SYDNEY NORTH
HEALTH NETWORK

CLIMATE AND HEALTH STRATEGY 2020

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An Australian Government Initiative

SYDNEY NORTH
Health Network

Sydney North Health Network - Climate and Health Strategy 2020

Achieving Together - *Better Health, Better Climate, Better Health System*

GOALS	ROLES	STRATEGIES
A. Community Activation	Support our community to anticipate their climate risks and mitigate the impacts of climate change on health and well-being	• Develop an understanding of the current and projected impact of climate change on our community • Enhance the capability of our community to anticipate, prepare for, and respond to a range of climate-sensitive health impacts and climate-related hazards and disasters
B. System Transformation	Strengthen health system resilience and adaptive capacity to climate-related hazards and disasters	• Establish primary healthcare in local, state and national plans for the prevention, preparedness, response, and recovery from climate-related hazards and disasters • Promote sustainable and climate-resilient solutions for health infrastructure and operations that decrease reliance on hospital care and ensure continuity of health service delivery • Develop and strengthen partnerships to enhance the capacity of the health system to anticipate and respond to climate and health impacts
C. Commissioning	Attract and distribute resources that enable and incentivise a climate-resilient and environmentally sustainable health sector	• Encourage environmentally sustainable and climate-resilient solutions for health infrastructure and operations through our commissioning of services • Commissioning addresses the population needs of those most vulnerable to climate-sensitive health impacts and climate-related hazards and disasters
D. Member & Provider Support	Build the knowledge and capacity of all primary healthcare providers to mitigate, adapt and respond to climate hazards and disasters	• Develop our member and provider workforce knowledge and skills for preparing and responding to a range of climate-sensitive health impacts and climate-related hazards and disasters • Support the mental and physical well-being of the health workforce with increasingly impacted by frequent and severe climate hazards and disasters • Support health-promoting and emission-reducing initiatives to transition our member and provider operations to a low/zero carbon footprint
E. An Exceptional Organisation	Embed climate mitigation, adaptation and sustainability in our operations, our people, and our visibility	• Provide leadership and representation for primary healthcare in addressing the health impacts of climate change • Implement health-promoting and emission-reducing initiatives to transition our operations to low/zero carbon footprint

CONTENTS

Key Terms

Adaptation - The process of adjustment to actual or expected climate and its effects, in order to moderate harm.

Capacity building - The practice of enhancing the strengths and attributes of, and resources available to an individual, community, society, or organisation to respond to change.[1]

Climate hazard - A physical process or event that can harm human health, livelihoods, or natural resources. A hazard is not simply the potential for adverse effects.[2]

Climate-sensitive health impacts - Health conditions and diseases that worsen or increase in prevalence as a result of changing climate conditions (e.g. asthma, malaria, heat stress, anxiety).

Disaster - A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.[3]

Mitigation - The lessening of the potential adverse impacts of climate change through actions that reduce hazard, exposure, and vulnerability.[1]

Resilience - Processes and skills that result in good individual and community-health outcomes in spite of negative events, serious threats and hazards.[4]

Social capital - The networks of relationships among people who live and work in a society enabling that society to function effectively.

Sustainability - A dynamic process that guarantees the persistence of natural and human systems in an equitable manner.[1]

INTRODUCTION

The World Health Organisation (WHO) has declared Climate Change 'the greatest threat to global health in the 21st century', calling on the health sector to take action to fulfill its duty of care to protect the health of current and future generations.[5]

Climate change increasingly affects people's health and wellbeing. Australians are set to experience ongoing and increasingly severe physical and mental health challenges from climate-related hazards and disasters.[6] Given the health implications, tackling climate change has been identified as the greatest global health opportunity of the 21st century.[7]

Action is needed across all levels of government, industry, the community, and the health sector to reverse the global warming trend and protect the health of communities.

The primary care sector, in particular, has an opportunity to leverage and support existing local leadership to build the resilience of communities through capacity building and health promotion activities, and by leveraging its leadership position in communities, to raise awareness and reduce the direct and indirect impacts of climate on health.

This document endeavours to place a climate lens over the established SNHN strategic direction to create an organisation that considers the impact of climate on health in all operational policies, procedures and decisions. It is anticipated that this document will evolve over time in line with community expectations, emerging research and SNHN climate and health maturing capabilities.

Our five strategic goals, presented in the SNHN Strategic Plan 2018-23, highlight the priority focus areas of the organisation:

- Community Activation
- System Transformation
- Commissioning
- Member and Provider Support
- An Exceptional Organisation

BACKGROUND

What are the health impacts of climate change?

