



Asthma Australia New South Wales Pre-Budget Submission 2024-25

November 2023

Budget Proposals

The Asthma Australia submission focuses on the following funding proposals for consideration in the 2024-25 Budget:

Proposal	Investment
1. Contribute funding to a national AirSmart public education campaign to reduce the health impacts of air pollution	The New South Wales (NSW) Government contribute: Option 1: \$3,127,760 (metro and regional) and option 2: \$1,491,760 (regional NSW exclusively) for one year to fund the NSW component of Asthma Australia’s national AirSmart public education campaign to reduce the impacts of poor air quality.
2. Increasing access to local air quality information.	Fund a low-cost air quality sensor pilot program as the first step towards ensuring NSW communities have access to air quality information. Costs to be determined in consultation with agencies responsible for air quality monitoring.
3. Program funding for asthma management in NSW	The New South Wales Government fund Asthma Australia \$4,029,000 over three years to deliver services to and improve the lives of people with asthma in NSW.
4. Supporting people with asthma on low incomes to install cleaner and more efficient forms of heating, cooling and cooking in their homes	The NSW Government introduce a financial support program for low-income households to replace inefficient methods of household heating and cooking to address indoor and outdoor air quality.
5: Supporting housing and housing modifications that are resilient to hazards and extreme weather events	The NSW Government’s program of building new housing include standards to ensure that new homes provide healthy indoor air quality by recognising the need for sealing to prevent infiltration of ambient air pollution and adequate ventilation to reduce indoor air pollution and aeroallergens.

About Asthma Australia

Asthma Australia is a for-purpose, consumer organisation which has been improving the lives of people with asthma since 1962.

Asthma is an inflammatory condition of the airways, which restricts airflow and can be fatal. There is no cure, but most people with asthma can experience good control of their condition. Asthma affects 1 in 9 people in Australia, or 2.7 million people. It has various degrees of severity (mild to severe) and affects people of all ages, from childhood to adulthood. Asthma can appear at all ages and stages of life.

Asthma Australia's purpose is to help people breathe better so they can live freely. We deliver evidence-based prevention and health strategies to more than half a million people each year. To ensure people can access effective treatments and best practice healthcare for their asthma, we work directly with people with asthma, their family and friends, health professionals, researchers, schools and governments. This way, we can ensure people with asthma are supported with education and access to high-quality information and care where they live, work and play in all stages of life.

Asthma in New South Wales

Impact on the health system and the community

Asthma is a chronic respiratory condition affecting 10.6% of the population in NSW, or more than 829,000 people.¹ Asthma prevalence is higher in regional NSW (12.4%) compared with the Greater Sydney Region (9.2%).²

Asthma places a significant burden on the NSW hospital system. There were 13,729 hospital admissions for asthma in NSW in 2016–17.³ An uncomplicated hospital admission costs approximately \$2,591 (approximately 1.5 hospital days) and a complicated admission costs \$5,393 (approximately three hospital days).⁴

In 2018-19 there were 22,971 asthma-like illness presentations to 84 emergency departments in NSW.⁵ Each Emergency Department presentation for asthma costs \$443 on average,⁶ and repeated asthma-related presentation to Emergency Department increased the risk of hospitalisation.⁷ For 2021-22 there were 77,150 emergency department presentations for asthma recorded across Australia, of which 40% were admitted to hospital and less than 1% were triaged as non-urgent.⁸

Asthma prevalence in Australia is increasing. In 2022 Asthma was the 8th leading contributor to the overall burden of disease in Australia, having risen from 9th place in 2018 and 10th place in 2011. Asthma can both be caused and exacerbated by conditions related to the warming climate, which means asthma outcomes will worsen as climate change impacts increase. Asthma is the leading cause of burden of disease for people aged 5–14 years.⁹

The home environment

The home environment is particularly important for people with asthma and allergies, who are sensitive to substances we all breathe. These substances are referred to as 'triggers' because they can trigger asthma or allergy symptoms. Indoor air pollution from heating with gas or wood heaters and using gas cooktops produces a range of pollutants and can worsen indoor air quality, and exposure to mould and dampness can lead to a range of health problems. Exposure to these triggers can cause asthma flare-ups and contribute to the development of asthma.¹⁰

