footprint in the UK³. These high emissions inhalers contain potent greenhouse gases (hydrofluorocarbon) as propellants, producing between 10 and 30 times as much carbon dioxide equivalent emissions as dry powder inhalers (DPIs), which are very often clinically equivalent. The recently completed review of [Australia's health technology assessment policies and methods for the Australian Government](#) recommends reporting of greenhouse gas emissions

associated with health technology products, with specific reference to respiratory inhalers where, '*knowledge of embodied emissions could enable clinicians to prescribe (and patients to ask for) the most environmentally friendly option*' ([HTA Methods and Policy Review](#), Recommendation 43).

Transition to low carbon respiratory inhalers is achievable, but needs good data and concerted action

There are substantial differences between countries in the estimated proportion of respiratory inhalers sold that are MDIs. In Sweden, only 13% of inhalers are MDIs, while in England they make up around 70% of inhalers⁴. These differences in prescribing patterns are thought to be primarily influenced by cost, marketing strategies and prescribers' and patients' familiarity with certain inhaler types, not by appropriateness of the device for the patient⁵. In Australia, data on all inhalers dispensed at national level, including over the counter sales, are currently lacking. Approximately half of short-acting beta2 agonist (SABA) MDIs (e.g. Ventolin) used in Australia are purchased [over the counter at pharmacies without a script](#), but these are not captured in national pharmaceutical benefits scheme (PBS) dispensing datasets. >



Asthma Australia, the national peak body for people with asthma, in partnership with Deakin University, have published ‘The National Sustainable Asthma Care Roadmap’, informed by comprehensive stakeholder roundtable discussion. In line with the National Health and Climate Strategy, a priority action item for the Roadmap is the establishment of a data dashboard including baseline measures on inhaler use for benchmarking and tracking trends in high and low emissions inhalers over time. Simultaneously, the National Asthma Council, the peak body for clinicians in this field, is calling for a reduction in environmental impacts from asthma care, specifically citing the overuse of SABA inhalers, most of which are MDIs in Australia, as a key focus for action.

The frequent use of SABA inhalers is an indicator for poor asthma control and is associated with an increased risk of exacerbations in both asthma and COPD. As such, the use of SABA alone is no longer recommended by national and international asthma guidelines. Nevertheless, they remain the most frequently purchased type of inhaler in Australia. Concerningly, the National Asthma Indicator on suboptimal asthma control does not show any improvements and reports that 18% of people aged 40 or under who were dispensed at least one SABA inhaler, were dispensed more than two of these in one year – indicating substantial overuse and poor disease control.

To improve our understanding of the population groups with poor asthma/COPD control, and which groups account for most high emission inhaler use, there needs to be easier access to sales data to researchers and the public. With more complete data on total inhaler use, we can better design, implement and tailor interventions to enable equitable high-quality, low-carbon, chronic respiratory care.

Sustainable, high-quality, respiratory care

The ‘principles for sustainable clinical practice’ provide a helpful framework for thinking about sustainable respiratory care. Implementing the principles of prevention (e.g. tobacco control, better housing, reducing air pollution), patient empowerment (e.g. effective asthma action plans), lean service delivery (the right care at the right time, including limiting overdiagnosis⁶ and overtreatment), are done alongside moving to low carbon alternative treatments (i.e. low carbon respiratory inhalers). The transition to sustainable respiratory care will need to include educating clinicians and patients on good asthma/COPD management to reduce SABA reliance as well as increasing awareness at all levels about the high carbon footprint of MDIs. Co-developing solutions with patients and clinicians, and affected communities, is essential. ¹⁴

“With more complete data on total inhaler use, we can better design, implement and tailor interventions to enable equitable high-quality, low-carbon, chronic respiratory care.”



Dry Powder Inhaler

- No propellant
- < 1kg CO₂ equivalent emissions
- Equivalent to driving ~0.5km-4km



DPI vs MDI

What's the difference?



Metered Dose Inhaler

- Propellants HFA134a & 227ea
- up to 37kg CO₂ equivalent emissions
- Equivalent to driving ~ 40km-150km



Image 1: DPI vs MDI – What's the difference?

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The Healthcare Carbon Lab



**DR SCOTT
MCALISTER**
Research Fellow,
De-Carbonising
Healthcare Melbourne
School of Population
and Global Health

“The primary aim of the HCL is to carbon footprint commonly used medical devices and procedures.”

Healthcare has a considerable carbon footprint, contributing 7% of Australia’s greenhouse gas emissions. These carbon emissions, in turn, contribute to human harm. As an example, in the three months of the 2022 European summer, there were an estimated 61,672 heat-related deaths, with heat-related deaths globally being projected to increase 5-fold by 2050.

In November 2023 the Australian Government launched the National Health and Climate Strategy, committing Australia to a net-zero health system by 2050. There is limited research, however, on how to achieve this decarbonisation. The majority (60-70%) of healthcare emissions arise from the provision of clinical care (medical equipment, consumables, pathology etc.) rather than from building energy usage. Healthcare, therefore, cannot rely only on transitioning to renewable energy to be net-zero by 2050, and instead must develop lower carbon pathways of care while not adversely impacting patient safety. The problem is that there is a lack of carbon data on individual medical devices and procedures to develop these pathways.

The Healthcare Carbon Lab (HCL) was launched in July of 2024, funded by the University of Melbourne’s Faculty of Medicine, Dentistry and Health Sciences. It is being undertaken in collaboration with Western Health, Melbourne, which is acting as the physical lab for us to undertake research and implement mitigation strategies. The primary aim of the HCL is to carbon footprint commonly used medical devices and procedures. This will allow clinicians or other stakeholders, such as health economists, when they are undertaking health technology assessments, to compare different ways of providing care. In addition, this process will also help identify carbon hotspots, and hence provide information on the best places to focus mitigation strategies.