Increases in the frequency, intensity and duration of extreme weather events (e.g. heatwaves, droughts, floods and storms), as well as aeroallergens and worsening air quality, changes in the patterns of food, water and vector-borne infectious diseases, and threats to food and water supplies, impact physical and mental health.[8,9,10]

Evidence suggests that exposure to climate hazards and disasters can have direct impacts on both health and mental health whether the effect of heat on different medications or the trauma and anxiety associated with increased severe weather events. Indirect impacts can include deteriorating mental health associated with destruction of environment, reductions in green space, poor physical health and a decrease in social and community wellbeing.[11,12]

Who is vulnerable?

Climate change is predicted to have a significant impact on social determinants of health, defined as 'the conditions in which people are born, grow, work, live and age, and the wider set of forces and systems shaping the conditions of life.[13]

Susceptibility to climate-related adversity is increasingly affecting populations not previously exposed to extreme environmental conditions, and some populations are disproportionally affected.[10]

Existing health inequities will be exacerbated with some groups placed at greater risk of the negative health and social impacts of climate change, including Aboriginal and Torres Strait Islander communities, older Australians, CALD communities, migrants, refugees, homeless people, rural and remote communities, low income earners, people with disabilities, and children.[14,15]

Other population groups requiring targeted efforts will arise, such as the firefighters reflected in the NSW Bushfire Inquiry and the need to ensure mental health screening and support is accessible for this population.[16]

A focus only on vulnerabilities, however, can undermine efforts to mitigate and respond to climate change. Strengths-based approaches recognise the self-determination, resources and resilience of individuals and communities in the face of adversity. Concentrating on the inherent strengths and assets can empower individuals and communities, which may be particularly important in this context.[17]

What is the health sector's role?

The Australian Government is a signatory to *The Paris Agreement*[18], a global commitment to lower national greenhouse gas emissions with signatories adopting nationally determined 5-yearly targets to reduce the health and economic impacts of climate change. All Australian states and territories have committed to the target of net-zero carbon emissions by 2050. Strategies and adaptation plans to reduce the impacts of climate on health and well-being are in various stages of development and implementation.[19,20]

The Australian health sector contributed to 7.2 percent of Australia's total carbon emissions in 2014-15, equivalent to the total carbon footprint of the population of South Australia. Hospitals and pharmaceuticals were shown to be the major contributors.[21] Primary healthcare also made a direct contribution.

The health sector is making considerable efforts towards both health-promoting and emission-reducing policies with networks such as the Global Green and Healthy Hospitals (GGHH)[22], which advocates for innovation, ingenuity and investment to transform the health sector and foster a healthy and sustainable future. Primary healthcare's role in reducing the health sector carbon footprint is through direct action to lower its own emissions contribution, but possibly more significantly indirectly by decreasing Australia's reliance on hospital-based healthcare.[21]

What action is being taken?

NATIONAL CLIMATE AND HEALTH RESPONSE

In Australia, at a national level, the Office of Health Protection monitors and reports on the National Environmental Protection Measures established by the National Environmental Protection Council.[23] In addition, the Australian Government has an active role in national health security; overseeing biosecurity, disease surveillance and facilitating coordinated responses to public health emergencies such as pandemics and natural disasters.[24,25]

A number of national networks and partnerships have formed calling for further national, strategic, health-centred climate action. The Climate and Health Alliance (CAHA)[26], Doctors for the Environment Australia[27], as well as health professional colleges and peak health bodies, have declared climate change a global and national health emergency, highlighting the symbiotic relationship between climate and health.[28] Furthermore,

CAHA together with over thirty health and medical organisations, developed *The Framework for National Strategy Climate, Health and Wellbeing for Australia*[10], which identifies the need for a low carbon and environmentally-sustainable health sector to deliver economic, social, and environmental benefits for Australians.

NSW CLIMATE AND HEALTH RESPONSE

At the state level, the NSW *Government's Climate Change Policy Framework for NSW*[29] recognises the importance of lowering emissions and taking action to reduce climate change impacts on health and well-being. Further, in response to the recent series of national disasters, including the NSW black summer of bushfires, widespread drought, and COVID-19, the NSW Government launched *Resilience NSW*; a government agency specifically focused on driving policy and action to build community resilience, prevent, prepare for, and recover from emergencies and disasters.[30]

The 2020 NSW Bushfire Inquiry has also recognised the importance of climate change and its impact on the increasing frequency and severity of disasters with the state government accepting in principle all 76 recommendations for reform.[16]

NSW also plays host to the University of New South Wales (UNSW) Climate Change Research Centre (CCRC), a dedicated multi-disciplinary research facility exploring questions of climate dynamics, global climate change, and extremes of weather and climate. UNSW, through the CCRC, also leads the Australian Research Council (ARC) Centre for Excellence for Climate Extremes, a multi-university research consortium and network of national and international partner organisations aimed at advancing climate science and research.[31]

LOCAL CLIMATE AND HEALTH RESPONSE

Regionally, local governments have a broad range of responsibilities which are impacted by climate, including public infrastructure, local emergency responses, planning and building regulation, public health and environmental management.[32] Strong community relationships, on-the-ground experience, and demonstrated leadership on climate and health issues[33,34] ensure local governments have a key role to play in the prevention, mitigation and adaptation of the health effects of climate change.