In 2022, Asthma Australia undertook a nationally representative survey of 5,041 people to understand what asthma triggers people in are exposed to in their homes, whether they take action to reduce triggers in their homes, and whether any barriers prevent people from addressing triggers. The resulting Homes, Health and Asthma in Australia report found that homes are not healthy places for all Australians, particularly for people with asthma or allergies. One quarter of Australians (24%) are not happy or are unsure about the air quality

inside their homes. Among people with asthma and allergies, three in ten reported that their symptoms are worse after spending time in the home.¹¹

Changing weather patterns due to climate change have reinforced the importance of housing in providing protection from cold, heat and other extreme weather events.¹² Governments across Australia in regions that have experienced torrential rain and floods, have recognised the impact of this on people's homes including the increased risk of mould in homes. No amount of mould is considered safe for health¹³ and people with asthma, allergies and other breathing conditions are more at risk from contact with mould.¹⁴

Housing is a key social determinant of health and particularly important for people with asthma as housing conditions influence an individual's asthma symptom control and risk of developing asthma. The type of energy used in homes contributes to the health of the indoor environment. Harmful energy sources include gas and wood, both of which emit harmful pollutants that can trigger asthma symptoms and its development as well as cause other serious health conditions.

Initiatives that improve the efficiency of people's homes and their health due to the type of energy sources they use, particularly for people without the means to make the changes themselves, are the types of investments NSW needs.

Asthma, climate change and air quality

Climate change is inextricably linked with air quality. With asthma affecting 1 in 9 Australians, or 2.7 million people, this means people with asthma are one of the largest population groups vulnerable to the risks associated with climate change.

The emissions which contribute to climate change also reduce air quality, which can cause people to develop asthma and trigger symptoms or exacerbations in people with asthma. These adverse impacts on asthma are also caused by a number of threats which are increasing as a result of climate change, including bushfire smoke, ground level ozone and pollen. Reducing emissions will therefore improve air quality in the short and long term.

Many people with asthma recognise they are particularly impacted by the effects of climate change. Asthma Australia surveyed over 12,000 people during the catastrophic 2019–20 bushfires about the impacts they experienced as a result of exposure to bushfire smoke.¹⁵ When asked what the government, Asthma Australia or other organisations could do to reduce the impact of poor air quality on their day-to-day life, more than 1,000 respondents provided open text responses that linked the bushfire smoke crisis with climate change. Common suggestions included taking action to mitigate climate change and supporting individuals and communities to respond to bushfire smoke, for example by providing people with air purifiers and implementing building improvement programs to prevent smoke from entering homes, commercial buildings and schools.

In 2023, Asthma Australia undertook a nationally representative survey involving 2,022 respondents to understand what priorities people in Australia want the Federal Government to address in the National Health and Climate Strategy.¹⁶ Two-thirds of respondents live with asthma or another chronic health condition.

Some of the key findings were:

- 70 per cent of Australians think governments should act to protect people whose health is vulnerable to climate change.
- 91 per cent of people with asthma are worried about the impacts of climate change; 71 per cent of people with asthma are concerned about increased air pollution as a climate change impact; and 69 per cent are concerned about more frequent and severe natural disasters.

- One quarter of people surveyed said climate change has already impacted their health. Among those people, breathing issues were the most common impact (49%) followed by poor mental health (39%) and hay fever (39%).

Wood heater smoke is the largest source of winter air pollution in Greater Metropolitan Sydney and regional towns such as Armidale,¹⁷ despite the small number of homes relying on wood heaters in the cooler months. The 2022 Asthma Australia housing survey found that 13.5% of those surveyed from NSW said they used wood heaters regularly during cooler months, which compared to 12.5% nationally.¹⁸

Wood heater smoke contains harmful pollutants including fine particulate matter and known carcinogens. There is no 'safe' level of air pollution and health impacts can occur even at low levels of pollution.¹⁹ Wood heater smoke is a trigger for asthma symptoms²⁰ and a risk factor for other respiratory illnesses, certain cancers, cardiovascular disease, premature birth and premature death.²¹

