

Portfolio Committee No. 2 – Health
Inquiry into the health impacts of exposure to poor levels of air quality
resulting from bushfires and drought

PROFORMA B

35 received, all with individual comments set out below.

The Hon Greg Donnelly MLC
Chair, Portfolio Committee No. 2 – Health
Parliament House
Macquarie Street
SYDNEY NSW 2000

Dear Mr Donnelly,

Thank you for the opportunity to provide a submission to the ‘Inquiry into the health impacts of exposure to poor levels of air quality resulting from bushfires and drought’.

We all want to live in communities where we are healthy and well. However, over the past Spring and Summer, we have seen unprecedented levels of poor air quality across New South Wales (NSW), with one study demonstrating that people in Sydney experienced 81 days of poor, very poor and hazardous air quality over 2019, which is higher than the combined total of the ten years prior to this.¹

Bushfires emit airborne particles or particulate matter. Suspended fine particulate matter or PM2.5 are tiny particles that can penetrate deep into the lungs and even the blood stream. People who have respiratory conditions such as asthma, women who are pregnant, children, older people and people with cardiovascular disease, are particularly vulnerable to the negative impacts of exposure.² The longer-term health impacts of sustained poor air quality include respiratory illnesses, some cancers and heart disease.³

To adequately prevent and protect people from the health impacts of exposure to poor air quality as a result of bushfires, Asthma Australia has identified that action is needed in four key areas:

1. Provide timely and appropriate information on air quality, including approaches to reduce the risk of adverse health impacts from exposure to poor air quality.
2. Manage the adverse health impacts of poor air quality through targeted support, particularly for people who are at greater risk, including people with asthma.
3. Improve the collection of data and undertake research on the short-and-long-term health impacts of poor air quality, particularly for children.
4. Prevent sustained periods of poor air quality, through taking meaningful action to address the drivers of climate change.

¹ Pallavi Singhal, ‘New Situation’ Record 81 days of bad air quality in Sydney (Sydney Morning Herald, Sydney) 24 January 2020; NSW Department of Planning, Industry and Environment (2020).

² Centre for Air pollution, energy and health Research-CAR (2019). Bushfire smoke: what are the health impacts and what can we do to minimise exposure? Located online: <https://www.car-cre.org.au/position-papers>

³ Vardoulakis. S, Jalaludin. B, Morgan. Hanigan. I & Johnston. F (2020) Bushfire smoke: urgent need for a national health protection strategy, *Medical Journal of Australia*, doi: 10.5694/mja2.50511

These actions will help to ensure that people with asthma can breathe clean air and be healthy and well.

Thank you for the opportunity to share my experience with this Inquiry.

INDIVIDUAL COMMENTS

Name suppressed

I am interested in sharing my personal story on how as an asthmatic, the poor air quality impacted me.

I live in Cardiff a suburb of Newcastle and even though I was spared the horrors of the fires, I was impacted greatly by the poor air quality. Over a 6 week period, which included the Christmas and New year periods, just opening the back door caused coughing and wheezing. I had to action my asthma emergency plan several times, even though my asthma is well controlled the rest of the time. With all the doors and windows closed and sealed with damp towels, sleep was disrupted by coughing and wheezing.

I fell into a depressive state also, due to not being able to leave the house. The extremely thick smoke and poor air quality left me unable to walk to the local shops (I don't have a licence) I felt extremely isolated.

Over the period I had to double up preventer medications, use my reliever many times and add the Prednisone. Luckily I did not need hospitalisation.

I was grateful to Asthma Australia's contact through email with advice on how to deal with the poor Air quality and smoke. However it didn't prepare me for the feelings of deep despair every time I looked out at the smoke haze, for days at a time. To me it felt like it would never end. Luckily I had the crisis numbers for depression help. Many don't know there is help available over the phone.

Name suppressed

Our whole family felt the impacts of poor air quality on both a physical and emotional/mental level. We all experienced stinging eyes, headaches, nausea, difficulties breathing, were not able to exercise and became depressed. My children and I are all asthmatic and were struggling some days to breathe properly. We had to increase our doses of preventative steroid medication to 4 times the amount we normally take to manage these symptoms. We were unable to be outside for extended periods of time, and were not able to do our normal levels of exercise and activity. This led to distress, anger and depression.

I had to seek out information with my GP, spent days trying to track down an air purifier across the country (unsuccessfully), and was looking at Air Rater and other air quality information available online several times a day. Clear information on the usefulness of masks was also unavailable, with chemists telling me that it was useless for the children anyway. There was a sense of hopelessness and fatigue in trying to negotiate the conditions, particularly when concerned for ones children.

AirPhysio Pty Ltd

As an Australian medical device manufacturer who exports to over 3 continents and a researcher for poor air quality and the effects on respiratory illness, AirPhysio has written numerous papers on the effects of pollution, mining and foreign particles and the short, medium and long term effects to people's health and the effects on the mucocilliary escalator and the airways of the lungs.

This is due to our interests in the foreign market including, but not limited to South East Asia, China, the Middle East and India. These papers were presented to Asthma Australia, the Lung Foundation, Australian Physical Therapy Association and other bodies around the world. The issue is that our papers have not been able to gain comment due to the fact that they bridge between environmental and respiratory science. The papers cover the effects of pollution and particle matter entering the lungs and the short, medium and long term effects to people's health and the effects on the mucocilliary escalator and the airways of the lungs.

Over the time of the bush fires, AirPhysio ran a number of social media campaigns to help educate people on the effects of smoke particle on the lungs and how they can combat the effects. These campaigns reached over 120,000 medical professionals, fire fighters and people suffering from respiratory conditions like asthma, COPD, cystic fibrosis and bronchiectasis. We received an engagement from over 20,000 people, with over 300 comments, 850 shares and over 9,500 article reads.