The carbon footprints are being quantified using environmental Life Cycle Assessment (LCA). LCA measures environmental emissions over the whole life cycle (raw material extraction, manufacture, use, and end of life), ensuring that any mitigation strategies in one part of the life cycle do not shift the burden to another part, or that reducing one




Photoshop AI generated

emission does not increase another (e.g. reducing carbon emissions increases ozone depletion or water use). It does this by creating an inventory of all materials and energy used over the whole life cycle (e.g. fuel used for mining machinery, or the energy used for recycling).

The HCL is collecting foreground data, and more specifically, the weights and compositions of devices and the energy use of equipment. As an example, a syringe is made up of a polypropylene barrel and plunger and a rubber seal and is wrapped in a polyethylene film. Each of these components is weighed, and the exact composition of each component is determined using a mass spectrometer. These are then modelled using background LCA databases, that contain the emissions associated with processes like mining emissions or from plastic manufacture. In addition to the composition of devices, we include all the emissions from a device's lifecycle, such as sterilisation, transport, and end of life (e.g. landfill, incineration or recycling).

As there are thousands of individual medical devices, the HCL is utilising procurement data from Western Health to determine the most to least procured items, and then preferencing data collection to those items that are more commonly used. We have started with items in the intensive care unit and are now moving to the rest of the hospital.

The aim of the HCL is to have a database containing the carbon footprints of devices and procedures that is accessible to as many clinicians, health economists and researchers, hospital administrators and procurement staff, and policymakers as possible. We are investigating ways that this will be funded, whether by government or through a subscription, as living databases require ongoing maintenance to ensure that data is up to date and to pay the licence fees for background LCA databases. Our hope is that the HCL database will provide the necessary fundamental research to help drive the move towards low-carbon healthcare. 



The Wiser Healthcare Net Zero Program

A partnership to address the carbon footprint of NSW Health hospitals



DR KRISTEN PICKLES
Research Fellow,
Wiser Healthcare
Research
Collaboration, School
of Public Health,
University of Sydney



DR ERIN MATHIEU
Senior Lecturer,
Academic Director,
Wiser Healthcare
Research
Collaboration, School
of Public Health,
University of Sydney



PROF ALEXANDRA BARRATT
Professor of Public
Health, Wiser
Healthcare Research
Collaboration,
Sydney School
of Public Health,
University of Sydney



PROF KATY BELL
Professor of Clinical
Epidemiology, Wiser
Healthcare Research
Collaboration,
Sydney School
of Public Health,
University of Sydney



NSW Health Net Zero Clinical program

For the pilot program, which ran from June 2022–June 2024, ten clinicians (‘Net Zero Leads’) were selected to lead exemplary sustainability projects of scalable, low-carbon models of care. Funding was provided to back-fill the clinicians from their usual clinical activities one day per week. The pilot program was inspired by the successful Sustainable Specialties in the United Kingdom¹.

To support this initiative, a new partnership was established between academic researchers from Wisser Healthcare, HEAL, and NSW Health’s Climate Risk and Net Zero Unit to support intervention design and evaluation of the sustainability projects. The NSW Health Net Zero Leads Academic Partnership was the first of its kind in Australia, adding value to the first significant, strategic investment by a state health department towards achieving net zero healthcare. It is an essential step in achieving Australia’s commitment to the United Nations to implement a Low-carbon health system and aligns strongly with the new National Health and Climate Strategy of the Australian Government (released November 2023).

The Wisser Healthcare–Net Zero Partnership is a potential model for research generation and evaluation of sustainable health care quality improvement projects.

Net Zero Clinical Leads

Health system changes require innovations across every service and specialty. To achieve this change, ten clinicians from different specialties across NSW were appointed to lead the implementation of environmentally sustainable healthcare initiatives in their clinical settings. Their clinical areas were chosen for diversity with specific targeting of carbon hotspots. Each of the clinical leads acted as change agents within their department and hospital while also undertaking specific discrete projects that may be scaled up for potential roll-out across the state. >

“The Wisser Healthcare—Net Zero Partnership is a potential model for research generation and evaluation of sustainable health care quality improvement projects.”



The Wiser Healthcare Net Zero Partnership

The Partnership was formed by the engagement of 9 University of Sydney members (6 academics, two professional staff and one PhD student) with the NSW Health's Climate Risk and Net Zero Unit in November 2022. The purpose was to develop research capability amongst the clinical Leads and provide robust measurement and evaluation of quality improvement initiatives aimed at reducing the carbon footprint of processes and procedures administered in the clinical setting. Via Wiser Healthcare and HEAL, the Net Zero Leads had access to Australia's best experts in sustainable healthcare, providing a platform for NSW Health to lead national reform.

This partnership generated significant new knowledge for health system sustainably, a priority area for reform of healthcare within NSW (Future Health Strategy 2022-2032). The sustainability projects included: reduction in unnecessary use of non-sterile gloves (allied health), improved management of pharmaceutical waste (pharmacy), reusable surgical linen and barrier gowns (surgery and ICU), switching off CT scanners when not in use (medical imaging), reducing unnecessary pathology testing (emergency medicine), reducing use of volatile anaesthetic gases with high carbon footprints (anaesthetics).