New South Wales Budget Priority Areas

The importance of respiratory health has been highlighted through various issues across NSW including the COVID-19 pandemic, the 2019–20 bushfire smoke crisis and 2021 floods. The Bureau of Meteorology declared in September that El Niño and a positive Indian Ocean Dipole (IOD) are underway, which means warmer and drier conditions will be more likely over spring and summer. A positive IOD contributes to greater fire risk over southeast Australia in spring, while El Niño contributes to elevated fire risk over both spring and summer.²² The likelihood of conditions that will impact people's health, particularly from bush fire smoke, means that investing in measures that improve the safety of people's homes and gives them access to reliable information, will not only assist but save lives.

In addition to the declaration of an El Niño by the BOM, the Australasian Fire Authorities Council (AFAC) released their Seasonal Bushfire Outlook for Spring 2023 which identified that Australia's climate influences have shifted significantly since last spring, contributing to an increased risk of bushfires across Australia, including for large areas of NSW. Due to high fuel loads and the forecast of warmer and drier conditions, large areas of central and northern NSW are expected to see increased risk of fire this spring. There are high forest fuel loads in parts of the coast and ranges not affected by the 2019-20 fires, particularly around the Sydney Basin, parts of the coast and north of the Hunter. The forecast of warmer and drier conditions in these areas present increased risk of fire this season.²³

Ensuring we are addressing asthma risk factors and giving people the tools to make lasting changes to live healthy lives is vital. It is particularly important to ensure people with asthma on low incomes receive the support they need to live in healthy home environments.

A focus for Asthma Australia is on addressing air pollution given the significant impacts poor air quality has on exacerbating and developing asthma. Air pollution is second only to tobacco use as a cause of death from non-communicable diseases globally, and the United Nations recognises air pollution as one of five risk factors for noncommunicable diseases, alongside unhealthy diet, tobacco use, harmful use of alcohol and physical inactivity.²⁴ Exposure to environmental hazards (such as poor air quality, bushfires and thunderstorms) is both a risk factor for the development of asthma and a trigger for asthma symptoms in people who have asthma.²⁵

People should be empowered and provided with information to make informed choices about their health when it comes to air quality. This is so they engage in their daily activities understanding and knowing what the air quality conditions are, no matter where in Australia they live.

As climate change progresses and extreme weather events increasingly drive people to seek refuge in their homes, housing conditions and the absence or removal of internal health triggers become ever more important. With the harms of gas energy becoming increasingly well known, it is important that people are guided away from replacing gas heaters with wood heaters, which risks increasing pollution and damaging

health. Homes utilising efficient and cleaner forms of energy can help improve both indoor and outdoor air quality and contribute to climate change mitigation. Electrification provides higher energy efficiency and reduced consumer costs than either gas or wood.²⁶

Asthma Australia's AirSmart public education campaign and proposal on air quality monitoring focus on empowering the community to access information about air quality to understand how it impacts their health, while also recognising we must improve the availability of air quality information.

Asthma Australia priority areas for the 2024-25 NSW Budget will support people living with asthma, their carers and health professionals. Addressing these priority areas will contribute to the systemic changes needed to ensure people with asthma can live healthy lives. The priorities are also consistent with the NSW Government's commitment to addressing air quality and its impacts outlined in the *NSW Clean Air Strategy*:

- building knowledge and communicating information transparently and effectively to support actions that protect air quality and public health
- developing innovative policy, and regulatory and economic tools to accelerate the reduction of air emissions, including the adoption of cleaner technologies and improved operating practices
- effective implementation, enforcement and evaluation to ensure the benefits of clean air policies and programs are fully realised.²⁷

Asthma Australia acknowledges the Special Commission on Inquiry into Healthcare Funding which is due to report by August 2024. We acknowledge that key areas of examination will be the way NSW health funds health services delivered in public hospitals and community settings; and strategies available to address escalating costs, limit wastage and identify areas of improvement in financial management.

The 2024-25 Budget proposals we have identified work to deliver savings for the health system, by addressing ways in which we can improve asthma management and the environment in which people live. This means people living with asthma in NSW can avoid unnecessary hospital visits, stay healthy and lead active and productive lives. Asthma Australia has a proven track record of delivering services in the community and we look forward to being an ongoing part of health service delivery for people with asthma in NSW.