Within NSW, local governments have initiated numerous initiatives designed to plan for, mitigate, and adapt to climate change. For example local councils in the areas of Blacktown, Nowra, Penrith, Leichardt, Dubbo and Albury all have projects under way focused on heat mapping and creation of public cool spaces through increased vegetation and tree cover.[34]

Within the SNHN local area, Ku-ring-gai local council has demonstrated leadership in disaster preparation and community awareness-raising. Collaborative partnerships with emergency services, strategic communication, and innovative 3D simulation forecasting technology enabled Ku-ring-gai local council to better inform and prepare residents, building community resilience to respond to the increasingly frequent threat of bushfires.[33]

What is the role of primary healthcare?

Strong community relationships combined with broad geographical distribution affords primary healthcare significant social capital to leverage behaviour change on issues of health and climate.[35] The trusted position and close community connection allows primary healthcare providers to act as opinion leaders and advocate for evidence-based interventions on issues of importance, e.g. climate and health.[36]

Prevention and surveillance are key priority areas for primary healthcare providers. Observing changing patterns of health, encouraging behaviour change and strengthening preventive health action will be crucial to preparing communities to respond to the current and future health impacts of climate change.[36]

The role of Primary Health Networks (PHNs) is to 'increase the efficiency and effectiveness of medical services for patients, particularly those at risk of poor health outcomes, and improving coordination of care to ensure patients receive the right care in the right place at the right time'[37]. Strengthening and better resourcing primary healthcare to deliver business as usual, including identifying health issues, system integration, preventing poor physical and mental health outcomes, and promoting health and wellbeing, will be central to any comprehensive action to prevent and mitigate the health impacts of climate change.

COMMUNITY ACTIVATION

Role

To support our community to anticipate their climate risks and mitigate the impacts of climate change on health and well-being.

Context

Responding to the challenges of climate change requires an understanding of the implications of a changing climate for the Australian population, particularly in relation to their health. Primary Health Networks have an understanding of the health needs of those in the region, and an understanding of the region's services and health infrastructure to meet those needs.[38] They are therefore appropriately placed to inform and prioritise climate action in their community.

Communities are not homogenous entities and building capacity will involve fostering shared knowledge and the development of skills, resources and organisational structures unique to the identified community. An asset-based approach to community development builds on the unique assets found in community and mobilises individuals, organisations and institutions to come together to realise and develop their strengths and drive sustainability.[39]

Creating coalitions maximises the influence of individuals and organisations, bringing together the unique strengths and resources of diverse partners for greater impact and more sustainable outcomes.

Engaging and empowering communities to prepare for climate-related hazards and disasters, minimise their impacts on health and wellbeing, and facilitate adaptation and resilience over the short, medium and long-term, will benefit from a network of organisations working together to influence outcomes.[10]

Local Government Councils are guided by principles to meet 'current and future local community needs' through 'strong representation, leadership, planning and decision making.'[40] They present an important partner for SNHN, together with other health sector groups (e.g. the Local Health Districts (LHDs), Aboriginal Health Council and healthcare providers) and research bodies, to increase awareness and understanding of climate-sensitive health impacts and collaborate in response to climate-related hazards and disasters.

The Australian Disaster Resilience Index[41] provides an overall measure of the capacity for communities to prepare for, absorb and recover from natural hazards and to learn, adapt and transform in the face of future events. Formed from indicators of coping and adaptive capacity at the local government area (LGA) and statistical area level 2 (SA2) level, it can guide SNHN, stakeholders and the community to target climate action in a way that leverages a region's specific strengths and recognises and overcomes weaknesses. Indicators used in the MJA-Lancet Countdown assessment for selected climate change-related, vulnerabilities and health impacts should also be considered in the region's needs assessment.[42]

Calls have also been made for a comprehensive national environmental health surveillance system to track and evaluate climate-related indicators and inform effective responses.[10] Much like a system in the United States that brings together health and environment data from a variety of sources,[43] it would complement the existing National Notifiable Diseases Surveillance Network.

Such surveillance could provide location-specific forecasts and real-time reporting (e.g. air quality during bushfires[44,45,46,47]), supporting communities to be informed and make decisions that enhance their health and wellbeing. Actions arising from the 2020 NSW Bushfire Inquiry are recommended to include an improved air quality alert system, public education campaign and tailored messaging to GPs and communities.[16]

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i Coping capacity refers to the means by which communities or organisations can use available resources and abilities to face adverse consequences

ii Adaptive capacity refers to the arrangements and processes that enable adjustment through learning, adaptation and transformation

CASE STUDY 1:

PARTNERSHIPS - COMMUNITY INVOLVEMENT IN HEATWAVE PLANNING[48,49]

Heatwaves are responsible for more deaths than any other extreme weather event and are predicted to cause hundreds of additional deaths by 2050. Heat can severely impact on physical and mental health placing people at risk of heat-induced illness (e.g. dehydration, heat stroke, cramps), or exacerbating existing conditions (e.g. altered mental state, cardiovascular impairment, renal illness, respiratory illness). Heat can also impact the effectiveness of prescribed medicines increasing medication toxicity or lessening its effectiveness.