This innovative partnership has had direct beneficial impacts on healthcare delivery in NSW, by increasing the delivery of sustainable healthcare

The projects supported by the academic partnership not only achieved increased clinician engagement and capabilities to conduct robust research in sustainable healthcare, but also demonstrated benefits to health care efficiency, financial savings, and carbon emission reductions. Several of the interventions have now been adopted in multiple other hospitals throughout the state, demonstrating beneficial impacts beyond the initial site. There have also been beneficial impacts on the generation of new knowledge, with 12 manuscripts under consideration or in preparation for publication in peer-reviewed journals; 8 of these report project interventions and evaluation outcomes, and four are evidence reviews. These will provide a permanent, searchable record of the new knowledge generated by the partnership, with the potential to influence future research, practice, and policy inter/nationally.

The novelty of the partnership has been recognised inter/nationally

The Net Zero Leads Academic Partnership team were awarded a School of Public Health Staff Recognition Award (July 2024) for a highly successful translational research partnership at the forefront of healthcare decarbonisation in Australia. A manuscript reporting the partnership has been published in an international peer-reviewed journal, *Environmental Research Letters*, demonstrating the international standing of our team's work. The value of the work has also been recognised by the broader community working in NSW Health, with Net Zero Leads projects publicly visible on the Innovation Exchange Platform of the Agency for Clinical Innovation. Three projects have been posted so far: the [CT Scanner Switch for Savings project](#), [reducing use of desflurane](#), and the [Gloves Off! Project](#).

Where to next? The way forward towards net zero healthcare

The Wiser Healthcare Net Zero Partnership demonstrates a collaborative and mutually beneficial partnership with the common goal of reducing carbon emissions in the health care setting in Australia. The pilot Net Zero Partnership has provided vital data and trialling of operations for a successful partnership. The projects demonstrated potential for reductions in carbon emissions, waste, electricity, and financial costs whilst maintaining or improving the quality of healthcare delivered. Partnerships between health services and academic institutions have the potential to create robust evidence of meaningful and clinically relevant outcomes to reduce the carbon footprint of the clinical setting whilst saving money and delivering high-quality care. ^{1a}

NSW Health Net Zero Academic Partnership

Team: Katy Bell, Alexandra Barratt, Erin Mathieu, Kristen Pickles, Philomena Colagiuri, Luise Kazda, Abigail Acosta, Scott McAlister, Krista Verlis.

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Unretired and rehired

You've heard of retirees going back to work. But what about returning to the workforce after you've retired twice?

That was the situation for HESTA Policy Manager Karen Volpato, who decided to start working again last year after her second retirement.

Karen's first retirement only lasted five months and, reflecting on it now, she realises she just needed a bit of a break.

She managed to stay retired for four years the second time, but after a big interstate move and renovating her home, she found herself looking around for her next challenge.

Back in the game

Karen is one of a growing number of Australians who are "unretiring".

According to the [Australian Bureau of Statistics](#), there are around 40,000 more people aged 65 and over in the workforce than the same time a year ago.

The reasons for returning to work after retirement are many and varied, including cost-of-living pressures, social interaction, and a sense of purpose.

For Karen, it was the promise of more intellectual stimulation that encouraged her to apply for a job.

"I think it's the joy of trying to solve a problem or come up with different solutions to things," Karen says.


"That was the thing for me that really triggered it. "I also think sharing your knowledge with others is really wonderful at this stage of life.

"I'm really loving it because I'm working for a fund that's so devoted to members, as well as trying to get system change, which is really interesting."

Weighing it up

There can be a number of financial implications to explore if you're considering returning to work:

- If you're receiving the Age Pension, you'll need to let Centrelink know about any additional income within 14 days. Under the [Work Bonus](#), eligible pensioners can earn \$300 a fortnight without reducing their pension.
- If you're receiving an income from your super, you can switch your account back into the accumulation phase. It's important to know that this will have [tax implications](#).
- You could also keep your super in the income stream phase to supplement your income and open a new accumulation account for your employer contributions.



“The reasons for returning to work after retirement are many and varied, including cost-of-living pressures, social interaction, and a sense of purpose”

There can be other costs to consider before putting your hand up for a new job:

- Don't forget to factor in things like petrol and vehicle maintenance, or public transport and buying your lunch, which can be more expensive than eating at home.
- And if you're caring for someone, you may need to hire a carer while you're at work.

Considering reversing your retirement?

If you're thinking of returning to the workforce, Karen has some tips.

“Think about what really makes you interested about work and the things that really matter to you,” she says.

“And put an application in. Because I think a lot of retired people don't. You might think you're going to get a negative reaction because of your age, but that's not always the case.”

With many industries across Australia facing staff shortages, employers are eager to fill their vacancies and retirees are in demand.

In fact, according to recruiter Robert Half, 58% of Australian employers have hired a retiree in the past 12 months, and a further 37% would consider it.

And why wouldn't they?

“There are great employers out there like HESTA who want that knowledge brought in,” Karen says.

“Let's face it, once you've been at work a long time, you do have a lot of knowledge about yourself, as well as what you can do.”

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ROS KIRK
Capital Health Network
Palliative Care Planning
Manager



MIREI CHURTON
Capital Health Network
Project Officer

People living with breathlessness support new trial of in-home physio

A key role of Capital Health Network (CHN) as ACT's Primary Health Network (PHN) is to build capacity in the primary health care sector to improve equity and access to primary health care, in order to improve health outcomes. One of the ways we do this is to trial new initiatives.

Many people with lung and heart conditions live with breathlessness every day. Even when they receive good medical care, this distressing symptom stops people from doing simple day-to-day activities. Many people with chronic breathlessness and their family/carers experience anxiety, depression and social isolation. Chronic breathlessness is a frequent reason for Emergency Department visits and hospital admissions, resulting

in high health care costs for services, out-of-pocket expenses and increased care and support needs provided by carers.