Proposal 1: Contribute funding to a national AirSmart public education campaign to reduce the health impacts of air pollution

Asthma Australia would like to acknowledge the NSW Government for providing funding for the pilot of AirSmart, and in recognising the importance of this initiative.

There is a gap in Australian public health messaging around the impacts of air pollution which disproportionately affect the health and wellbeing of people with asthma. Asthma Australia has taken the lead on developing and piloting a public education campaign and air quality app called 'AirSmart'.

AirSmart fills the need for community education and guidance around air quality which was revealed by the 2019–2020 bushfire smoke crisis. This need was recognised by the Royal Commission into National Natural Disaster Arrangements and the Final Report of the NSW Bushfire Inquiry following the 2019–20 bushfires. The need for access to air quality information and guidance will only increase as climate change continues to increase the frequency and severity of events causing poor air quality.

AirSmart was developed with the guidance of a panel of environmental and public health experts, including from the University of Sydney and the NSW Department of Planning and Environment. AirSmart was piloted in communities across southern NSW, ACT, and regional Victoria over a six-week period in July and August 2022. The pilot was evaluated and showed strong indications that Australians want access to local, responsive air quality information and tools. Engagement in the campaign, as shown by over 16,000 app downloads and 23,000 website views in just six weeks, suggests that air quality is an important issue for many Australians.

AirSmart includes an air quality public health campaign which raises awareness about air quality and promotes the AirSmart app as a source of air quality information:

- **The public health campaign** aims to raise community awareness about poor air quality, and how to interpret health advice, so people can protect themselves against exposure to air pollution and the associated health impacts. This evidence-based educational initiative is an Australian-first, using a mix of traditional and digital media channels to reach the full community. The creative process behind the AirSmart campaign included consumer research and was guided by environmental, public health and social marketing experts. The campaign includes 15 and 30 second television commercials, a radio commercial, social and digital assets, a website, billboards, and an app.
- **The AirSmart app** is a consumer tool for accessing local, real-time air quality information and related health advice. Asthma Australia used human-centred design principles to design the AirSmart app. The AirSmart app provides consumers with localised 'real-time' air quality, and strategies to avoid or minimise poor air quality exposure. The app also provides personalised notifications and health advice at specific air quality levels to provide consumers with specific daily advice about the most effective protection.

Asthma Australia is providing two proposed options for funding. Option 1 is to roll-out across all of NSW including a 10-week advertising campaign in November and December, peak bushfire season; and option 2 is to roll-out in regional NSW exclusively in bushfire prone areas also including a 10-week advertising campaign in November and December.

INVESTMENT REQUESTED: The NSW Government contribute: Option 1 \$3,127,760 (Metro and regional) and option 2 \$1,491,760 (regional NSW exclusively) for one year to fund the New South Wales component of Asthma Australia's national AirSmart public education campaign to reduce the impacts of poor air quality.

Table 1: NSW Government requested contribution to AirSmart – Metro and regional NSW

Item	Cost
10-week media campaign commencing Nov/Dec	\$3,000,000
Project management	\$57,960
App maintenance and updates	\$39,800
Evaluation	\$30,000
TOTAL	\$3,127,760

Cost for year 2 - \$3,284,000

Table 2: NSW Government requested contribution to AirSmart – Focused on regional NSW

Item	Cost
10-week media campaign commencing Nov/Dec	\$1,380,000
Project management	\$51,960
App maintenance and updates	\$39,800
Evaluation	\$20,000
TOTAL	\$1,491,760

Cost for year 2 - \$1,566,000

Proposal 2: Increasing access to local air quality information

A key finding from the Federal Government's 2021 State of the Environment report was that better information could reduce the impact of poor air quality.²⁸ The report recognised that communities need real-time, local air quality information during periods of poor air quality.

However, many communities around Australia do not have access to local air quality information because there are not enough air quality monitoring stations. Regional and rural populations commonly lack local air quality monitoring facilities, which can be particularly problematic during bushfires if people in these communities are disproportionately affected by smoke from nearby fires. However, even in metropolitan areas, air quality monitoring stations span many suburbs, meaning localised peaks of air pollution are neither detected nor reported on.

