Public Health Association of Australia: 
Policy-at-a-glance – Outdoor Air Quality Policy

Key message:
1. Exposure to air pollution is linked to an increased risk of poor health and premature death.
2. There is no known absolute safe level for inhalation of particulate matter so population exposure should be minimised.
3. The current and future levels of urban infrastructure development, and vehicular and industrial emissions in Australia demand urgent action from peak regulatory bodies to protect public health.
4. The Public Health Association of Australia calls on policy makers to promote clean ambient air, and ensure regulatory and monitoring mechanisms exist to mitigate impacts on population health.

Summary: Poor air quality is a major but poorly recognised cause of significant ill health and mortality globally and in Australia. Major sources are domestic and wild fires, energy generation, and industry and diesel vehicle emissions. In Australia, air quality monitoring and regulation needs improvement to adequately protect public health.

Audience: Federal, State and Territory Governments, policy makers, PHAA membership and environmental groups.

Responsibility: PHAA’s Ecology and Environment Special Interest Group (SIG).

Date policy adopted: September 2016

Contacts: Dr Peter Tait, Convenor, Ecology and Environment SIG
Outdoor Air Quality Policy Statement

The Public Health Association of Australia notes that:

1. There are two inter-related components of air quality: indoor and outdoor (ambient) air quality. This policy relates to outdoor (ambient) air quality.

2. Particular population groups may be more vulnerable to air pollution: children, pregnant women, the elderly, asthmatics, and people with chronic disease.

3. Air pollutants include particulate matter (PM) of different sizes (PM10, PM2.5), ultra-fine particles, sulphur dioxide, nitrogen oxides, carbon monoxide, benzene, formaldehyde, ground level ozone, and volatile organic compounds.

4. Adverse health effects of air pollutants:
   a. Air pollution is well established as a key health threat in urban environments across the globe.\(^1\,^2\) In particular, over the last 20 years, a vast body of medical and scientific research has emerged, linking various air pollutants with health problems.\(^3\,^4\,^5\,^6\) The literature confirms a causal association between exposures to air pollutants particularly PM2.5 and increased all-cause mortality, and increased incidence of heart disease,\(^7\) stroke,\(^8\) and lung cancer.\(^9\) Importantly, a steep risk in mortality from cardiac disease has been found even at low levels of exposure to some vehicular pollutants.\(^10\) There is an increased risk for respiratory problems, with nitrogen dioxide exacerbating asthma, and long-term exposure causing impairment of lung growth in children.\(^6\) New research in some populations suggests exposure may be associated with increased risks of low birth weight, foetal growth restriction, and pre-term delivery.\(^11\,^14\)
   
   b. Even short exposures to particles sized 2.5 micrometres diameter (a few hours to weeks) can trigger cardiovascular deaths and illness, while longer-term exposure (over a few years) may greatly increase the risk for cardiovascular mortality and reduce life expectancy among highly exposed groups.\(^15\)
   
   c. A European study of long-term exposure to air pollution and lung cancer\(^9\) found a statistically significant association between risk for lung cancer and particulate matter (PM10 and PM2.5) – a risk which increases linearly with concentration.
   
   d. Based on the existing research, especially for non-smoker’s lung cancer and bladder cancer, diesel emissions have been classified as carcinogenic by the World Health Organization.\(^16\)
**PHAA Policy Statement on: Outdoor Air Quality**

e. The effect of air pollution on lung development in American school children 10 to 18 years of age was evaluated in the Children’s Health Study. Permanent impairment of lung development was found in those children exposed to higher levels of environmental air pollutants including PM2.5.

5. Air quality policy in Australia:

   a. Development of a National Clean Air Agreement with the states, has been proposed by the Commonwealth but progress has been delayed. The PHAA supports the need for rapid and effective progress to attain this agreement to improve air quality.

6. Health co-benefits exist through improving public and active transport, to improve physical activity levels in addition to reducing air pollution from transport sources.

The Public Health Association of Australia affirms the following principles:

7. The provision of clean air is an environmental health priority that can be achieved through intersectoral collaboration between health, industry, and planning ministries, guided by Commonwealth legislation and standards and State government action.

8. Industrial and infrastructure growth needs to be undertaken with adequate planning to reduce air pollution and protect health.

9. Health risk assessments that form part of Environmental Impact Statements from development projects should fully quantify risks to population health including air pollution risks. Public and private sector organisations implementing infrastructure or industrial projects must be held accountable for the health impacts of their developments on populations.

10. Understanding of environmental risks associated with air pollutants is incomplete, therefore the precautionary principle to protect human health through reduction of public exposure to particulate matter and other air pollutants should apply.

The Public Health Association of Australia believes that the following steps should be undertaken:

11. To advocate for research into the health effects of exposure to air pollutants.

12. To disseminate relevant research to the public health, scientific and medical communities, governments, businesses and the general community.

13. Where resources permit, support community groups whose health is at risk from by poor ambient air quality to understand health impacts and advocate for improvement.
14. To advocate to reduce air pollution through more rigorous environmental regulation assessment and monitoring.

15. To raise awareness of the benefits of reducing air pollution and mitigating climate change.

16. To advocate for effective and timely implementation of a National Clean Air Agreement.

First adopted at the 2016 Annual General Meeting of the Public Health Association of Australia.

References