Internationally, growing research evidence supports the use of symptom-based care to lessen the effects of breathlessness on the quality of life and distress for carers and families. There is compelling evidence that in the year after receiving brief symptom-based interventions through a Breathlessness Intervention Service, unplanned hospital admissions reduce by as much as 50-60%. Despite this, few services are available in Australia that focus on the management of this troubling symptom.

“Many people with lung and heart conditions live with breathlessness every day. Even when they receive good medical care, this distressing symptom stops people from doing simple day-to-day activities.”

a) New model of care: in-home physio

To address this issue, CHN engaged the University of Technology Sydney, Southside Physio, consumers, and clinicians to co-design and develop a pilot of a Breathlessness Intervention Service in the ACT. The ACT Breathlessness Intervention Service (ABIS) is addressing the local primary and community care needs. This pilot is contributing towards growing evidence about how a Breathlessness Intervention Service could work best for our local community. It also highlights to clinicians the role of non-pharmacological interventions, including engagement of Allied Health practitioners, in managing breathlessness to reduce distress and improve the quality of life of patients and their carers.

The ABIS Pilot program is delivered by the Southside Physio Mobile team. Requiring a medical referral, clients receive an initial home visit by a Physiotherapist, with 2 to 5 follow-ups at home or by phone. Interventions are non-pharmacological and address the ‘Breathing, Thinking and Functioning’ components of breathlessness. Both the patient and their carer are supported by ABIS.

The ABIS trial is supported by funding from CHN through the Australian Government’s Greater Choice for At Home Palliative Care Program.

b) Key outcomes

Over a 16-month period (March 2023 – July 2024), 93 patients completed the ABIS program with 4-6 home visits from the Physiotherapist. All patients achieved improvement on at least one outcome measure, such as reduced severity of breathlessness, or improved performance of nominated activity of daily living.

Another key outcome of the ABIS trial is that some patients reported not calling an ambulance when they usually would. 23% of patients who received at least one visit said they thought about calling an ambulance on 44 occasions, but instead self-managed using ABIS techniques.

Unpaid family carers of people living with breathlessness also benefited from the ABIS trial. 58/77 (75%) of carers of discharged patients (who provided at least two data points) reported at least a one-point improvement from ‘not confident’ to ‘somewhat’ or ‘very confident’ in managing symptoms of breathlessness from their first session in comparison to their last session.

c) Independent evaluation

New referrals are no longer being accepted. The ABIS trial will be evaluated by the University of Technology Sydney, with the report due in March 2025.

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“By the end of the ABIS program, Tony managed to have a full olive production going.”

Patient story:

Tony* (not his real name) was referred to the ABIS program with a history of chronic obstructive pulmonary disease, severe osteoarthritis and hypertension. Tony loved his garden and produced almost all of his food himself. He had a few olive trees and was passionate about producing several products with them. Due to being anxious about feeling breathless, Tony reduced his activity level severely. This led to an increase in pain due to his osteoarthritis, which then further reduced his activity level. Through the program, Tony increased his activity level using a slow introduction to some functional activities around and inside his house. Due to the education given, Tony was not scared or anxious to go into a state of being breathless

and could manage it with breathing techniques. Slowly his osteoarthritis pain improved, and he managed a higher level of activity. Initially, Tony highly considered knee replacements, but after completing the program, his pain reduced enough to not require surgery. By the end of the ABIS program, Tony managed to have a full olive production going. Tony was loving every moment of it and was so appreciative of what the program meant to him. Tony can now implement the ABIS techniques that he learnt through the program for the rest of his life.

You can see more patient stories in our ABIS video on [Capital Health Network’s YouTube Channel](#). 

Experiencing Breathlessness?

ACT
Breathlessness
Intervention
Service

ABIS

- Helps you gain control over breathlessness
- Helps you increase your independence in daily activities
- Run by allied health professionals trained in Breathlessness Management
- FREE!



www.southsidephysio.com.au



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Physio**

phn
ACT

An Australian Government Initiative

**Capital
Health
Network**
Partnering for better health

National Health and Climate Strategy: Update

In December 2023, the Hon Ged Kearney, Assistant Minister for Health and Aged Care, launched Australia's first National Health and Climate Strategy at the United Nations climate change conference, COP29, in Dubai.

The Strategy lays out a whole-of-government plan for addressing the health and wellbeing impacts of climate change, whilst also addressing the contribution of the health system to climate change. It consolidates work across Australia that has been occurring at state, territory, regional and local levels.

The Strategy has benefited from strong community and stakeholder engagement, including from health service providers, aged care providers, peak bodies, academia and industry. It prioritises co-design with First Nations leaders and community representatives.

The Strategy includes 49 actions to be implemented over five years and since its launch in December last year, we have made considerable progress across a range of areas.

On an international level, the Australian Government has joined the World Health Organization's Alliance for Transformative Action on Climate and Health (ATACH), an alliance of 85 countries committed to strengthening climate adaptation and resilience and low carbon sustainable health systems (Action 5.3). We also signed a public statement of collaboration with the United Kingdom and the United States to decarbonise healthcare supply chains (Action 5.2).

After contributing to the National Climate Risk Assessment and National Adaptation Plan developed

by the Department of Climate Change, Energy, Environment and Water (Actions 3.1 and 3.2), we are now developing a Health National Adaptation Plan to complement the National Adaptation Plan and set out a coordinating framework for the health and wellbeing impacts of climate change. We are also currently developing guidance on climate-health risk assessment and adaptation planning for healthcare (Action 3.3).