Air quality monitoring stations provide highly accurate information, however, they require suitable locations and can be expensive to establish and run. In contrast, low-cost air quality sensors provide air quality data at a good level of accuracy. Additionally, there is more flexibility in placement as the sensors can be affixed to premises such as schools or council buildings. Some sensors require a data connection while others have built in communications.

The need for access to air quality information and guidance will only increase as climate change continues to increase the frequency and severity of events causing poor air quality. With the declaration of an El Niño in September 2023 and the identified increase in risk for bushfires and longer bushfire seasons, the likelihood of conditions that will impact people's health, particularly from bush fire smoke is certain. Investing in measures give people access to reliable information, will not only assist but save lives.

Responsibility for air quality is shared by the federal and state and territory governments, with states and territories having prime responsibility for monitoring and managing air quality. All governments are required to help maintain and improve air quality and deliver on actions through the National Clean Air Agreement, which includes as one of four strategic approaches:

Better knowledge, education and awareness are essential requirements to inform policy decisions and to help empower communities and individuals to better deal with air pollution. Knowledge, improved through information sharing and research, is critical to plug existing data gaps, identify future trends and help focus efforts in managing air quality, and explore innovative measures to address air pollution. The Agreement's initial work plan also includes a two-year plan for reforms to improve the National Pollutant Inventory.²⁹

The National Clean Air Agreement work plan for 2021-23 includes projects on nationally consistent public air quality information and health advice. This project has a framework agreed by jurisdictions and providing guidance on low-cost sensors measuring air pollution to the public led by NSW and SA.³⁰

The NSW Government should fund a low-cost air quality sensor pilot program as an important step towards ensuring communities in NSW have access to air quality information. The proposed pilot program would enable agencies responsible for air quality monitoring and reporting to trial low-cost sensors. It would also increase understanding of how these sensors can be integrated into the existing monitoring networks and how information can be shared with the public. Investing in this type of technology, which is low cost but has a significant impact, is an investment that will deliver a return for the NSW Budget.

Investing in increasing access to local air quality information would act on the recommendations of the State of the Environment Report, as well as progressing the National Clean Air Agreement work plan. It is also consistent with the NSW Government's commitment to addressing air quality and its impacts outlined in the

NSW Clean Air Strategy: This information is critical to ensure that people vulnerable to the health impact of air pollution exposure are able to protect themselves and their families.

INVESTMENT REQUESTED: Fund a low-cost air quality sensor pilot program as the first step towards ensuring NSW communities have access to air quality information. Costs to be determined in consultation with agencies responsible for air quality monitoring.

Proposal 3: Program funding for asthma management in New South Wales

The funding received by Asthma Australia from the NSW Government has enabled Asthma Australia to deliver a diverse range of programs and activities to improve the health and wellbeing of people with asthma in NSW including telephone and digital education and support services, online training for healthcare professionals, and tailored supports for communities.

As the leading cause of disease burden in children and the 8th leading cause of disease burden in adults nationally, we need to continue to extend services and supports to more of the over 829,000 people with asthma in NSW.³¹

Asthma Australia has invested in understanding the impact of our work to demonstrate the value of these services. From a sample size of 1698 consumers using our services:

- 84% reported they had and adhered to their preventer medication, compared to 48% of the general population of adults with asthma.
- 72% reported they had seen their healthcare professional for a planned asthma review in the last 12 months compared to 60% of the general population of adults with asthma.
- 65% reported they had a flare up requiring medical intervention in the last 12 months compared to 53% of the general population of adults with asthma

As a condition that can be well managed in most people, the continuing investment in education on self-management is vital to empower people to manage their asthma and reduce the demand on health services.

With additional funding, people with asthma in NSW will be able to benefit from more activity across a greater breadth of services, tailored to the needs of individuals and communities across NSW. This will enable greater reach, deeper engagement, and a more profound and enduring impact upon the health and wellbeing of people with asthma.