Having personally experienced the effects of air borne pollution in China during business trips in the past 3 years and India and the Middle East during my time in the Royal Australian Navy, as well as bushfire Australia I have experienced first-hand the effects, the toll which this takes on the respiratory system and also from talking to people suffering from respiratory conditions during the resent bush fires.

AirPhysio is happy to offer further input into this enquiry and offer our research and papers on both pollution and the mining sector if you find this helpful.

Please find the link to the simplified article which I personally wrote to assist people during the bushfires - <https://www.airphysio.com/smoke-doesnt-cause-asthma-attacks-it-causesrespiratory-attacks/>

Name suppressed

I live in Sydney and was diagnosed with asthma in 1986 when I was three years old. I am now 36 years old and have been vulnerable to asthma attacks and asthmatic bronchitis throughout my life. It is often at its worst when I catch a cold or flu virus. In December 2019, despite being otherwise physically well, I developed asthmatic bronchitis from exposure to poor air quality. For the next two weeks, I became seriously unwell and needed a week off work. For the following week when I returned to work, I had to take my nebulizer machine to work so that I was able to breathe comfortably throughout the day. I have never had to do that before.

For the rest of the summer, I needed to hide inside my house with the doors and windows shut and the air conditioning on to try and avoid breathing the air that made me so sick. I was unable to take my children to the beach or the park and we spent most of the summer at home instead

of enjoying the summer season as we usually do. I work for a state government department and was not permitted to work from home, and so on my work days, I had to wear a smoke mask to and from my car, my home, and my office.

I found that there was little information and advice provided on a day-to-day and hour-to-hour basis about how dangerous the air quality was for sensitive groups, and whether I should risk venturing outdoors at all, or whether I could go outdoors with a PM2.5 smoke mask. I am still unsure as to how effective these masks actually are at reducing or preventing exposure to smoke.

I also downloaded two apps on my mobile phone that purported to provide regularly updated advice about Sydney's air quality. But, I found that the apps provided different information to each other and it was confusing as to which app to pay attention to. I usually followed the advice of the app that showed the worst PM2.5 reading. I would love to be able to use a reputable, reliable app that provided accurate advice about the outside air quality so that I could better plan my days and take precautions to protect my health.

Name suppressed

I feel the poor air quality impacts my whole life, respiratory episodes that are life threatening, poor quality of life, reduced family and enjoyable activities, and time off work.

Whilst I have a great support network, including my GP and local hospital, I feel there is so much more that can be done.

Rhiarn Hoban

Working in biological sciences, witnessing the ecological devastation, like most Australians I also suffered horrendously from the poor air-quality. As a chronic asthmatic whose illness drove them into the science sector, the air-quality some days nearly saw me admitted to hospital. During the 81 days where Sydney saw some of the worst air quality in the world I was limited in my ability to travel, relying completely on medication just to progress from points A to B, took numerous days off work as my oxygen levels became low and high risk of hospitalization and lived in on going on certainty. What most do not realize, the fine particles released into the air from the devastation and drought linger for days. A single day of exposure has residual impact for up to seven days, especially in those with respiratory illnesses such as myself. This meant one bad day; where the air quality was miscalculated or exposure was unavoidable an asthmatic sufferer would experience difficulties for a week. If individuals had not been proactive there could of have very easily been greater loss of life.

During this awful time where the country suffered together, I can honestly say I was not impressed with the information and support that was provided. Many days you would not know the air quality until it was too late. Government officials disregarded the seriousness of the issues and refused to acknowledge how climate change not belief, but a fact that requires action now. Working in science, I am mad. Mad that this country prides itself on what my field accomplishes while the government completely ignores the facts we present simply because they do not align with their sponsors. Belief should not outrank factual investigation and science, because it is this science that will help resolve and improve this devastation. We have the people with knowledge, heart and determination to fix this, but we need our government to support us now with actions not just broken promises.

Name suppressed

As someone with chronic asthma, I felt firsthand the effects of poor air quality. For me, this includes many days off work (which in turn has caused issues with my employment). This impacted heavily on our financial situation, due to having time off work and the cost of medications. I suggest a review of how to better educate employers of the importance of not leaving home when the air quality is so poor. My workplace has given the impression they no longer trust me, it has impacted heavily on my mental health.

During this time of serious poor air quality, it was frustrating that the information provided was not relevant for our specific local area. The closest air quality monitor is many, many kilometres away – this caused confusion and frustration and made it hard for my workplace to understand also, why I had such a hard time breathing when their advice showed not ‘too bad’ of an air quality issue.

Nettie Burke, CEO, Cystic Fibrosis Australia

Cystic Fibrosis (CF) is the most common life-threatening inherited disease in Australia. Sticky mucus blocks the respiratory and digestive systems. There is no cure for CF but early diagnosis, regular follow-up by a multidisciplinary team in a specialised CF clinic, and correct, timely treatment of symptoms can prolong and save lives and improve the quality of life.

A new era of drugs, targeting the basic defect in the cells of people with CF, is arising and will have a big impact on the lives of people with CF if they get access to these drugs. However poor air quality and climate change will reduce the effectiveness of these drugs and reduce life expectancy yet again.

Every four days a baby is born in Australia with cystic fibrosis (CF) and more than one million Australians are carriers of cystic fibrosis. Cystic Fibrosis Australia (CFA) is committed to improving clinical practice and patient outcomes through its quality improvement programmes and research with the aim of extending life expectancy from 37 to 50 years by 2025.

The bush fire season, the extended drought and then the floods that followed placed severe demands on people with CF. Poor air quality has a direct effect on already ‘at risk’ lungs and then mould and damp are breeding grounds for infection.