Among the many actions necessary to reduce health system gas emissions, a key task is to set standards and ensure strategic alignment among health organisations. Along this line, the Australian Commission on Safety and Quality in Health Care has piloted an 'Environmental Sustainability and Climate Resilience' module across almost 50 hospital sites across the country with a view to informing the next edition of the National Safety and Quality Health Service Standards (mandatory accreditation standards) due in 2027.

In October, Australian medical colleges together with the Australian Commission on Safety and Quality in Healthcare and the interim Australian Centre for Disease Control announced joint work to develop a framework for action on climate and health emphasising prevention, minimising harmful and wasteful care, and reducing emissions from high value care (progressing Actions 4.7, 4.8 and 7.1).

Evidence-gathering and review are crucial building blocks that inform the approach of the Strategy. Several reports are nearing completion, including baseline estimates of health greenhouse gas emissions (Action 4.1), a mapping review of Australian research on climate change and health



The Hon Ged Kearney, Assistant Minister for Health and Aged Care, launched Australia's first National Health and Climate in 2023.


interventions (Action 7.2), a review of sustainability in food and catering policies in Australian public hospitals (Action 4.15), and a review of interventions to reduce greenhouse gas emissions from health system waste (Action 4.16). The National Health and Medical Research Council (NHMRC) also launched a Targeted Call for Research (Action 7.3).

Aiming to reduce emissions from medicines and anaesthetic gases, we have worked with the University of Melbourne to develop and release a practical guide, 'Detecting and reducing leaks from nitrous oxide in healthcare facilities' (Action 4.13). This will assist facilities and health practitioners identify faults in piped supplies of nitrous oxide, a greenhouse gas that is also an occupational health and safety concern. We have also engaged with states and territories, anaesthetics professional organisations and the Council of Australian Therapeutic Advisory Groups to reduce emissions from the anaesthetic gas desflurane (Action 4.12). Addressing greenhouse gas emissions from respiratory inhaler propellants, we have participated in roundtables with medical and non-government organisations responsible for lung health, organised by peak body, Asthma Australia.

They have now launched a National Sustainable Asthma Care Roadmap which will accelerate work to reduce emissions from respiratory inhalers and improve asthma care, contributing to the fulfilment of Action 4.14.

Governance structures have now been established and committees have commenced their work, including a Program Board of senior Australian Government staff; a Climate and Health Expert Advisory Group; and a State and Territory Working group.

In September, an Implementation Plan was published on the [National Health and Climate Strategy website](#). Other resources are available for download, including the strategy itself. We welcome continued engagement in the policy making process.

The path to decarbonisation and readying the health system for climate change is a long one which extends beyond the timeline of the Strategy. Transformation requires concerted action by everyone working within the health system, as well as other sectors and the wider community. While there has been great progress, there is still much more work to do: roll up your sleeves and help us tackle the greatest health threat of this century! 



MAJA VAN BRUGGEN
DIRECTOR
Sustainability Action,
NT Health

“Are you a knowledge sharer, an influencer of change or a connector of people?”

Tackling the tricky stuff

System transformation at speed. Where can you start?

Strategic and operational transformation for health care sustainability is trickier than ever with increasing demand, decreasing budgets and frequently shifting priorities and players. **How do you decide where to spend your time and what you should lead or support or just monitor in order to make a difference?**

Firstly, keep an eye on the problems you are trying to solve. The current global impacts of climate change are occurring more quickly than anticipated with seven of nine planetary boundaries now breached¹ so maintaining line of sight to the global mission of addressing the climate crisis, helps achieve clarity of purpose, reduce local distractions and enable effective prioritisation of effort.

One practical strategy to achieve this **clarity of purpose** is to ‘join the dots’. Start with a clear problem at the global level (for example, healthcare systems globally account for over 4%

of global CO₂ emissions²), then identify key data or research which helps bring the problem into sharper focus at a more local level (for example, in Australia healthcare accounts for 7% of Australia’s CO₂ emissions³ and, of these emissions, food/ accommodation and transport account for two of the top three Scope 3 emissions⁴). Then insert your own jurisdictional priority challenge and/ or applicable data (i.e. in relation to food, you could highlight estimated facility food waste, or in relation to transport, you could highlight emissions (and costs) of transport based on your current models of care).

By describing the problem in increasingly specific dimensions at the national, local and organisational levels, you can prioritise (and communicate) clearly ‘why’ and ‘how’ your efforts contribute directly to urgent global healthcare sustainability efforts. This joining of the dots also helps to highlight potential opportunities. For example, clinical care accounts



for 80% of Australia's health care emissions and, of this, 30% is identified as low value care⁵. This means, by targeting evidence based, college supported Choosing Wisely recommendations in relation to low value related activity, hospitals could reduce their emissions... and costs, patient impacts and workload. This equips you to more powerfully influence potential collaborators, colleagues and/or decision makers, because your approach is mission centric and data informed.

Once you have clarity of purpose, you need to consider your own expertise and strengths. Are you a knowledge sharer, an influencer of change or a connector of people? Each of these roles are critical in triggering or accelerating organisational and social change⁶. Understanding your strengths and how to apply them in these roles will help you to prioritise where and how you spend your limited time for maximum value.