Local heatwave plans, planning templates, and heat health strategies have been developed by a number of local councils and state governments in order to activate communities, facilitate collaborative action at the local level and reduce the health impacts of heatwaves. Examples include Lake Macquarie and the Central Coast[50], Buloke[51], Boroondara, Surf Coast Shire and more[34]. These documents emphasise the central role of activated communities in heat prevention and adaptation initiatives, identifying the benefits of empowering communities through awareness raising, resource distribution and the facilitation of community input and connection.

Partnering with communities to identify heat islands, embed cooling spaces, increase shade, safeguard community infrastructure, and develop green spaces is central to these local government strategies to increase community heat resilience. The 'Cool Streets' initiative run by Blacktown City Council highlights this. By activating the community though participatory engagement processes, local governments were able to increase street tree planting lowering public space surface temperatures, reducing home energy use, sequestering carbon and potentially increasing community property values.

Building partnerships that activate and build on the strengths of community will be critical for building the long term resilience of communities to respond to, and mitigate the health impacts of heat hazards that are increasing in both frequency and intensity.

STRATEGIES	ACTIONS	SUCCESS LOOKS LIKE...

Develop an understanding of the current and projected impacts of climate change on our community	• Needs assessments identify:
	  - Climate change-related health impacts of the region
	  - The region's services and health infrastructure to respond to those health impacts
	
	• The impact of the social determinants of health and the needs and strengths of population groups vulnerable to climate change-related health impacts are identified
	
	• Partnerships are established that support monitoring of the local community's needs in preparing for and responding to climate-sensitive health impacts and climate-related hazards and disasters
	
	• There is engagement with and contributions to state and national systems that evaluate climate-related indicators and inform responses
		SNHN is recognised as a key source of information about climate change-related health impacts in the community and the ability of the region's health services to respond

Enhance the capability of our community to anticipate, prepare for, and respond to a range of climate-sensitive health impacts and climate-related hazards and disasters	• Existing health literacy and health promotion activities (e.g. GPs in schools and Healthy Living workshops) incorporate, anticipate prepare for and respond to the health impacts of climate change • Communities are supported to become informed and access resources that strengthen their capacity to respond to climate-sensitive health impacts, climate hazards and disasters • Partnerships are established (e.g. with local councils, community services, community groups) to develop and facilitate consistent communication about anticipating, preparing for and responding to the health impacts of climate change	The community understands the relationship between climate change events and their health and knows how to respond

SYSTEM TRANSFORMATION

Role

To strengthen health system resilience and adaptive capacity to climate-related hazards and disasters.

Context

Primary healthcare will strengthen health system resilience and adaptive capacity through:

- Integrated involvement in the prevention, preparation, response, and recovery from climate-related hazards and disasters; and

- Reducing the health sector carbon footprint, directly by lowering its own emissions contribution, but more significantly, indirectly, by decreasing Australia's reliance on hospital-based healthcare.

DISASTER PLANNING

Involvement of the heath system in all aspects of prevention, preparation, response, and recovery from public health emergencies such as natural disasters and pandemics is crucial to building Australia climate resilience.[52] While the acute health sector has traditionally been included in these processes, there have been calls for better utilisation of primary care and formalisation of primary care integration into responses.[53] Primary healthcare is instrumental in 'not only an effective emergency response, but also a prepared and resilient system that can prevent, withstand and recover from emergencies, while continuing to provide essential health services throughout.[54]

Nepean Blue Mountains PHN in collaboration with Wentworth Healthcare presents an example of how GPs and primary care have effectively formed local partnerships to foster proactive, coordinated approaches to disaster planning and management. Through the collaborative development of a living document, formalising the roles of the PHN and GPs, along with strengthening communication channels, procedures, and resources, more comprehensive disaster response has been embedded in the region.[55]

An avenue for primary healthcare and general practices to become more involved in collaborative emergency planning and testing of ideas is to participate in scenario exercises. These processes are vital to ensuring adequate understanding of the continuum of risks associated with hazards and disasters, allocating roles and responsibilities, gaining insight into the local context, and understanding capability requirements. Involvement of primary healthcare in these processes will help build a clearer picture of community capacity and assets to better facilitate a comprehensive coordinated response to climate-related hazards and disasters.[56]