Tracy Ellem, Director of Training and Resources Web Tech Plus Pty Ltd, trading as Joy of Water Swim School

I am the Director of Web Tech Plus Pty Ltd and run a Swim school, Joy of Water as well a parent of a child who is Asthmatic and myself and husband and other child all suffer from allergic rhinitis.

Please see link to our website www.joyofwater.com.au for details of locations we operate in Newcastle and MidCoast NSW.

Our services are seasonal between October to April each year and we operate out of government run pools which are all outdoors and heavily impacted by weather and natural disaster events such as the latest bush fire crisis.

During term 4 which is often one for our busiest times as we are run school sport, special water safety days and learn to swim at all 4 venues.

In November to December 2019 we took on additional learn to swim contract work at Gloucester Pool, and we found ourselves in a position where we were needing to monitor multiple different systems i.e. Bom weather, storm tracker, lightning tracker, fires near me NSW, trafficlive.com, and talking with our local contact to work out if we should travel to this location and it be safe to teach. On one occasion it was cancelled.

I also was scheduled to teach for Department of Education swim scheme which for majority of my shifts were cancelled and not sure if this was fully necessary in some locations. Joy of Water is also in full swing of promotion stage of our popular summer intensive program which starts early January each year.

Thankfully by then the worst of the fire crisis was over, however we note one of our sites (Stroud pool,) did not get any bookings for January and were very late getting term 1 bookings 2020 too and wondered if maybe due to the fires and havoc they caused.

It was noted that we had to cancelled multiple scheduled sessions at Stroud and Bulahdelah initially due to risk to our staff and or patrons traveling to areas not knowing what the impact would be like at specific locations as well area that need to be travelled through as my instructors who deliver our programs in Bulahdelah and Stroud travel from Beresfield each day.

One of my instructors was being affected by smoke ingestion and was losing his voice and finding breathing painful and was using Ventolin as prescribed by his doctor.

We found that it was best often to have local contact who could keep us updated as to how the specific location was being affected as depending on wind direction would mean a totally different outlook. When this contact was not available, we needed to call a local café to get a better understanding of what occurring.

I too was getting head and sinus pain after about a month of being surrounded by smoke and was very glad when we finally got a reprieve.

One of the last days in term 4 2019 we were delivering a school sport program where the air felt thick. This was at our flagship site Beresfield Pool. The sky was dark orange and ash was falling. I decided then to not open for normal learn to swim that afternoon.

As a key provider of an essential service for both the public and local schools I feel there needs to be a central location where information can be sourced for all parties concerned.

This would entail a user-friendly digital tool and guide on how to understand the atmospheric conditions and rating scales used to determine air quality and what the appropriate preventative or reactive actions would be for a business such as our swim school.

If an investment needs to be made i.e. purchase of a portable monitoring device ensuring, we get accurate advice what would suit our needs and be a trusted source of information and ongoing

support in using this tool but also in development of a suitable policy/ procedure that can be replicated at our different sites.

Name suppressed

I run a small business. During the bush fires I had an asthma flare up which lasted weeks. I was unable to work for around 2 weeks and during that time still had to fund my business overheads such as a property lease and software subscriptions. I am seriously considering whether it is worthwhile continuing in small business.

Patricia Danvers

As someone who lives with asthma in Newcastle I felt first hand the impacts of poor air quality during and since our dreadful summer of bush fires.

I felt my symptoms worsening from the beginning of November and increased my medication regime according to my management plan. I also kept the doors and windows closed and avoided going outside as much as possible.

Unfortunately this didn't help and I had the worst asthma attack I've ever had on the evening of November 24th. I am still not fully recovered. I had 2 weeks off work, 2 courses of antibiotics for chest infection directly related to asthma and 2 long courses of prednisone. I felt very breathless and had prolonged coughing fits, I couldn't finish speaking a full sentence.

I saw my doctor 5 times in 3 months; thank goodness she bulk bills. I also had several investigations to determine if there was something else going on causing the breathlessness and cough. A lung function test showed my 58 year old body had a lung age of 70 years. Thankfully (I think) the 24 hour heart monitoring, whooping cough test, chest x-ray and chest CT scan revealed nothing more than lung inflammation.

What distressed me most is that I couldn't laugh without having a coughing fit. This lasted nearly 3 months, finally I can laugh .. a bit.

My health also had an impact on my family, I couldn't play with my grand daughter at the park because I was breathless and most of the time I couldn't go outside because of the poor air quality, even on days when I couldn't see the bush fire smoke.

My husband and I had no social life during this time because I was too ill or too tired to do anything. We missed going to several A League games due to the poor air quality and my health (we have season tickets)

My husband said he felt absolutely helpless, he could do nothing to make my health better. He was very supportive and looked after me very well, which I really appreciate – he wanted to do more but couldn't.

My health also impacted on my work as a Nurse Unit Manager in a large nursing home. I had great difficulty talking with people and walking around our large building due to the effects of asthma. This illness also affected my concentration and memory – not great qualities in a nurse manager. Thankfully I work in a supportive environment.

The information available via mass media was not very helpful in identifying how bad the situation was in terms of air quality. I determined myself if we could leave windows open by seeing how I reacted when we opened them – if I coughed, they got closed.

It would be great if there was an addendum to the weather reports on radio and TV which indicated air quality. One day I looked on the BOM website thinking I would easily find this information – it didn't.

Marie-Antoinette Rogers

I have several lung diseases, asthma and bronchiectasis. During the recent bushfires I was exposed to smoke from fires many kilometres away.

We had smoke from Binna Burra in Queensland and Commissioners Creek and Tunttable Falls in New South Wales for several months. This was not reported on in the news we only heard about it on TV and social media when it affected Sydney and Canberra several weeks later.

