

WOODFIRE HEATERS AND HEALTH SURVEY KEY FINDINGS REPORT

EXECUTIVE SUMMARY

Woodsmoke emissions from residential heaters are predominately composed of PM2.5 and have been associated with a range of health outcomes including adverse respiratory outcomes and mortality. People with asthma are among those who are particularly vulnerable to the health impacts of air pollution, including woodfire heater smoke.

Asthma Australia undertook research to better understand the prevalence of woodfire heaters in Australia, health impacts and attitudes to woodfire heaters including regulation. This included a survey (telephone and online) of more than 25,000 people and 15 focus groups across Australia.

This research found:

1. People exposed to woodfire heaters are largely unable to protect themselves. Only 28% of the general population and 18% of people with asthma said they are able to protect themselves from woodfire heater smoke when present.
2. People in Australia, particularly those with asthma, are supportive of regulations to reduce the impact of woodfire heaters. More than three-quarters of the general population (77%) agree that woodfire heaters should not be allowed in urban or built-up areas and over half agree they should be phased out (55%) or banned (54%).
3. Support for regulation was even higher amongst people with asthma with 84% supporting regulation of woodfire heaters in urban or built-up areas, 71% supporting a scheme to phase them out and 65% agreeing they should be banned.

"I don't know why they haven't been totally banned in residential areas in major cities and large towns, my mother lives in Tamworth and when I was there in July, the smoke from the wood-fire heaters was so bad, luckily I don't have asthma but it still made me unwell with a headache and sore throat."

Newcastle, NSW

"These wood-fire heaters don't have a place in a city where people live in close proximity, just a cluster of a few homes with one can have a large impact on a lot of people in the neighbouring area. I used to live in Kenthurst (suburb of Sydney) and every winter people in the area would be affected and complain about the smoke to the local council."

Macquarie Park (Sydney) NSW

INTRODUCTION

Woodsmoke emissions from residential heating are predominately composed of PM2.5 and have been associated with a range of health outcomes including adverse respiratory outcomes and mortality.^{1, 2, 3} Evidence shows there is no safe level of PM2.5 exposure.⁴ People with asthma are among those who are particularly vulnerable to the health impacts of air pollution, including woodfire smoke.

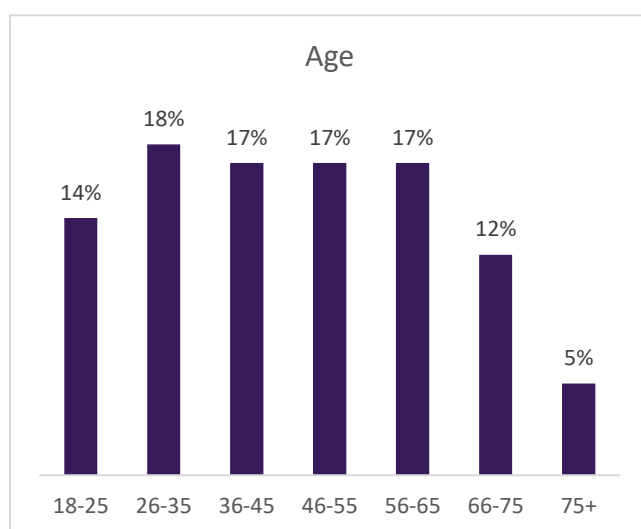
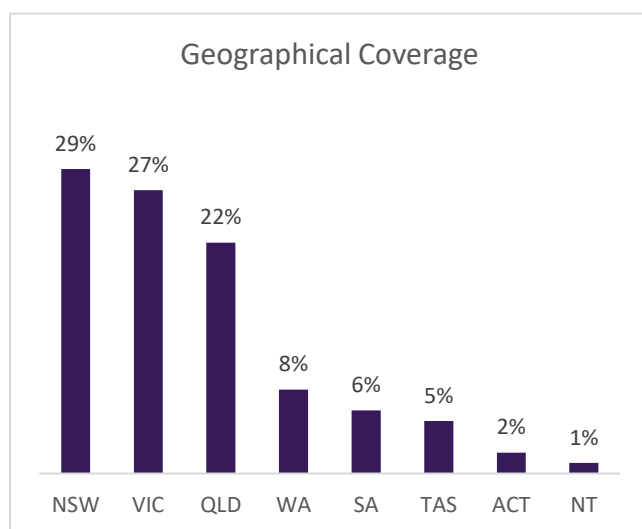
METHODOLOGY

Asthma Australia commissioned research, conducted by APMI Partners, to better understand the prevalence of woodfire heaters in Australia, and health impacts and attitudes to woodfire heaters including regulation. The research had qualitative and quantitative components.

The quantitative research occurred between the 10th and 29th of November via a representative online survey and telephone interviews. The qualitative research occurred between the 22nd of October and 4th of November through 15 focus groups. Each focus group included a representative sample of 12 Australians and ran for approximately 90 minutes.