In addition to your own capabilities, it is important to consider the context in which you are trying to make a difference. Given the urgency of sustainability action in healthcare, **aligning or integrating sustainability efforts** into existing initiatives and strategic priorities is a powerful and immediate opportunity to influence change. This could involve:

- **Aligning with top priorities** — scan organisational strategies to identify priority goals and frame environmental sustainability opportunities and objectives in terms which align with the existing stated priorities. For example, healthcare workforce shortages across local, national and global contexts demand a reimagining of how healthfulness is achieved across populations. Value based health care (VBHC) is about achieving the best possible outcomes for people receiving care with the >

“The bigger and more diverse your network of colleagues and collaborators is, the greater your potential to influence priorities, share important opportunities to align effort and leverage collective mission oriented action.”

lowest possible use of resources. Applying this VBHC lens to health system redesign aligns environmental and workforce sustainability in healthcare to be addressed simultaneously.

- **Following the money** – identify what is already funded and integrate a sustainability lens into it. Alternatively, identify where savings could be achieved and highlight the return on investment of prioritising an environmental sustainability priority. This could mean incorporating relevant sustainability concepts, evidence or metrics into project design, business planning, tender development or service redesign. For example, investment in virtual health care infrastructure.
- **Highlighting co-benefits** – many sustainability actions have multiple co-benefits (i.e. good for patients, staff, the budget and the planet). Helping key staff and decision makers understand this and encouraging them to apply this to strengthen proposals or business cases can better highlight sustainability co-benefits and overall value (and criticality) of sustainability action. For example, applying targeted evidence based recommendations from the Choosing Wisely framework to reduce low value care in a health service has benefits for **patients** (less invasive/

stressful/time consuming), **staff** (frees time for higher value functions), the **budget** (saves health system costs in terms of consumables, waste and time) and the **planet** (less emissions and product waste into the environment).

To really accelerate system transformation, **framing the message** is important. This could include describing problems in a health context, for example, at the **strategic level**, framing the climate issue as a health issue by consistently reinforcing that human health is dependent on planetary health (and vice versa) helps to boost the urgency and authority of the issue across sectoral ‘boundaries’. At an **organisational level**, framing sustainability as a powerful co-benefit helps to lower barriers and build a sustainability mindset which supports the diffusion of sustainability ownership and action across the organisation.

At the **operational level**, given there is so much to do, if there are barriers in one area (such as no dedicated budget, no interest, no capacity) then refocussing your time and efforts to priorities where enablers exist (such as champions keen to help, colleagues with clarity of purpose, aligned initiatives which are funded) allows you to make progress. Key enablers which you can use to frame




sustainability actions (or co-benefits) include:

- **The accreditation process** (for example, preparing to meet the Environmental Sustainability and Climate Resilience Healthcare Module)
- **risk management** (for example, preparing to meet climate related financial disclosures)
- **financial sustainability** (for example, highlighting savings through initiatives such as reducing low value care through the Choosing Wisely framework, reducing inappropriate glove use through targeted campaigns and other evidence based sustainability initiatives)
- **clinical redesign** (for example promoting, co-designing or supporting value based health care approaches)
- **quality improvement** (for example partnering with the Quality Improvement (QI) staff in your health service to embed sustainability concepts across all applicable QI initiatives).

Strategic and operational transforming is a **team effort**. You are not alone. The bigger and more diverse your network of colleagues and collaborators is, the greater your potential to influence priorities, share important opportunities to align effort and leverage collective mission oriented action.

The bottom line is that you are best placed to see opportunities to align effort and reframe thinking when you have broad networks (friends and colleagues spanning multiple sectors, professions and interests) combined with clarity of purpose (linking a global problem with a local problem).

Ultimately, unlike arbitrary targets, budget allocations and project deadlines, the planetary boundaries are not negotiable, so clarity of purpose and urgency of strategically targeted and aligned actions are powerful ways to avoid distractions and tackle the tricky stuff at speed. 

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MS ERYNN JOHNSON
Senior Policy Officer,
Climate Risk & Net Zero
Unit, NSW Health

DR KATE
CHARLESWORTH
Medical Director, Climate
Risk & Net Zero Unit,
NSW Health

Transitioning towards a high-quality, low-carbon and climate resilient health system in New South Wales

NSW Health's first Net Zero Roadmap

The NSW Ministry of Health is working to produce NSW Health's first Net Zero Roadmap ([Roadmap](#))*. The Roadmap will provide a blueprint for how the NSW Health system is working towards the NSW Government's net zero targets of a 50% reduction (based on 2018-19 levels) by 2030 and net zero by 2050. NSW Health has consulted extensively in developing the Roadmap, with over 2,200 staff and public contributions. The Roadmap is anticipated for release in early 2025.

Reducing low-value care and decarbonising evidence-based care

More than half of the health system's carbon footprint is from clinical care: pharmaceuticals, medical devices, equipment, food services, staff and patient transport. We recognise that everyone has a role to play in our transition to net zero, including our frontline staff.

Earlier this year, our pilot Net Zero Leads program concluded. The program supported

clinicians to step out of their clinical practice on a fractional basis to lead net zero initiatives. Some of the successful initiatives focused on reducing the impact of healthcare waste, switching to greener products or procedures, and reducing or eliminating single-use equipment. Examples include Tina Wilkie's [Gloves Off! project](#), A/Prof Deepak Bhonagiri's ICU [barrier gown project](#) and Dr Anthony Hull's [desflurane project](#).

For 2024-2027, the program has been expanded to include multi-disciplinary Hubs across known carbon hotspots in theatres, ICU, ED, endoscopy, women's health, general medicine and renal care. Appointed clinicians are responsible for becoming exemplars and guiding decarbonisation in their service or specialty.

Desflurane

Anaesthetic gases account for approximately five per cent of a hospital's greenhouse gas emissions. Awareness has grown about the environmental impact of desflurane. Earlier this year, the



NSW Medicines Formulary Committee removed desflurane from the NSW Medicines Formulary, noting the availability of alternatives, and concerns about desflurane's financial and environmental impacts.