Improved asthma management reduces preventable hospital admissions, reduces the cost burden to the health care system, reduces absenteeism and lost productivity, and improves quality of life enabling people to achieve their full potential as contributing citizens. The cost for delivering these services is \$1,231,000 per annum and \$4,029,000 over three years.

Support effective self-management practices

Despite best practice guidelines recommending that all people with asthma have a written Asthma Action Plan, only around 34% of people with asthma do.³² People with asthma rate their health more poorly than the general population, yet when managed well, people with asthma can lead a full and active life. At least 80% of hospitalisations due to asthma are preventable.³³ There is clearly much work to be done in supporting people with asthma to better manage their health.

Currently thirty per cent of callers to Asthma Australia's 1800 phone line service are from NSW. This phone line is supported by asthma educators who deliver person-centred, evidence-based self-management information and support across the entire state. We are now evolving our support services using a Customer Experience model. This includes developing a more sophisticated multi-channel customised approach utilising telephone, videochat, email, newsletters, SMS and webchat—to encourage deeper ongoing sustainable engagement with people with asthma and their carers. By customising the client journey, participants are empowered to be more self-directed and focused on the issues impacting their health. As our system learns patterns and behaviours, future journeys become more customised and the approach to information and support more diverse. This leads to a more cost-effective model of care, with less dependency on direct person contact.

Engagement with Aboriginal and Torres Strait islander people

Approximately 35% of Aboriginal and Torres Strait islander people reside in New South Wales, with 16% of the population having asthma – an increased prevalence rate of almost twice the non-Aboriginal and Torres Strait population.³⁴ For Aboriginal and Torres Strait Islander children aged 5-14 years, asthma is the third leading cause of total burden of disease (contributing 8.7% to the total burden).³⁵ Asthma is the leading cause of respiratory disease burden among Aboriginal and Torres Strait Islander people aged under 45 (contributing 80% of respiratory burden).³⁶ Aboriginal and Torres Strait Islander people are almost twice as likely to die from asthma and have poorer outcomes than non-Aboriginal and Torres Strait Islander people.³⁷

Asthma Australia is committed to working with Aboriginal and Torres Strait Islander people, organisations and communities to address health inequity experienced in relation to asthma.

Asthma Australia's commitment to working with Aboriginal and Torres Strait Islander people is evidenced by the launch of our Reflect Reconciliation Plan, the development of a First Nations Asthma Strategy, the creation and filling of an identified role to help drive the strategy, and a partnership with the Djurali Centre at Macquarie University which entails working with select Aboriginal and Torres Strait Islander communities to understand the barriers and enablers to asthma management, and using a proven research methodology, codesigning enduring approaches to improve asthma health outcomes.

Asthma Australia will develop a comprehensive approach of listening to community and identifying issues and codesigning solutions. We will use community engagement and codesign principles and methodologies to understand barriers to better asthma outcomes, and to identify solutions that can be piloted in partnership with communities. This approach involves partnering with community and key health stakeholders to determine what works and what doesn't. Piloting, evaluating and refining programs that support Aboriginal and Torres Strait Islander people in a culturally affirming manner, builds trust and improves health outcomes in relation to asthma.

The approach can be replicated in other communities, modified and applied. The communities where this approach will be piloted will be based on areas with the highest number of Aboriginal and Torres Strait Islander people with asthma in NSW, including Western Sydney, Central Coast and South-Western Sydney.

Asthma Australia is seeking funding to pilot this approach over three years in areas in NSW with the highest numbers of Aboriginal and Torres Strait Islander people with asthma. This will include Western Sydney, Central Coast and South-Western Sydney.³⁸

Develop the health professional workforce

Asthma Australia has invested significantly in the development of health care professionals through various means including our partnership with Reed Medical Education to develop and launch the 'Advanced Learning Module *Asthma in Australia: Practical Solutions for challenges in primary care*'. This online accredited training is free of charge for health professionals including General Practitioners, nurses, pharmacists and allied health professionals. Over the past 3 ½ years 2,265 health professionals from NSW have enrolled in the online course, with a consistent rating of close to 90% stating their learning needs were met.