Engagement with the NSW Government, through Resilience NSW and the State Emergency Management Committee (and its Functional Area Committee on Health Services)[57] will also be important. Actions arising from the NSW Bushfire Inquiry, for example, will see regional planning around local infrastructure assets in bushfire prone land, and research pursued on the health impacts of bushfire smoke and poor air quality.[16]

LOWERING EMISSIONS

With hospitals the major contributor to emissions from the health sector, evidence suggests that efforts to strengthen our health system and build the capacity of primary healthcare will have co-benefits for the environment.[21] Prioritising integrated service provision that promotes patients as healthcare partners, and facilitates access to healthcare when and where patients need it (e.g. telehealth, remote monitoring, or hospital in the home[58]) will have a number of environmental co-benefits (e.g. reducing healthcare travel, unnecessary medical procedures, and unnecessary hospital admissions)[59], and build the capacity of patients to self-manage climate-sensitive health impacts.

Investment in meaningful action and research to support innovative healthcare approaches, along with efforts to build and strengthen collaborative partnerships and networks[22] across all sectors and levels of government, will be essential to creating synergistic responses to climate change, and build a robust, effective and flexible health system, able to respond to climate health hazards and disasters.

STRATEGIES	ACTIONS	SUCCESS LOOKS LIKE...
Establish primary healthcare in local, state and national plans for the prevention, preparedness, response, and recovery from climate hazards and disasters	• A locally-orientated shared plan for disaster prevention, preparedness, response and recovery is developed • Relationships are established with entities that have a role in the prevention, preparedness, response and recovery from climate hazards and disasters to inform and implement the plan • Opportunities are identified, and mechanisms established to incorporate primary healthcare into local, state and national disaster prevention, preparedness, response, and recovery decision making • Primary healthcare is supported to participate in scenario planning exercises	Primary healthcare is recognised and included in plans for disaster prevention, preparedness, response, and recovery
Promote sustainable and climate-resilient solutions for health infrastructure and operations that decrease reliance on hospital care and ensure continuity of health service delivery	• Implementation of digital and virtual healthcare solutions (e.g. My Health Record, telehealth, and remote patient monitoring) are prioritised and supported to become core elements of high quality, safe primary healthcare delivery • New and innovative models of healthcare delivery, infrastructure and operational processes that have climate co-benefits (e.g. reduction in travel, energy, waste or procurement emissions), are explored and supported • Research on the impact of climate change on health, health systems and health services is supported and promoted	SNHN actively contributing to a patient-centred health system that prioritises climate-friendly operational practices and infrastructure solutions that facilitate continuity of care
Develop and strengthen collaborative partnerships to enhance the capacity of the health system to anticipate and respond to climate and health impacts	• Networks and partnerships with organisations (e.g. LHDs, local councils, universities, community organisations) are established to promote health system action on climate change • Climate and health information sharing networks are identified and supported (e.g. GGHH, CAHA)	SNHN is working collaboratively with a number of partners to raise climate and health awareness and reduce the health impacts of climate change

CASE STUDY 2:

RAPID TRANSFORMATION - THE CAPABILITY OF PRIMARY HEALTHCARE DEMONSTRATED IN THE RESPONSE TO COVID-19

The response to COVID-19 demonstrates the critical importance of listening to evidence and engaging early and effectively with primary healthcare to protect Australian lives.

In March 2020, primary care was called upon by the Australian Government Department of Health to co-develop a National COVID-19 Primary Care Response.[60] Early engagement and targeted investment saw rapid implementation of innovative initiatives to protect the population, particularly those most at risk, strengthen existing services and systems, and optimise workforce capacity. Key areas of focus included:

Telehealth - rapid activation of whole of population access to telehealth services supported the continuous provision of care to all members of the population during lockdowns, reducing patient population movement and the spread of the virus.

Respiratory clinics - the establishment of a nationwide network of GP-led respiratory clinics based in communities enabled the redistribution of people with COVID-19 symptoms away from healthcare services and emergency departments. This played a crucial role in protecting patients and staff from infection and allowed the continuation of routine essential care.

Communication - Early engagement, strong communication networks and effective feedback mechanism between government and primary care health professionals (doctors, nurses, mental health and allied health providers) was crucial to the successful primary care response and enabled the promotion of clear consistent public health messaging. Regular teleconferences between government and national primary care professional organisations, and regular interactive informational webinars for professionals enabled primary care input into decision making, strengthening the delivery of a cohesive health response.

COMMISSIONING

Role

To attract and distribute resources that enable and incentivise a climate-resilient and environmentally sustainable health sector.

Context

Climate action in healthcare settings can be encouraged through the commissioning process by positively recognising proposals that reflect a reduced carbon footprint of programs both directly (through action to lower its own emissions contribution such as smarter use of energy and minimising waste) and indirectly (through a reduced reliance on hospital-based healthcare). Commissioning will also play a fundamental role in enhancing disaster preparedness. Opportunities lie at all stages in the commissioning approach for encouraging and incentivising environmentally sustainable and climate-resilient strengths driven solutions to address the needs of our community.