This affected my health and lifestyle considerably. Not only did I have to stay at home as much as possible, indoors with air conditioning 24/7 to purify the air, I was also incapacitated by having to wear a P2 mask if I ventured outside.

As there were no reports on our air quality or information about smoke and it was around for several months there were times when I was caught unawares.

The impact on my lungs was considerable, for days on end, asthma attacks requiring frequent ventolin, coughing constantly, bringing up mucous and losing my voice. There were no smoke warnings for my area and no support was available. It was a very scary time and thankfully did not end up in a hospital visit.

Bushfires are not going away and neither is air pollution. As almost one in 3 people live with a lung condition their health would be improved by having air quality testing stations closer to allow for adequate advice during bad air quality to enable them to protect themselves. Fewer hospitalisations means less cost to the public and private health systems.

The closest air quality testing stations to me are in Southport in Queensland 61km's away from Murwillumbah and Armidale in New South Wales which is 395km's away from Murwillumbah. This is not good enough. The Tweed Shire has nearly 100,000 people and deserves to have that information just as the people in Sydney and Canberra do.

Name suppressed

As someone with asthma living in Potts Point, Sydney, I have been forced to take steps on a number of fronts when air quality is poor. I have had to stay indoors with all doors and windows closed for multiple days with air conditioning and fans turned on. I have purchased air purifiers for my home and when I travel as air quality inside was poor despite closed doors and windows. In addition, I have had to increase my preventer medication due to breathing difficulties. Instead of walking or catching public transport I have driven to most places. My exercise has suffered, and my expenditure has increased as a result of the steps that I have had to take.

I have had to plan more, taking into consideration air quality when determining my schedule. Air quality information, current and predicted, has become critical to me to help with decision making.

Name suppressed

I spent many consecutive days indoors. While I never had major attacks and could rely on my Ventolin inhaler, the mental toll it took on me was very severe. I experienced great anxiety on the days when air quality was low and avoided exercise, further compounding the stress that poor air quality has having. My house is also not sealed from the outside so I had to spend money and time in trying to secure the air quality of my indoor spaces. My partner and I are very concerned for future fire seasons and have discussed immigrating out of Sydney as we are planning on having children and are worried about the developmental physiological damage that they could suffer.

Whilst I relied on information daily, and at some points, hourly, from the NSW Department of Planning, Industry and Environment, I feel that the NSW government did not really do much beyond informing me of how bad air quality was. There was one day where I had a driving test booked but was unable to leave my house as the AQI was over 2200. I had to make two phone calls to Services before they allowed the refund for cancelling my test on the proviso that I obtain a doctor's certificate, which again, was problematic due to being housebound.

I was finally able to obtain proof that I have asthma on a day when air quality improved. I feel bureaucratic understanding of being housebound and rendered disabled by air quality needs to be improved. Functionally, my asthma has not been a major impediment to my daily life but bushfire smoke presented a shift in my ability to function within and contribute to my community. As this is very much a public health issue, I feel that 'smoke days' when air quality is hazardous should be officially declared and recognised.

Name suppressed

I have suffered from Asthma for 6 years now - diagnosed at age 42. It has been a learning curve as to how to manage it and I have been to see my Doctor regularly to review and check in on how I am managing with asthma.

November, December and early January were very difficult and I ended up having to spend most days at home, shut in, to try and keep my escalating asthma under control. I checked in with my doctor and I was already on the highest preventer, but requiring Ventolin every 2-3 hours to keep my breathing manageable.

On the 5th of December I made an emergency appointment with my doctor and had to go on a high dose of prednisone to shock my lungs clear of the asthma issues as the Ventolin and preventer were not cutting through. I ended up having to do this 3 times over December as due to the air quality, my lungs could not recover. My doctors only advice continued to be stay indoors until the bushfires are under control and the air clears again. Finally by the 29th of December I was able to manage again with my preventer and 2 hourly Ventolin, and back to my normal of preventer and Ventolin as required (usually 2-3 times a week) by the middle of January.

I felt trapped by this condition like I have never felt before. I was trapped in my body as I could not put any pressure on my lungs through exercise or even moving too fast in my home. I was trapped in my home with all windows and doors shut, air conditioning running full time to try and reduce the impact of the poor air quality around us. I could not participate in any social or family activities as it escalated my breathing issues being outside for prolonged periods. It took me until Mid January to feel like I was back to my normal - that's 11 weeks of my life where breathing well was a challenge.

I was scared for my own survival due to breathing being essential to my continuing life. I spent my waking hours throughout December, when in the grip of the worst asthma attack I have ever had, trying to breathe calmly, but it really felt like trying to fill my lungs through a straw - that's how hard it is to take a breath in and let it out. I was scared that if it got worse, would an ambulance arrive to my house in time to save me, I have never felt so vulnerable to something I couldn't see, but had to rely on how I felt everyday to assess my action plan every couple of hours.

I put on 10kg's from lack of activity and I will admit some stress / depression / boredom eating in this time. This has now put more pressure on my body and put me into the obese category so Heart and Stroke chances have now increased.

The only place I could reconcile how I physically felt each day to actual data was to an Air Quality App that told me how poor the air quality was each day or the media reports, along with what I could see.

What I don't know yet, is what are the long term impacts to my health based on this prolonged period of exposure to very dangerous air quality and the impact to my ongoing asthma management. Has this period weakened my lungs so now I am more susceptible if this was to occur again? I won't know until faced with the issues again in the future, therefore more needs to be done to help individuals like myself so that the air quality doesn't reach such levels again, and better solutions provided for this large group of Australians impacted with Asthma.