RESPONDENTS

A combined total of 25,039 people completed the telephone and online surveys. The sample was representative of the Australian population across major demographic, geographic and socio-economic factors. 49% of respondents were male, 51% were female.



¹ Borchers-Arriagada, Palmer, Bowman, Williamson, Johnston 2020, Health Impacts of Ambient Biomass Smoke in Tasmania, Australia. Int. J. Environ. Res. Public Health, 17, 3264.

² Bothwell et al 2003, Home heating and respiratory symptoms among children in Belfast, Northern Ireland, Archives of Environmental Health: An International Journal, 58:9, 549-553.

³ Luke et al 2007, Woodsmoke Health Effects: A Review, Inhalation Toxicology, 19:1, 67-106.

⁴ World Health Organisation (WHO) 2013, Review of evidence on health aspects of air pollution—REVIHAAP Project: Technical Report. Copenhagen, Denmark: WHO.

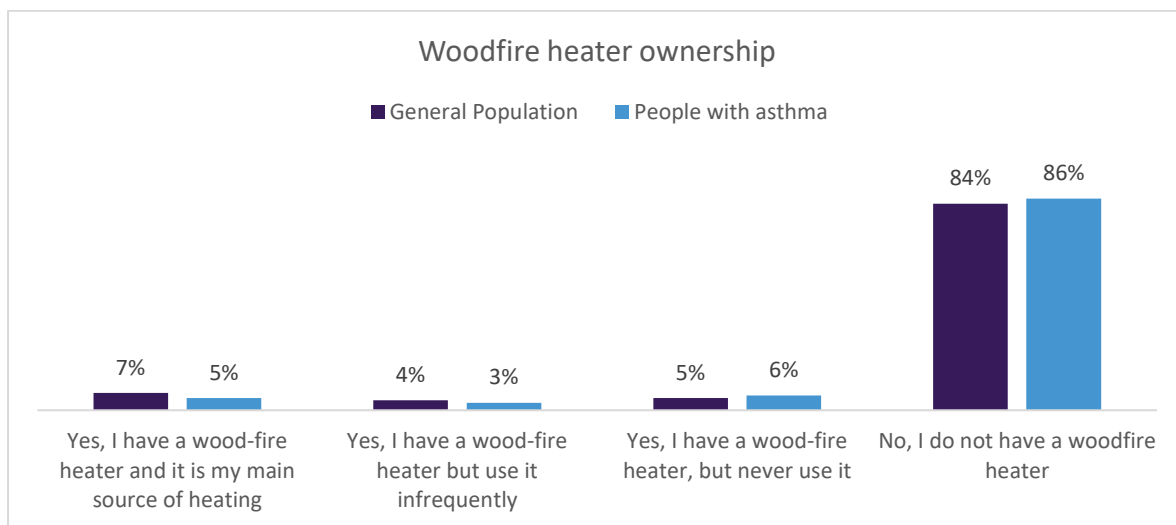


FINDINGS

Prevalence of woodfire heaters

One in nine Australians (11%) reported owning and using a woodfire heater, with only 7% reporting they use it as their main source of heating.

This is higher in cooler states and territories, with 13% of people in Tasmania and 14% of people in the Australian Capital Territory reporting they use a woodfire heater as their main source of heating. Woodfire heater ownership is also higher in regional and rural areas across the country. People with asthma are only marginally less like to own and use a woodfire heater.



“It gets pretty bad here (Bendigo) because even in the new housing areas where we are, a lot of people have installed wood-fire heaters, I would say at least half of the homes built in the last five years that I know would have one.”
 Bendigo VIC

Health Impacts

People with asthma are **twice as likely to report experiencing respiratory symptoms** when exposed to woodfire heater smoke compared to the general population. Nearly one quarter (23%) of people with asthma reported they experience respiratory symptoms when exposed to woodfire heater smoke, compared to 11% of the general population.

For the most part, the impact of smoke on people with asthma is recognised by Australians. Three quarters (75%) of the general population agreed that woodfire heaters can cause health problems for certain people. This was also reflected in the focus group discussions, with many participants recognising smoke from woodfire heaters could be harmful to people with respiratory illnesses, including people with asthma.



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“People who have asthma and other respiratory conditions are very badly affected by the smoke from these heaters, my neighbour has asthma and suffers terribly because here in Canberra and in surrounding areas, there are a lot of these wood-fire heaters.”

Canberra, ACT

“...I’ve lived next door to people who used to have theirs going constantly and the days when there is no wind or it was blowing over our place were terrible, I can remember seeing ash cover our patio and having to re-wash clothes we hung out, my wife used to complain it made her feel sick and it probably caused her health problems in hindsight.”

Adelaide, SA

“People with asthma like my sister-in-law suffer the most in terms of health impacts, she lives in the Lenah Valley (Hobart) and basically has to live in the house with all the doors and windows shut from May-September because it induces asthma attacks.”