Commissioning is more than just purchasing services. It is a strategic process of working with the market to co-design, co-deliver and actively manage services to most effectively and efficiently meet the needs and improve outcomes of a defined population within resources available. SNHN's Integrated Commissioning Framework is a continuous process of planning, delivering, monitoring and reviewing health services with a focus on person centred outcomes.

SNHN may attract funding, outside typical sources, to achieve specific objectives. The NSW Government provides Increasing Resilience to Climate Change (IRCC) grants[61], with community groups able to partner with local councils in their applications for relatively small amounts of funding to take practical steps to reduce climate change impacts such as heatwaves, bushfires or floods.[62] The Australian Government Department of Agriculture, Water and the Environment facilitates multi-stakeholder partnerships to co-create integrated solutions[63], which may also involve funding and investing in programs.

Climate action in healthcare settings is growing, but the topic lacks synthesis in the literature and there are challenges in monitoring progress in this area. The GGHH[22] international community provides members with a range of resources to support sustainability action, including in elements of commissioning (e.g. procurement). They also provide a data centre for members to measure their footprint and track progress, and an initiative, currently focused on waste and energy, challenging members to measurably reduce their footprint with a series of targets and indicators for monitoring progress.[64]

SNHN uses the Quadruple Aim as a foundation in its evaluation framework to map and understand 'success' across commissioned services to date and to guide future service delivery and enhancement. The Quadruple Aim prompts consideration of: population health; patient experience; cost per capita; and provider (workforce) experience. Work is underway to better understand how health services have addressed climate change and the tools used to measure implementation[65]. However, GGHH resources may provide a useful starting point for identifying climate and health indicators and measures for inclusion in the SNHN evaluation framework.

A better understanding of community will enable SNHN to embed a strengths-based approach to commissioning- working together with community and providers to analyse, plan, implement and review community need to identify and inform opportunities for action.[66]

STRATEGIES	ACTIONS	SUCCESS LOOKS LIKE...
Encourage environmentally sustainable and climate-resilient solutions for health infrastructure and operations through our commissioning of services	• Seek funding to support the implementation of environmentally sustainable and climate-resilient solutions for health infrastructure and operations	Funding to support the implementation of environmentally sustainable and climate-resilient solutions is received
	• Embed criteria in tendering processes that support evaluation of the environmental sustainability and climate resilience of proposed programs	Entities responding in the commissioning process increasingly demonstrate consideration of the sustainability and resilience of their operations and proposed solutions
	• Identify indicative measures for environmental sustainability and climate resilience that can be developed and tailored to each program to set and monitor performance with providers and to evaluate success of the programs individually and collectively	Improvements in the environmental sustainability and climate resilience of SNHN commissioned programs, individually and collectively, are observed
Commissioning prioritises a strengths-based approach to address the population needs of those most vulnerable to climate-sensitive health impacts and climate-related hazards and disasters	• Implement strengths-based programs to address the physical and mental health needs of communities affected by climate hazards and disasters • Implement programs to address the needs of Aboriginal and Torres Strait Islander people and culturally and linguistically diverse (CALD) communities affected by climate-sensitive hazards and disasters, in a manner that recognises their inherent strengths and assets, to promote and protect their health • Implement programs within other populations identified as being at risk of the health impacts of climate change, in a manner that recognises their inherent strengths and assets, to facilitate improved health outcomes	SNHN is commissioning projects and programs that support and empower communities vulnerable to climate and health impacts

MEMBER AND PROVIDER SUPPORT

Role

To build the knowledge and capacity of all primary healthcare providers to mitigate, adapt and respond to climate hazards and disasters.

Context

As noted under 'Commissioning', Australians are set to experience ongoing and increasingly severe physical and mental health challenges from climate-related hazards and disasters.[6] Current and future primary healthcare providers must be well-educated and aware of the health risks of climate change, and better prepared to recognise and respond to these risks.[10]

SNHN consults with, involves, and collaborates with members and providers to identify opportunities for quality improvement, understand expectations, and explore ways to overcome disruptions and improve outcomes.[67]

SNHN activity aligns with the Quadruple Aim, which includes an aim of improving the experience of providing care. This will become increasingly important in the context of climate and health with the growing severity and intensity of climate related hazards and disasters likely to result in expanding workloads and environmental pressures for health professionals. Local workforce capability, capacity and needs will need to be monitored with additional resources provided as required (e.g. health professional mental health, recruitment support, flexible workplace arrangements) to ensure SNHN members and providers are adequately equipped to respond to changing community climate and health needs.