Investing in innovation

We recognise that staff have innovative and impactful ideas that can improve the sustainability of our health system. Earlier this year, we announced the second round of recipients of the Sustainable Futures Innovation Fund*. This initiative was established in December 2023 to provide dedicated start-up funding for staff-led innovation projects that improve patient care and reduce the environmental footprint of NSW Health.


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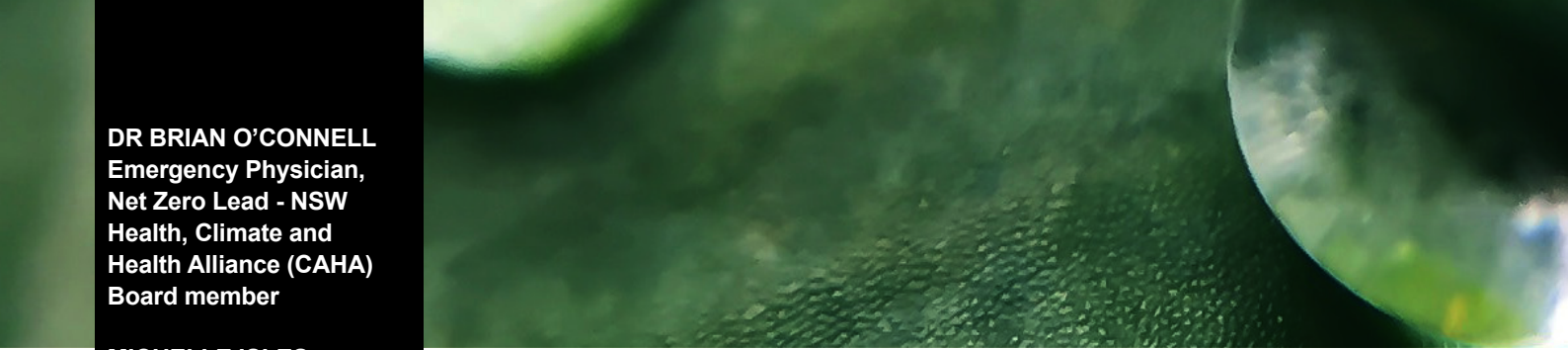
From a waste perspective, NSW Health is participating in the NSW Government's Choose Circular program*, stimulating innovation

and demand for recycled materials through procurement and supporting the state's transition towards a circular economy.

Celebrating climate action and solutions

Last year, NSW Health introduced a new Environmental Sustainability Award category to the annual NSW Health Awards*. The award recognises the achievements of the health system and workforce to reduce NSW Health's environmental footprint, whilst continuing to deliver high-quality healthcare and patient experience.

This year, three impressive teams have been identified as award finalists with initiatives that focus on reducing the impact of clinical and textile waste and reducing the carbon footprint of care at all levels. These sustainability leaders and clinical champions are critical to supporting our transition towards a high-quality, low-carbon and climate resilient health system. 



DR BRIAN O'CONNELL
Emergency Physician,
Net Zero Lead - NSW
Health, Climate and
Health Alliance (CAHA)
Board member

MICHELLE ISLES
CEO Climate and Health
Alliance (CAHA)

High-Value, Low Carbon Care in action

What is it? How you can get started

Climate change is increasing the demand for healthcare, while exacerbating adverse health outcomes through direct impacts on health, such as illness associated with fossil fuel exposure, and indirect impacts linked to increasingly frequent climate disasters. Budgets of Federal, State and Territory governments in Australia now must account for 'unnatural' disaster management. In 2023-24, the Australian Government expected to spend \$101.0 billion on health, while climate disasters cost the economy an estimated \$38 billion annually.

How can the health systems respond to these growing costs and impacts?

One area of focus is the dual opportunity of assessing value of care and the environmental impact of its delivery. In Australia, healthcare accounts for an estimated 7% of national emissions. Emissions can be attributed to direct emissions from facilities, energy sources used in provision of care, and the production and disposal of medical goods and services. The carbon footprint of Australian healthcare approximates almost half the entire construction sector.

A growing population and climatic factors are contributing to an increased demand for patient care – but is the care we provide high value? Australian clinicians order over 500 million tests annually. Unfortunately, evidence shows that some 30% of clinical care is low-value, and 10% even cause iatrogenic harm.

Evidence is mounting to demonstrate value for care, the environment and budget. Striving for high-value, low carbon care can be addressed at multiple scales; through national policy, jurisdictional ambition, consumers, supply chains, and the health service level.

At the Climate and Health Alliances' 2024 Greening the Healthcare Sector Forum, improving the value of care is a priority discussion.

Consumer health and value of care is a significant challenge, boldly taken on in the recently-launched National Sustainable Asthma Care Roadmap (the Roadmap). One in nine Australians live with asthma, and for around half of those people, it's poorly controlled. The main causes of poor control are the overuse of 'reliever' medicines (predominantly salbutamol), and the underuse of 'preventer'

“A growing population and climatic factors are contributing to an increased demand for patient care — but is the care we provide high value? ”

medicines (predominantly inhaled corticosteroids).

Addressing a key action in the National Health and Climate Strategy, the Roadmap was recently delivered by Asthma Australia and Deakin University’s Dr Mike Forrester. Recommendations from the Roadmap include a campaign to inform people with asthma about how to improve asthma control – which has the potential to reduce emissions in itself – and how they can reduce emissions from alternative inhalers where suitable devices are available.