Asthma Australia is seeking support to continue to offer this course to GPs, pharmacists and nurses across NSW. This is to increase uptake; ensure content is up to date with latest developments in asthma; and build on the base knowledge of those who have undertaken the course. This includes continued promotion of evidence-based guidelines, promotion of emerging practices, and engaging and supporting health care professionals around changes to scope of practice. This also involves identifying and understanding the patient asthma journey and their pain points associated with interactions with health care services in order to influence person-centred care. Supporting this approach is the ongoing development and distribution of resources, newsletters and asthma updates to health professionals in NSW via digital and hard copy platforms.

Create supportive community environments

Asthma Australia’s engagement with the Arabic speaking community in Western Sydney has been insightful in how asthma impacts children and parents from a non-English speaking background and will inform the development of culturally appropriate, tailored supports. Our aim is to replicate this approach in communities where the burden of disease is great.

Asthma Australia has also conducted several projects across Australia that have worked directly with community in developing community-based solutions. Projects in South Australia have been successful in developing models of care that have created systems change. We are seeking to replicate this approach in NSW with rural and remote communities, through the development of social intervention models aimed at influencing the social, cultural, environmental and economic determinants of health around the person with asthma.

The Asthma Smart Community concept is a support model based on developing a deep understanding from people with asthma about what effective change looks like for them and their community. It uses a person-centered approach based on consumer participation and empowerment in developing local solutions. Communities that could benefit from this include Bathurst, Lachlan and Forbes, with the highest prevalence of asthma in NSW at 16.3; 16.1 and 15.9% respectively, compared with the state average of 10.7%³⁹.

INVESTMENT REQUESTED: The New South Wales Government fund Asthma Australia \$4,029,000 over three years to deliver services to and improve the lives of people with asthma in New South Wales.

Table 1: Request for program funding

Program	Funding request
Support Effective Self-Management Practices	\$315,000
First Nations Peoples engagement	\$215,000
Developing the Health Professional workforce	\$205,000
Create supportive community environments	\$250,000
Subtotal	\$985,000
Oncosts and administration	\$246,000
TOTAL year one	\$1,231,000
TOTAL over three years	\$4,029,000

Proposal 4: Supporting people with asthma on low incomes to install cleaner and more efficient forms of heating, cooling and cooking in their homes

Replacing gas cooktops and heaters, wood heaters, with efficient, electric alternatives in NSW will reduce ambient air pollution, improve health outcomes, and reduce greenhouse gas emissions. Cooking with gas cooktops produces a variety of air pollutants, including fine particulate matter, nitrogen dioxide, carbon monoxide, and formaldehyde. Similarly, gas heaters produce a variety of air pollutants, and unflued gas heaters are particularly dangerous because these pollutants remain inside the home rather than being vented outside. Wood heaters also produce a range of pollutants, including fine particulate matter, which can worsen indoor air quality, as well as contributing significantly to outdoor air pollution. Exposure to these pollutants can trigger asthma flare-ups and increase the risk of developing asthma. Cooking with gas is estimated to be responsible for up to 12% of the childhood asthma burden in Australia.⁴⁰ People who rent or live in social housing have limited agency to replace their appliances with efficient, electric alternatives, while people on low incomes may face cost barriers.⁴¹

In 2022, Asthma Australia undertook a nationally representative survey to look at homes, health and asthma in Australia, which was completed by 5,041 people.⁴² The survey asked participants about their current practices and preferences for heating their homes and cooking. The most common type of cooking was gas (48%) followed by electric (41%). Only 7% had an induction cooktop or a combination cooktop. While the preferred type of cooktop was gas, regardless of their cooktop preference, most people's preference is based on cooking preferences, ease of cleaning and affordability. Only 15% of respondents cited their cooktop preference was due to health reasons and 14% noted environmental reasons.

The preferred types of heating were reverse cycle air conditioning and central heating, which are the most efficient options and provide the additional benefit of cooling the air in the warmer months. However, nearly half (43%) of respondents reported they do not currently have their preferred form of heating at home. One in five respondents (22%) regularly use portable electric space heaters, 13% regularly use wood heaters, 8% regularly use flued gas heaters and 7% regularly use unflued gas heaters. For people who don't have their preferred source of heating, the most common barrier to switching is cost (43%), followed by not owning the home (32%).