The SNHN COVID-19 response and recovery has demonstrated the key role that SNHN can play in supporting and upskilling healthcare providers in response to an identified need. Through levering existing mechanisms and processes, SNHN was able to scale up support and rapidly provide additional information and capacity-building resources to primary care and allied health providers (e.g. multifaceted webinar-based information and training, personal protective equipment (PPE), respiratory clinics, daily updates. telehealth support, decision support pathways and staff counselling).

Additional support was also provided to communities and providers identified as having an increased risk of negative health outcomes because of the pandemic. This included aged care, mental health, young people, and other communities. SNHN supported these communities through increased availability of resources; a community care access, health and wellbeing awareness campaign; and the development of a GP 'super squad' to support home care and flu vaccine distribution.

Throughout COVID-19, SNHN was also able to effectively establish and build partnerships that facilitated enhanced community and provider support. SNHN mapped local service availability to create a network of 60 community organisations, and worked with MPs, Local Government, and stakeholders to share important information and enhance resource distribution. Working with the LHD, SNHN was also involved in the implementation of a virtual ward for COVID-19 patients.

The SNHN COVID-19 response highlights the vast skill set and existing partnerships that could be leveraged and reoriented to build the knowledge and capacity of SNHN members and providers when responding to more frequent and severe impacts of climate on health.

STRATEGIES	ACTIONS	SUCCESS LOOKS LIKE...
Develop our member and provider workforce knowledge and skills for responding to a range of climate-sensitive health impacts and climate-related hazards and disasters	• Local plans for preparing, responding and recovering from climate-related hazards and disasters are communicated with our member and provider workforce • Resources to support preventing, preparing, responding and recovering from climate-related hazards and disasters are developed and collated for timely access by our member and provider workforce	Primary healthcare providers within the SNHN region are actively engaged in activities designed to anticipate, prevent, prepare, respond, recover, and adapt to the future impacts of climate change
	• Primary healthcare providers are supported to actively plan and establish operational structures that strengthen their capacity to respond to climate-related hazards and disasters	Primary healthcare providers within the SNHN region have plans in place for risks such as surges in service demand, destruction of infrastructure and equipment, and interruptions to workforce availability, access and supply chain
	• Education is developed and delivered to support primary healthcare providers to better assist their communities to understand climate health risks, recognise and respond to climate-sensitive health impacts, and build climate resilience	All education and training opportunities supported or initiated by SNHN recognise, consider and embed information on the impacts of climate on health

STRATEGIES	ACTIONS	SUCCESS LOOKS LIKE...
	• HealthPathways are reviewed, and updated where required, to include information relevant to climate-sensitive health impacts, and actions to mitigate, anticipate, respond and recover from climate-related hazards and disasters	GPs and other clinicians in the region have access to region–specific information about climate-sensitive health impacts and resources to anticipate, mitigate, respond and recover from climate-related hazards and disasters, covering: • service navigation; • condition management; • referral to specialist services; • reference materials; and • patient educational resources
Support the mental and physical wellbeing of the health workforce with increasingly frequent and severe climate hazards and disasters	• The health impact of climate-related hazards and disasters on the healthcare workforce is recognised • The primary healthcare workforce is aware of and supported to access opportunities for mental and physical health support when impacted by climate-related hazards and disasters	An adequately resourced and resilient local primary healthcare health workforce supported to meet the changing health needs of the communities they serve
Support health-promoting and emission-reducing initiatives to transition our member and provider operations to a low/zero carbon footprint	• Primary healthcare providers are supported to explore and implement health promotion (e.g. cycle to work programs, locally sourced healthy workplace snacks, office green space) and emission-reducing activities (e.g. renewable energy purchasing, low carbon procurement and waste reduction practices)	Primary healthcare providers have a workplace culture that encourages climate action (e.g. emissions reduction, waste management, health promotion activities) both personally and as an organisation through health promotion and emission reduction activities

AN EXCEPTIONAL ORGANISATION

Role

To embed climate mitigation, adaptation and sustainability in our operations, our people, and our visibility.

Context

Everyone has a role to play in ensuring society is able to prevent, mitigate and adapt to the impacts of climate change; it is only with a collaborative effort across all communities, sectors and levels of government that we will be able to implement the necessary change. This must start with the individual because as stated by New Zealand scientist and activist Dr Jane Goodall *'What you do makes a difference, and you have to decide what kind of difference you want to make.'* [68]

The rapid activation of an integrated primary healthcare response to COVID-19 has demonstrated the key role of primary healthcare in providing effective and influential community leadership (Case Study 2).

While health professionals have always held a highly trusted position in society, COVID-19 has raised this profile further, expanding their influence within the political and policy arena. Community trust and the value placed in evidence-based decision making using the expertise of health professionals is at an all-time high. By capitalising on their clinical expertise and status as a respected public voice, health professionals and providers have a window of opportunity to demonstrate leadership on issues of climate, communicating the health risks of climate change and highlighting the need for immediate action. [69]

With governments committed to lowering carbon emissions, and the business community actively working to reduce emissions and build climate sustainable policies and practices [70], healthcare organisations that are committed to climate action have the opportunity to build on these experiences. Numerous low cost and free supports already exist that assist organisations to embed policies and practices that promote health and mitigate climate impacts.