Hobart, TAS

“The bushfires we had late last year and early this year were horrendous and I can think of a few people with asthma and a neighbour who had lung cancer who were all suffering terribly because of the smoke and down in Camden (suburb of Sydney) that happens to some people every year in the winter months because of number of homes that have wood-fire heaters, even if you have the flu it really affects you.”

Sydney, NSW

In contrast, the impacts of woodfire heater smoke on the general population are less recognised. Despite research telling us there is no ‘safe’ level of air pollution and that woodfire smoke contains harmful pollutants, only 55% of the Australians believe woodfire heaters can cause health problems for the general population.

Table 1: Attitudes to woodfire heaters and health impacts

To what extent do you agree or disagree with the following statements?	All (%)			PWA (%)		
	Disagree	Neutral	Agree	Disagree	Neutral	Agree
Woodfire heaters can cause health problems for certain people	20	5	75	12	3	85
Woodfire heaters do not cause health problems for the general population	55	14	31	71	7	22
I can protect myself from woodfire heater smoke if present	60	12	28	76	6	18



Attitudes to woodfire heaters and regulations

Most people are supportive of the introduction of regulations to reduce the impact of woodfire heaters. More than three-quarters of the general population (77%) agree that woodfire heaters should not be allowed in urban or built-up areas and over half agree they should be phased out (55%) or banned (54%). Support for regulation was even higher amongst people with asthma with 84% supporting regulation of woodfire heaters in urban or built-up areas, 71% supporting a scheme to phase them out and 65% agreeing they should be banned.

Support for regulatory methods was much stronger than support for community education to ensure people know how to correctly use and reduce smoke from their woodfires, with only 37% of the general population and 50% of people with asthma agreeing.

There are no notable differences in attitudes to woodfire heaters and their regulation across states and territories, or across metropolitan, regional or rural areas.

Table 2: Attitudes to use and regulation of woodfire heaters

To what extent do you agree or disagree with the following statements?	All (%)			PWA (%)		
	Disagree	Neutral	Agree	Disagree	Neutral	Agree
Woodfire heaters should not be allowed in urban or built-up areas	20	3	77	14	2	84
Woodfire heaters should be phased out (e.g. a subsidy or rebate scheme)	40	5	55	25	4	71
Woodfire heaters should be banned	39	7	54	31	4	65
Governments should regulate woodfire heater use	41	9	50	28	6	66
People using woodfire heaters should inform neighbours prior to use	39	13	48	35	9	56
There should be community education about how to correctly use and reduce smoke from woodfire heaters	57	6	37	42	8	50
Woodfire heaters are a cheap /low-cost heating source	34	15	51	29	10	61
I enjoy using woodfire heaters/I find woodfire heaters enjoyable	49	15	36	61	10	29

These attitudes were reiterated in the focus groups, with participants most commonly reporting stricter regulations of woodfire heaters would be the best method to improve the air quality. In particular, participants considered that only woodfire heaters that have low emissions set by a government standard should be sold, and that woodfire heaters should only be permitted in regional or rural areas. However, a small number of participants disagreed with stricter regulation and believed people should continue to be free to heat their homes as they had done in the past.

Some focus group participants were also supportive of a subsidy scheme to assist people to upgrade woodfire heaters which are responsible for the worst pollution, with many making analogies to solar subsidy schemes offered by State and Territory governments.



“In my area there are some older homes that have wood heaters and sometimes the smoke is really thick and noticeable, I don’t have a medical condition like asthma but if I did I would be very upset having to live in that unhealthy environment during winter, so I agree with the last point, there should be regulations that new wood heaters can’t be installed in metropolitan areas like Sydney, or if that is going too far, then only wood heaters that are approved by government and don’t emit much smoke should be permitted.”

Sydney, NSW

“There should be a subsidy similar to what has been offered to people to have solar installed by State governments, where if a home has a wood-fire heater removed and reverse cycle air conditioning installed to replace it, they get a cash subsidy of something like \$500 a decent incentive to do something.”

Brisbane, QLD

“I am sure there are some regulations in place now that I think local governments set and enforce, but I’m not exactly sure about them because I haven’t bothered to check, but the way things are in my area over the last 4-5 years, the smoke in winter is definitely getting worse and something needs to be done, like not allowing them (wood-fire heaters) to be installed in build up areas.”

Newcastle, NSW

“For most of my life I lived in a home with a wood-fire heater, in areas where most people had them and never thought twice about there being too much smoke, so I think apart from in the middle of cities, people should be able to have them if they want and council and governments shouldn’t continue to erode away our choices in how we live.”

Adelaide, SA

“I don’t have one but my parents-in-law do and I’m sure they and people like them would consider changing if a subsidy was offered that covered part of the cost of replacing it with a cleaner type of heater.”

Melbourne, VIC



CONTACT

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