The *NSW Clean Air Strategy* includes a specific focus on wood heaters in relation to healthier households. In addition to contributing to indoor air pollution, wood heaters are a leading source of outdoor air pollution. In 2020, Asthma Australia conducted a representative survey of 25,039 people which found that people exposed to wood heater smoke are largely unable to protect themselves against exposure to it. Further, the majority of people support regulations to reduce the impact of wood heaters, with stronger support among people with asthma.⁴³

Pollution from wood heaters contains harmful pollutants including fine particulate matter (PM_{2.5}) and known carcinogens. There is no 'safe' level of air pollution and detrimental health effects can occur even at low levels of pollution, well below air pollution standards.⁴⁴ Wood heater smoke is a serious risk factor for asthma, both in terms of developing asthma and triggering symptoms in people who already have asthma.⁴⁵ It is also a risk factor for other respiratory diseases, certain cancers, cardiovascular disease, neurological disease, premature birth and premature death.⁴⁶ These health impacts result in substantial economic costs, which have been estimated at \$3,800 per wood heater.⁴⁷

Homes utilising efficient and cleaner forms of energy can help improve both indoor and outdoor air quality and contribute to climate change mitigation. Electrification provides higher energy efficiency and reduced consumer costs than either gas or wood.⁴⁸

The 2023-24 NSW Budget included a number of initiatives and rebates to provide assistance to people with paying energy bills. Investing in measures that enable people to make their homes more energy efficient in the long term, returns on investment to the Budget through lessening the need for ongoing rebates and bill

assistance, and makes people's homes healthier places to live. People on low incomes should be prioritised, as was the case with the 2023-24 Budget rebates and assistance with energy bills.

Introducing financial support for low-income households to replace inefficient and polluting methods of household heating and cooking would address health impacts associated with poor indoor and outdoor air quality, assist low-income households to address cost of living pressures and reduce greenhouse gas emissions. As noted, this is particularly important for people in situations where they are unable to make these changes due to cost or not owning their home. The scheme should include owners of rental properties to encourage them to make these replacements.

People on low incomes, living with chronic disease and in living situations where they are unable to make changes themselves, are likely to be most impacted by cost-of-living issues. They will also likely benefit the most from reduced power bills and improved living conditions in their homes. We would expect the NSW Government to use mechanisms to determine eligibility for the proposed program similar to those applied to 2023-24 Budget initiatives to assist with energy bills.

INVESTMENT REQUESTED: The NSW Government introduce a financial support program for low-income households to replace inefficient methods of household heating and cooking to address indoor and outdoor air quality.

Proposal 5: Supporting housing and housing modifications that are resilient to hazards and extreme weather events

Climate change is increasing the frequency and levels of outdoor airborne hazards such as bushfire smoke, dust storms, thunderstorm asthma and ground level ozone.⁴⁹ However, homes in Australia are typically leaky, meaning airborne hazards can easily enter many homes.⁵⁰ It is also important to ensure homes can be ventilated when outdoor conditions are favourable. Ventilation disperses outdoor pollution that has entered a home and pollution generated indoors; it also prevents aeroallergens such as mould and dust mites.⁵¹

Housing standards and modifications need to both improve the airtightness of homes to limit the infiltration of outdoor air pollution and allow adequate ventilation to reduce the growth and accumulation of airborne hazards in the home when ambient air quality is good. The balance between these considerations may vary between regions and it should reflect local conditions and climate change risks.

The 2023-24 NSW State Budget highlighted funding to construct a significant number of new homes, including 30 percent for affordable housing, along with the Housing Infrastructure Fund to progress housing development across NSW. It is critical that the NSW Government ensure that providing healthy indoor air quality is a part of this program of building new homes. This includes supporting the retrofitting of existing homes, as well as improving housing standards, prioritising people with asthma and others who are highly vulnerable to climate change health impacts. Government programs to retrofit housing should cover social housing dwellings and people on low incomes.

INVESTMENT REQUESTED: The NSW Government's program of building new housing include standards to ensure that new homes provide healthy indoor air quality by recognising the need for sealing to prevent infiltration of ambient air pollution and adequate ventilation to reduce indoor air pollution and aeroallergens.

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