Initiatives such as Climate Active [71], Australian Energy Foundation [72] and the Green Building Council Australia [73] currently partner with both small and large organisations to drive voluntary action on climate change, providing expertise that assists organisations to measure, reduce and offset carbon emissions, improve energy efficiency, reduce waste, and lessen negative impacts on the environment. Mandated disclosure of a rating that measures, for example, energy efficiency, water usage, waste management and indoor environment quality for larger commercial buildings is also being reviewed for expansion to all commercial buildings. [74,75,76]

Additionally, office educational programs are on the rise with organisations such as CitySwitch [77] providing dedicated support to assist office-based businesses improve energy and waste efficiency. The NSW Government provides information on energy management, with offers that help businesses upgrade equipment at a lower cost. [78]

GGHH features a database of case studies outlining initiatives healthcare organisations have undertaken that have effectively reduced their climate impact and, in many cases, also produced economic benefits. Some examples include a paper reduction purchasing initiative that saved Mater Health Services $60,000 in addition to the climate benefits [79] or Ambulance Victoria's action plan to source 100% of their energy requirements from renewable sources by 2025. [8]

Health-promoting activities and systems are also important for mitigating the burden of disease, adapting to new demands of efficiency and quality, mitigating carbon emissions and local pollution, and adapting to a changing climate [81]. It is well established that the conditions in which we live, work and play influence our health behaviour and lifestyle choices. Workplaces as such have a social responsibility to create workplace cultures that promote health and wellbeing. Health promotion activities also have reported co-benefits of improving profitability and business performance. [82]

STRATEGIES	ACTIONS	SUCCESS LOOKS LIKE...
Provide leadership and representation for primary healthcare in addressing the health impacts of climate change	• Use our trusted voice to actively promote the importance of climate action to reduce current and future impacts on health • Engage with entities to grow our expertise, share ideas and strengthen our capacity to communicate broadly on issues of climate and health • Communicate our climate action and achievements to members, providers, stakeholders and the broader community	SNHN is recognised by members, providers, stakeholders and the broader community as a primary healthcare leader on issues of climate and health
Implement health-promoting and emission-reducing initiatives to transition our operations to a low/zero carbon footprint	• Enhance the capability and culture of our people to anticipate, prepare for, and respond to climate and health impacts through education, training and resources • Develop health-promoting and emission-reducing organisational policies and practices (e.g. encourage exercise as transport, source local healthy produce, explore renewable energy purchasing, waste reduction, or low carbon procurement supply chains)	A workplace culture with informed and capable SNHN people actively working to reduce their climate impact both personally and as an organisation

CASE STUDY 3:

CLIMATE AND HEALTH LEADERSHIP - KOOWEERUP REGIONAL HEALTH SERVICE[83]

Kooweerup Regional Health Service (KRHS) has taken a proactive lead on building resilience within its organisation and among the local community, as well as advocating for climate adaptation policies more broadly at state and national levels.

The KRHS Health Promotion team plays an important role in integrating health promotion into its practices, educating the public and decision makers on the health impacts of climate change and the solutions to these issues, and advocating for protective policies to protect public health from climate change.

Staff/physicians/nurses - All staff (including student placements and contractors) complete an induction process that includes a focus on environmental sustainability practices conducted onsite. Newsletters, posters, emails, meetings, and leaflets keep staff informed and aware of climate change initiatives, impacts and strategies. Staff can complete an environmental pledge to support their contribution to environmental sustainability both at work and at home.

Patients - Long-term residents have access to all the gardens, the Men's Shed and workshops that cover a wide variety of subjects, with environmental sustainability embedded in many of the themes. Environmental Sustainability and Health Promotion practitioners hold workshops in the onsite Hewitt Eco-house.

Community - Regular and ongoing communication with the community and stakeholders influences more sustainable and health promoting behaviour and enables meaningful input into decision-making processes. The Health Promotion Communication Officer regularly updates and contributes educational information relating to climate change health initiatives to a variety of external newspapers, newsletters, and social network systems.

Primary and secondary school students, youth groups and a variety of community groups regularly visit the Hewitt Eco-house facility. Information is on-hand on the form of brochures that relate to different solutions to problems affected by climate change. Examples include District Nursing, Flood Readiness Checklist, Bush-fire Readiness and Extreme Heat Dangers. The house also has an interactive touch screen that includes messages concerning environmental degradation, waste impacts, water management with solutions and links to useful information.

Decision makers - KRHS regularly meets with local state and national decision makers, participates in climate-focused seminars and workshops, and delivers presentation at conferences and events.

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