At the health systems level, Associate Professor Christopher Leung will share progress of the Victorian Choosing Wisely scaling collaborative, established to reduce unnecessary tests, treatments and procedures in 11 metropolitan and regional health services. Within each health service, clinical and project leaders were engaged, and reductions in low-value care practices were calculated. Mixed methods were used to determine engagement by interdisciplinary clinicians and patients.

The nexus between low-value care and unnecessary resources is further explored by Kimberley Walter of Fiona Stanley Fremantle Hospital, who will share an approach to sustainable pathology practices.

Variation in pathology testing can lead to unnecessary patient discomfort, consume limited resources, and increase emissions. Over-testing causes physical, psychological, social, and financial harm – while under-testing can result in delayed or inaccurate diagnoses, leading to adverse outcomes and higher costs. Unnecessary testing not only offers minimal benefit, but also incurs a high environmental cost, straining services under

extreme pressure. Additionally, low-value testing for one patient may delay essential testing for another, resulting in preventable harm.

During COVID-19, models of care were adapted to treat patients at home through virtual care. Virtual care is a priority initiative for NSW Health, and recognised as an important addition to in-person care. As the largest health district in NSW, Hunter New England Local Health District (LHD) is challenged to provide equitable access within its vast geographical landscape.

Ambitions in virtual care, along with their ambitious Sustainable Healthcare: Together Towards Zero strategy, will see the Hunter New England LHD become the first carbon and waste neutral health system in Australia. Hunter New England LHD’s Jennifer Rutherford will share incredible progress, including savings of 941,3069 tonnes of carbon between January to August 2024, attributed to 22,935 outpatient appointments via virtual care, saving 3,342,664km of patient travel.

Nitrous oxide is a potent greenhouse gas that leaks from healthcare facilities, representing some 70,000 tonnes of CO₂e per annum across Australia. Dr Cas Woinarski and the team at Barwon Health are addressing this impact, and have assessed that an estimated 50-100% of nitrous oxide use does not improve patient’s care and its use, along with associated emissions, could be avoided.

To learn more about *‘High-Value, Low Carbon Care in action. What is it? How you can get started’*, join Dr Brian O’Connell and our stellar team of presenters online at the [Greening the Health Sector Forum 2024](#). Recordings of presentations will be available on CAHA’s online platform four months post-event. ^{ha}

Become an AHHA member

Help make a difference on health policy, share innovative ideas and get support on issues that matter to you – **join the AHHA.**

The Australian Healthcare and Hospitals Association (AHHA) is the ‘voice of public healthcare’. We have been Australia’s independent peak body for public and not-for-profit hospitals and healthcare for over 70 years.

Our vision is a healthy Australia, supported by the best possible healthcare system. AHHA works by bringing perspectives from across the healthcare system together to advocate for effective, accessible, equitable and sustainable healthcare focused on quality outcomes to benefit the whole community.

We build networks, we share ideas, we advocate and we consult. Our advocacy and thought leadership is backed by high quality research, events and courses, consultancy services and our publications.

AHHA is committed to working with all stakeholders from

across the health sector and membership is open to any individual or organisation whose aims or activities are connected with one or more of the following:

- the provision of publicly-funded hospital or healthcare services
- the improvement of healthcare
- healthcare education or research
- the supply of goods and services to publicly-funded hospitals or healthcare services.

Membership benefits include:

- capacity to influence health policy
- a voice on national advisory and reference groups
- an avenue to key stakeholders including governments, bureaucracies, media, like-minded organisations and other thought leaders in the health sector

- access to and participation in research through the Deeble Institute for Health Policy Research
- access to networking opportunities, including quality events
- access to education and training services
- access to affordable and credible consultancy services through JustHealth Consultants
- access to publications and sector updates, including:
 - Australian Health Review
 - The Health Advocate
 - Healthcare in Brief
 - Evidence Briefs and Issues Briefs.

To learn about how we can support your organisation to be a more effective, innovative and sustainable part of the Australian health system, talk to us or visit ahha.asn.au/membership.

More about the AHHA

AHHA Board

The AHHA Board has overall responsibility for governance including the strategic direction and operational efficiency of the organisation.

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Chair

Dr Michael Brydon
University of Notre Dame

Ms Yasmin King
SkillsIQ

Ms Susan McKee
Dental Health Services Victoria

Dr Kim Webber
cohealth

Mr Michael Culhane
ACT Health Directorate

Mr Anthony Schembri AM
Independently Appointed
Board Director

Mr Mike Bosel
Brisbane South Primary
Health Network

Dr Tina Janamian
Australian General Practice
Accreditation Limited

AHHA National Council

The AHHA National Council oversees our policy development program. The full list of Council members can be found at: ahha.asn.au/governance

Secretariat

Ms Kylie Woolcock
Chief Executive

A/Prof Rebecca Haddock
Executive Director
Knowledge Exchange

Ms Ellen Davies
Communications Manager

Mr Kevin Chacko
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Ms Suzzie Harvey
Director, Business Development

Ms Emma Hoban
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Value-Based Health Care

Ms Emma Walsh
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AHHA sponsors

The AHHA is grateful for the support of HESTA Super Fund.

Other organisations support the AHHA with Corporate, Academic, and Associate Membership and via project and program support.

Contact details

AHHA Office
Unit 8, 2 Phipps Close
Deakin ACT 2600

Postal address
PO Box 78
Deakin West ACT 2600

Membership enquiries

T: 02 6162 0780
F: 02 6162 0779
E: admin@ahha.asn.au
W: www.ahha.asn.au

The Health Advocate, general media and advertising enquiries

Ellen Davies
T: 02 6180 2826
E: communications@ahha.asn.au

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