Elisabeth Miller

As someone with asthma who lives in Sydney, I felt firsthand the impacts of poor air quality, which for me included a reduced ability to breathe with frequent asthma attacks due to the smoke, and as a result a poor quality of life with interrupted sleep due to said asthma attacks. Having to increase asthma preventor and reliever medication has reduced the quality of my health. As a yoga teacher, there was a great deal of stress placed on me in terms of having to use my voice- croakiness/hoarseness due to the smoke reduced the quality of classes I could deliver, as well as having to dose myself up on ventolin prior to each class. In addition, I experienced heightened anxiety due to all of the above.

I found myself constantly needing to consider whether my children could play outside, especially at school and daycare where there appeared no hard and fast rules as to smoke hazard levels and compulsory inside play. In effect my children were kept indoors as much as possible, for over 2 months. My 3 year old son really struggled for most of this time, with a constant cough and asthma-like symptoms which led me to take him to the urgent care department in the middle of the night (he does not have asthma). This was primarily caused by outside play at daycare (where

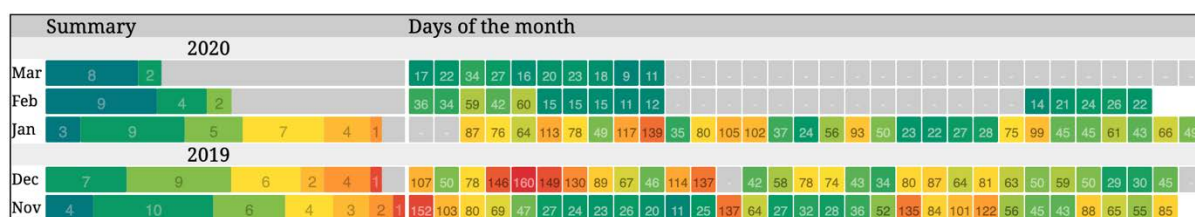
the children were playing outside during times of hazardous air quality, according to sms alerts I had signed up for).

I experienced anxiety when wondering how much smoke would settle in overnight, with the double checking of windows and stuffing towels around gaps in door frames. We had an inability to hang any washing outside to dry, due to the smoke smell settling on the clothes and triggering asthma attacks and being hazardous to the children. I also experienced anxiety due to my 'healthy' friends and family members, not understanding that the air quality was at a dangerous level (especially at times when the air didn't 'look too smoky').

I personally felt that the level of information provided to the general public, schools and daycare centers was poor. I believe that all asthmatics and people with chronic heart and lung issues, should receive sms and email alerts with specific information about the AQI and specific advise to follow. In addition, I strongly feel that there should be a national standard set for childcare centers which enforces play indoors during times of hazardous air quality, so individual staff members aren't responsible for having a guess based on if the air 'looks' ok.

Mr Aftab Siddiqui

Kindly, look at the data visualization provided by Air Quality Index website⁴ where they claim the data source is Office of Environment and Heritage – NSW. Any number more than 100 is considered unhealthy for people with asthma and it is suggested to avoid prolonged outdoor activities.



As someone with asthma condition who lives in the Bankstown area, had to limit my outdoor activities, couldn't take my son to park as it was too dangerous for myself and my son. We stayed at home with Air Conditioning on all the time.

Usually, I only take Ventolin Inhaler to keep my asthma under control but during this summer I had to take access amount of not only Ventolin but also Symbicort. I felt firsthand the impact of poor air quality in the form of extra medication bills, extra utility bills for air con and reduced mobility. During this period there was no central place to get the information from other then ABC News and occasionally from Asthma Australia via email.

Being a member of Asthma Australia, I received an email from them where they identified some key points which I totally agree with.

⁴ <https://aqicn.org/city/sydney/>

Michael Williams

During the period of the recent bushfires I was living and working in different parts of Sydney. I'm in my mid 50s, otherwise healthy but I have lived with severe allergies and asthma-related conditions since I was a teenager. Recent air pollution, with levels increased by many orders of magnitude due to the particulate matter emitted from the fires has caused as many health issues for me as when I lived a few kilometres from one of the world's largest grain elevators in the Riverina.

I work on the Macquarie University campus, which on some days had visible smoke at ground-level. Even on days that appeared clear, I had to wear a proper protective mask in order to be able to walk around outdoors without collapsing or retching up protective fluids in my throat. More than once I had to be assisted by a colleague when I'd fallen against a wall, gasping for breath, unable to make it a few metres to the next doorway.

As much as I could I worked at home so I could avoid going outside. But even there the smoke particles invaded my house and I had to sit next to an air purifier for most of the day. Fighting for air is tiring.

My job requires that I have significant day to day contact with teachers and researchers on campus. Having opportunities to work reduced by poor air quality is not financially sustainable.

I've avoided smoking all my life, not least because the effects of smoke inhalation on my father's heart killed him at 59. I am fearful because I am approaching that age and the effects of air pollution have been quoted as equivalent to several packets of cigarettes a day. Weeks after the fires ceased, I am still tired and run down, with no treatment available from the respiratory specialists I have seen.

Name suppressed

As someone with asthma who lives in the Shellharbour area I experienced firsthand the impacts of poor air quality, which for me included being continually confined to the home for the majority of the 81 days and when leaving the home it was absolutely essential to wear a mask to prevent numerous asthmatic attacks from causing numerous hospital admissions.

There was insufficient information broadcast as to the dangers of smoke inhalation for asthmatics and those with any lung disorder.

Name suppressed

I am writing to tell you about my experience as a long-term asthma sufferer. While the Illawarra region where I live did not face evacuation, we did experience multiple, long days of poor air quality. As someone who is fairly active, I found I was unable to complete my regular activities without resorting to my emergency inhaler multiple times. I have suffered headaches, and loss of sleep due to lack of oxygen and being unable to breathe well. I was on double-dose of my preventer during the bushfires, and still needed to use my emergency inhaler regularly.

In terms of the information being available to me: "stay home" was the message that seemed to be repeated by experts and the media. Which is totally inadequate, really. That might work for a

particularly hazy afternoon but not the sort of unprecedented, ongoing smoke and particulate ash accumulating over weeks. I'm sure the Vesuvian council told their citizens to stay home too for all the good it did them. My house, like many Australians, is not a quarantined, air-controlled facility – it was built mainly to let air in thanks to our hot climate, and its 50+ years of existence has done nothing to help that problem.

A better message would be to send people to buildings with climate control and air filtration – i.e. shopping malls, office buildings, RSLs, clubs and hospitals – and reminding owners of those places to ensure their air filtration systems are regularly checked and up to standards.

Prevent sustained periods of poor air quality, through taking meaningful action to address the drivers of climate change. I cannot stress that last point enough. There should be a push from the Health ministry to dissuade the government from green-lighting any more coal or gas plants, as well as working with transportation to incentivize moving away from gas-powered vehicles.

Name suppressed

As an Asthmatic, I am vitally interested in this issue, although poor air quality also has a severe impact on the young, the elderly and others even with minor respiratory conditions. While the bush fires this year have reached an unprecedented level and can only be described as catastrophic, the reality is that Australia suffers from devastating bush fires every year. It is my view that both Federal and State governments need to do more to prepare for this reality and I offer the following suggestions:

1. Prevention through reduction of undergrowth, cutting fire breaks and other activities which do not impact on air quality. There will be those who are unhappy about losing some of our beautiful natural bush. However, I do not accept that controlled burn-offs are the best possible solution as this still causes a high impact on air quality.

Prevention is not a short-term solution. Such activities would be the focus of many years of determined effort, communication, education and funding.

2. Mitigation through more effective preparation. At the very least Australia should purchase one or more of the large aircraft that would enable a rapid response to bush fire emergencies. As our summer approaches we should be prepared to lease one or more of these aircraft from overseas so that a rapid response could enable more effective mitigation and containment. Accepting that the current fire season has been overwhelming and unprecedented, I would argue that we could see this coming and that more urgent action was needed than actually took place.

Better education, earlier preparation, forward planning and a clear strategy for how to move forward are among the main items that I would ask the Inquiry to address in a courageous and resolute way.

Charles Eccles

I have been an asthma sufferer for nearly twenty years and cannot function without daily medication to keep this debilitating condition from sending me to hospital. I live in Canberra an

experienced firsthand the severity of the high level of particulates in the air. Masks disappeared quickly from the shelves in chemists and it was only through work that I was able to get support with an issued mask and advice about taking time out if required.

I felt unsafe and unsupported by the health system we pay for through our taxes. Genuine asthma sufferers should have had first access to masks and Ventolin. The panic buying by healthy individuals and the lack of clear information from the health authorities did not help the situation.

I spent four weeks at home over the Christmas early January period. I had to pay over \$800 for an air purifier to keep the air quality of my home safe for me. I feel the government should have helped subsidise the cost of this necessary equipment. After all, it kept me having to go to Hospital. An expense to the health system that would be far more than the \$800 for the equipment.

Alison Billing

I am over 65 and have suffered from asthma and allergies all my life. Seasonal allergies in spring trigger my asthma but the smoke from this summer's bushfires prolonged the effect for months. I have had to take steroids and antibiotics in addition to my normal medication and of course I stayed indoors for much longer than normal.

On the worst days the smoke is obvious to everyone but I would have appreciated some way of knowing the air quality rating by receiving an alert on my phone. That would help me to plan my day.

I have never experienced such lengthy and heavy exposure to smoke and I urge the State government to reduce the risks of climate change that led to extreme conditions.

Name suppressed

I am an interested in this issue, as my young daughter (7 years old) suffered badly from asthma during this past summer period from the impacts of bushfire smoke. We live in Wentworth Falls within the Blue Mountains and the air quality was extremely poor for many weeks. We were forced to take measures we never thought were required. We purchased an expensive Dyson air filter/fan to manage the air quality within our house. My daughter never got to play outside during this time due to the extreme smoke conditions.

During this period of time, the information about the quality of air was not available. We really depended on our own judgements. However, communication about the quality of air would have greatly improved our living conditions. We could not plan ahead on taking trips outside to the shops or playgrounds, as we didn't know what the levels were currently or what was expected that day or if they were going to deteriorate throughout the day. On some days they did deteriorate mainly from ongoing back burning occurring by the Rural Fire Service. Better communication to the general public on expected air quality levels and back burns by the RFS are required.

Dianne DeLaine

I am interested in this inquiry as my asthma has been impacted by both fires and dust storms. I live on Eyre Peninsula in South Australia and as an asthmatic experienced severe reactions to both raised dust, (during windy conditions) and from smoke from the Kangaroo Island Ravine Fire and the local Miltalie fire. My symptoms included tightness of chest and difficulty breathing. After the fires I developed bronchitis type symptoms, without the fever. I had to remain indoors each time the air quality deteriorated and increase my medication. Symptoms lasted for over a month.

I used online health sources of information however felt that some measure of air quality in regional SA was lacking. There were no local warnings of air quality where I live.

Name suppressed

With summer 19/20 now behind us, I am interested in taking a more proactive approach towards lessening the impacts of these types events on my asthma & the community as a whole.

I have never before seen such a range of adverse effects on fellow asthmatics, non-asthmatics & myself.

I live in Gordon in the ACT. Beginning in mid to late November the ACT began to feel the impacts of the bushfire smoke from NSW & in January/February from the fires in the ACT. Many of these days, the ACT was the most polluted city in the world.

Not only am I an asthma sufferer, but also am hypothyroid & suffer from sleep apnea & other related illnesses. The effects of some of the heaviest smoke days caused me to miss work & experience the following impacts throughout the course of the summer:

- Extreme dry eyes
- Sore throat
- Difficulty speaking
- Swallowing
- Mild to severe headaches
- Dizziness
- Lethargy

I am still feeling the effects of this summer now.

There is a wealth of information available. I would like to see more education around this subject in malls, infomercials on television, and infographics in workplaces. Most importantly, the information needs to be constantly refreshed.

Loren Downing

I felt firsthand the impacts of poor air quality, which for me included significant impact on my asthma, bronchiectasis, cystic fibrosis and peak flow levels. I live in Brisbane and we faced smoke inundation from the 4th September until Christmas. 4 months.

To protect myself I was forced to:

- Take a 3-day reprieve in a hotel in the city (I live in a Queenslander where smoke was still seeping in so I could not protect myself);
- Take a 3-day reprieve out in Miles a small regional area;
- Take a 2-day reprieve in Melbourne;
- Wear a mask 24/7, although I believe it was of no benefit;
- Purchase a \$1,600 air purifier for the house, but sadly it didn't arrive until the event was almost over; and
- Purchase a second hand (none were available brand new) \$1,500 air purifier to be at my family home (Victorian border) so I could attend Christmas.
- Take my passport with me at Christmas as we'd made the decision that if the air quality had not improved after Christmas, I would need to go overseas to protect my life as my peak flows were continually deteriorating.

I felt scared the entire time that I would not survive. I am scared now about what further damage has occurred to my lungs. I felt no support and that I was left to find my way around each day to survive. And, I was distraught at the thought of people with health issues like me and how they were (or were not) supported if they were in the thick of it. Given the impact on me from afar, I cannot grasp the impact on those with vulnerable conditions right at the centre of it.

Along with the items below, I would like to see futuristically vulnerable people evacuated and supported somewhere safe.

Diane Siljanovic

For myself, the impacts of living in Sydney's Eastern Suburbs (Vaucluse) during the summer bushfires has been extraordinary. I have been a very fit 71 year old with mild asthma requiring Tilade preventer daily. I virtually self excluded myself from all outdoor activities from late December 2019 through January 2020 when air quality was at its worst. Despite that, in mid January I had to attend my specialist and have CT scans and take relievers constantly, never having the prior need to use them for well over ten years. I am still using the preventers and coughing and do not feel I have ever properly recovered. Now I feel at a disadvantage coming into the COVID-19 situation. I do feel that proper maintenance of bushfire regions and access to adequate firefighting aircraft and personnel in high risk areas are imperative.

Name suppressed

I was sick with a flu virus which triggered off a severe asthma attack.

The bushfires and poor air quality had a very bad impact on me recovering from the virus.

I was unable to work or to go outside at all.

The number one essential thing for life is AIR and the quality of our air is the most important requirement for LIFE.

There was no information or support available at that time for people with asthma except on the weather section of the news saying air quality poor, stay indoors. Easier said than done.

Name suppressed

As someone with asthma who lives in the South Eastern suburbs of Melbourne, I felt firsthand the impacts of Poor Air quality. I struggle day to day, but during the days of high bushfire smoke I had constant asthma attacks, I was coughing and felt breathless most of the day and night. I wasn't able to go out during these days and felt that unless I remained in my room with the air purifier on, I would suffocate.

Living inside with an air purifier for days places great stress on your mental health. One day we decided to try to go to the local shopping centre, however the air conditioning system couldn't cope with the smoke and it turned out to be a very bad choice. My asthma deteriorated. My dr put me on prednisolone whose side effects include depression, anxiety and worsening mental health.

The Government should provide HEPA filtered air spaces (i.e. not just air-conditioning) where vulnerable people with lung conditions can go during these periods of high smoke. Going to the movies, shopping centres or other air-conditioned environment did not make enough of a difference.

Overall since the days of high smoke, my asthma has deteriorated in general. I've become super sensitive to any change in the environment. Now when I have an asthma attack, my body and mind goes straight back the bushfire event when I was trapped in my own home. And I can't help reflect on all the summer outdoor events I missed, my nieces 10th birthday because I couldn't sit in the restaurant. I could barely speak for a lot of those day of summer.

My mum and sister both have bad asthma. They were equally affected however as my mum is in her 70's she was sick for longer than me. She feels that the summer of 2019/20 was really taken from her.

I feel that the smoke affected my quality of life this summer and even thinking about it makes me feel stressed and anxious.

The information provided by the EPA and the BOM was inadequate. It only updated every few hours and was always at least an hour behind. When you are sitting waiting for the air to clear so you can breathe, having updated information rather than information from an hour ago is vital. In addition, the air quality measuring station is not terribly near to our home, so it was very hard to trust the information and numbers provided anyway.

Name suppressed

The poor air quality we endured over the spring and summer, meant that my son, a chronic asthmatic, who is completing his HSC, missed a considerable amount of school. The air quality meant that with his chronic asthma, he couldn't walk to the bus stop. If driven to the bus stop, it meant my son would be sitting for a period of time breathing in the polluted air.

My son's school lost a student to an asthma attack a few years ago and are quite proactive in keeping him safe. They are aware of the dangers of living with asthma and rang me on many occasions to collect him due to the smoke in the air. I am a single parent, who works full-time and had to rely on work colleagues to help collect him and pay for UBER rides to get him home out of the polluted air. We couldn't have windows open due to the air quality and had to rely on

the air conditioner this summer much more than we normally would. We try to be frugal with such appliances, but had no option this summer with the extreme pollution.

The media was helpful with relaying the air quality issues. I would watch Sunrise of a morning before work to keep up to date. Many family members and friends rang to see how my son was coping with all the smoke we had in Sydney. People would send me messages showing what the Air Quality Index was for our region using Apps such as Haze.

I understand that it was extreme weather we experienced this season, with the fires and then floods. For families with a chronic asthmatic such as my son, it also means additional costs are incurred due to the air quality. Extra medication for home and school was required. Paying for UBER rides to limit his exposure to the pollution. Running the air-conditioning for days, non-stop, as we couldn't have windows open.

Consideration to supplement the additional costs for asthmatics would be appreciated such as the Life Support Energy Rebate.

Name suppressed

Thankfully I live on the Far South Coast of NSW. But like so many other areas in NSW our air quality was also negatively impacted. I have asthma, so for me it was even worse. Days at a time, for months on end, the smoke was so bad that I could not go outside for health reasons. I couldn't walk my dog, or go swimming. I couldn't go out to eat, or go shopping.

On top of that I lost my casual seasonal work because I couldn't be outside for long periods. I couldn't predict which way the wind would be blowing the smoke on any given day so my only course of action was to advise my employer that I was unavailable for the duration. Meanwhile I was spending more money on asthma medication and P2 masks. Wearing a mask impaired my eyesight because the mask raised my bifocal glasses out of alignment. I was anxious and depressed. I was struggling financially.

We had fires to the North, the South and the West of us. There was no escaping the smoke. Once it became apparent that the fires and therefore the smoke were going to be present longer term, I became concerned at the difficulty in determining/defining a 'healthy level' of smoke exposure. This particular concern only abated once I researched and found an Air Quality App. Even then, because I live in a small regional area, the information wasn't pinpoint accurate.

I found it difficult to obtain information about the longevity of the P2 masks. There was conflicting information about when a mask needed to be discarded. It was only by chance that I discovered that masks lose their efficacy once they get damp. And then there was the major shortage of masks. I was evacuated twice in the first week of January 2020. By this stage the NSW fires had been burning for months and yet neither the Merimbula nor the Bega official Evacuation Centres had masks for the evacuees. It is completely unacceptable that the relevant agencies were not better prepared.

Residents were told to go an Evacuation Centre if they were physically unable to stay and defend. So at first the Evac Centres had a lot of elderly, infirmed and people with asthma...and yet no-one could stop the smoke from entering the Centres. If I had stayed at the Bega Evac Centre I would have ended up in hospital. Bega needs to have a better designed building as their Evacuation Centre rather than an open showground shed.

I also got conflicting information about how often to use my asthma preventer and Ventolin from GPs. The lack of clarity around all the above issues and the lack of supplies added to my stress and anxiety levels.

There should have been an adequate supply of P2 type masks available with detailed instructions on how to wear them, and when they need to be changed. Ideally that information would be displayed on Posters at all points of sale, and a small flyer offered with each purchase. The posters could also be posted in Doctor's offices, Evacuation Centres, Disaster Recovery Centres etc. Information needs to be made available about the short and long term health impacts to people who choose not to wear a mask. This information needs to be available for everyone – not just people with asthma.

Ideally masks would be developed that changed colour when their efficacy expires; similar to the way nappies change colour when they are wet. Ideally masks would be designed so people with glasses can wear them without their eyesight being affected. Ideally there would be masks for people with facial hair, or at least some kind of alternative. Otherwise what does that look like long term? Do we lose a generation of bearded men to lung cancer or emphysema?

Name suppressed

I have suffered from chronic, acute asthma since 1969 when I moved to Canberra as a teenager with my parents. I have experienced several life threatening episodes over the years and have been declared 'clinically dead' on more than one occasion. I have been hospitalised numerous times with asthma that was caused by breathing allergens such as pollens, grasses, dust mites, dog dander etc; as well as ingesting allergens such as sulphites, nitrites etc that are contained in many different foods.

I still live in Canberra as there are no guarantees that moving to a different environment would alleviate my asthma symptoms. I felt firsthand the impacts of poor air quality when first the dust storms, and then the smoke haze, descended on Canberra. I had many months of virtual 'house arrest' (self isolation), that enabled me to continue to live in my home. During this time I could not venture outside, not even past the front or back doors, without experiencing coughing and wheezing and an inability to breathe normally. My partner undertook all of the external tasks such as shopping, gardening, picking up grandchildren from school etc. I literally stayed within the walls of our home. I bought several air purifiers to assist with the internal air quality, however once the smoke infiltrated our home I was forced to leave Canberra immediately.

My partner booked a flight to Darwin for me and I spent over 3 weeks away from home until the rain came, my health improved and the smoke dissipated. My daughter lives in Darwin and on my arrival there she insisted that I go straight to hospital, which I did. I was diagnosed with a chest infection and given much stronger doses of medication including prednisone which, while it helps to relieve asthma, it also causes weight gain, unfortunately. I am still struggling to lose that weight.

As I am on a low income the additional costs involved in my need to travel unexpectedly, the expense of new medications, doctor's visits, and living away from home have all contributed to a loss of quality of life on my return to Canberra.

Elva Shumack

I personally have had Asthma and other respiratory conditions most of my 80 years, most times it has been well controlled. We had several weeks of bushfires and accompanied smoke in Tamworth at the end of 2019. I found that my ability to walk and do any exercise declined over that period. I became insecure about going out on my own, for fear of collapsing. Twice I had to get people to drive me home. Something I had not had to do before, if my condition was not good I would not go out. The breathing seemed to slowly become worse over time, only an hour or so. This was unusual. When the media brought up air quality I started to understand why I was having this trouble, I believe. I hope your committee can increase public and Doctors knowledge about the effects of smoke on people.
