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**Statement of the American Thoracic Society
Before the Senate Environment and Public Works Committee
Presented by Alfred Munzer MD
On Wednesday, June 15, 2011**

I am Dr. Alfred Munzer and I am a physician specializing in lung disease and practicing at Washington Adventist Hospital in Takoma Park, MD. I spend my days treating people with serious conditions like asthma; chronic obstructive pulmonary disease, or COPD; sarcoidosis; and a number of other serious respiratory diseases, many of which are unknown by the general public.

Through a combination of medications, interventional procedures and lifestyle modifications, I work with my patients to try to help control their respiratory disease. But there is one thing, neither I nor my patients can control and that is air pollution. Air pollution plays a major role in causing and exacerbating respiratory illnesses. From years of clinical experience, I know that when the DC area has a code orange or code red air pollution day, patients will suffer the effects. Those with asthma will experience acute exacerbations of their condition, making every breath they take more labored. And the emergency room at the hospital will be filled with patients in serious respiratory distress. In most these cases, my patients didn't do anything wrong or different: they just happened to be unlucky enough to breathe highly polluted air.

While I am not an air pollution researcher, my clinical experience of the impact air pollution on respiratory health is backed up by a countless peer reviewed studies in the United States. and abroad. The science documenting the adverse health effects air pollution has on human health is comprehensive, consistent, and compelling.

Unfortunately, that science is also under attack.

Industry regulated by the Environmental Protection Agency has started a campaign to discredit the research that is used to support EPA's regulations under the Clean Air Act. Some members of Congress appear to be taking up the mantra of discrediting or openly discounting the validity of EPA-sponsored research. This is a mistake and is a distraction from what we all should be focusing on: reducing air pollution to improve everyone's health.

The EPA's science is sound in its methodology and strong in its conclusions. But the EPA is not the only source of credible science that shows air pollution matters. Respected scientific agencies in the United States and around the globe have documented the adverse effects of air pollution.

The NIH has supported a number of studies that found that air pollution – particularly ozone and particulate matter – is bad for everyone's health. This is especially true for children.

Silverman and colleagues demonstrated warm weather patterns of ozone and PM_{2.5} disproportionately affect children with asthma and appear responsible for severe attacks that could have been avoided.

Moore and colleagues in a California Air Resources Board funded study showed that current levels experienced in Southern California, ozone contributes to an increased risk of hospitalization for children with asthma.

In another study funded by the National Institutes of Health, Dr. Balmes and colleagues demonstrated that traffic related air pollution lead to measurable decreased in the lung function of adults.

The American Petroleum Institute has even contributed to the scientific literature. In an API funded study, Dr. Schelegle and colleagues demonstrated that in chamber studies exposures, ozone concentrations below 75 ppb decreases FEV1, a key measure of lung function, in healthy young adults.

I could go on about many studies supported by respected scientific agencies other than the EPA, but I hope my point is clear: air pollution impacts in a significant and negative way the health of Americans. This is not an opinion, it is a fact.

For the record, I have included a brief list of other important studies that all demonstrate that air pollution continues to be an important health issue in the United States. The most comprehensive listing of relevant studies can be found in the EPA Integrated Scientific Assessment document or the relevant the EPA criteria document.

In conclusion, the science is consistent and comprehensive and comes from multiple creditable sources, including the EPA. I hope Congress and the EPA can put to rest questions about the scientific validity of air pollution studies and start focusing our attention at the real problem: how best to move forward with eliminating the threat posed by air pollution.

I would be happy to answer any questions.

Selected References

TOPIC: Air pollution makes asthma worse, especially in children

Ambient ozone concentrations cause increased hospitalizations for asthma in children: an 18-year study in Southern California. Environ Health Perspect. 2008 Aug;116(8):1063-70. Moore K, Neugebauer R, