

From: [Megan Dunstan](#)
To: [Hazelwood Info Shared Mailbox](#)
Subject: Submission on behalf of "Healthy Futures" organisation
Date: Monday, 10 August 2015 1:43:59 PM
Attachments: [Hazelwood Mine Fire Inquiry Submission Healthy Futures.docx](#)

To whom it may concern,

Please find attached below a submission on behalf of Healthy Futures, an organisation of health professionals and community members concerned about the health effects of climate change and fossil fuel use.

Many thanks for your consideration,

Megan Dunstan
(Healthy Futures member)

As a Victorian medical student and Healthy Futures member, I am incredibly concerned about the ongoing damage to health resulting from the Hazelwood mine fire in February 2014. Healthy Futures is an organisation of health professionals and community members concerned about the health consequences of climate change and fossil fuel use. On behalf of Healthy Futures, I submit the following:

Increase in deaths and morbidity

- The Hazelwood Mine Coal Fire Health Effects Report (1) outlines the profound health effects resulting, and expected to emerge from the Hazelwood fire. The combustion of this open cut coal mine has exposed the Latrobe Valley to high levels of carbon monoxide, ozone, PM10 and PM2.5 (1), each of which carry specific short and long term health consequences. More specifically, as the Hazelwood Inquiry Executive Summary clearly details, on February 16, 2014, PM2.5 levels were 28 times higher than the advisory standard, while carbon monoxide exposure was found to be 4 times the compliance standard (2). Firefighters, outdoor workers, those with chronic cardio-respiratory illness, community members and unborn children are particularly vulnerable to these pollutants, and some of the health effects cited in the report are listed below (1):

Agent	Short Term Health Impact	Long Term Health Impact
Carbon Monoxide	<p>Unborn children: foetal death</p> <p>Firefighters: Neurological sequelae and death</p>	<p>Unborn children: low birth weight, premature, small for dates</p> <p>Firefighters: Chronic neurological impairment</p>

		(including movement disorders, dementia, depression, drowsiness, aphasia, apathy, agnosia, apraxia, disorientation, hallucinations, incontinence and seizures, cerebral oedema and delayed unexpected death (3))
Ozone	<p>Children and Adults:</p> <p>Respiratory symptoms, new asthma, worse asthma</p> <p>Those with chronic cardiorespiratory illness:</p> <p>Worse asthma, cardiorespiratory morbidity and mortality</p>	<p>Children and Adults:</p> <p>Respiratory symptoms, new asthma, worse asthma</p> <p>Those with chronic cardiorespiratory illness:</p> <p>Worse asthma, cardiorespiratory morbidity and mortality</p>
PM10	<p>Unborn children: at greater risk of being small for dates/ low birthweight</p> <p>Adults: Cardiorespiratory morbidity and mortality</p>	Currently unknown
PM2.5	<p>Unborn children: increased risk of being small for dates, low birth weight and</p>	Unborn children: lung growth retardation

	<p>premature</p> <p>Children: respiratory symptoms, new asthma, worse asthma</p> <p>Adults: cardiorespiratory morbidity and mortality, diabetes</p>	<p>Children: respiratory symptoms, new asthma, worse asthma</p> <p>Adults: cardiorespiratory morbidity and mortality, lung cancer</p>
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- In addition to the aforementioned morbidity, 11 deaths have been directly attributed to the mine fire during February and March of 2014 (4). Determining mortality rates beyond this period will be hindered by a range of methodological challenges, including defining an ‘exposed population’ and determining causation in an already vulnerable population.
- Studies of bushfires in Australia have repeatedly demonstrated increased rates of psychiatric morbidity including depression, anxiety and post-traumatic stress disorder in survivors (5, 6), highlighting the need for access to mental health services.

Response Required:

- In the short term, it is critical that communities in Morwell and the Latrobe Valley have access to the necessary resources to mitigate the consequences of exposure to residual pollutants from the 2014 fire. For example, there is a need for ash residue to be professionally cleaned from houses and workplaces, requiring the provision of financial assistance and access to appropriate cleaning equipment.

- In the medium term, supporting the Morwell community in establishing health screening services will be of paramount importance in rapidly detecting and managing emergent symptoms and chronic disease from the fire. Efforts should also be made to educate the community on the symptoms and signs of illnesses potentially associated with the mine fire, and health services should be known and accessible for all.
- In the long term, expanding health care services in the Latrobe Valley in a sustainable manner will be important in addressing the anticipated chronic physical and psychological ramifications of the fire. Finally, to further reduce the health impacts of coal-fired power, Victoria must expand its renewable energy sector. As the most recent Lancet Commission on Health And Climate Change outlines (7), switching from coal to renewable energies (which support low-cost active transportation) will have important health co-benefits, reducing the incidence of cardiovascular disease, cancer, obesity, diabetes, mental illness and respiratory disease (7).

References:

1. Hazelwood Coalmine Fire Health Effects report. Available at:

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4. Barnett, A. *Analysis of death data during the Morwell mine fire.* Available from: <http://eprints.qut.edu.au/76230>. 2014.
5. Burke, S. APS responds to mental health needs following the Victorian bushfires. In *Psych*, June, 2009. (Available from: http://psychology.org.au/inpsych/mental_health_bushfires/).
6. Clayer, J.R., Bookless_pratz, C., & Harris, R.L. Some health consequences of a natural disaster. *Medical Journal of Australia.* 1985; 143(5): 182 - 184.
7. Watts et al. Health and climate change: policy responses to protect public health. The Lancet Commissions. Available at: [http://dx.doi.org/10.1016/S0140-6736\(15\)60854-6](http://dx.doi.org/10.1016/S0140-6736(15)60854-6).
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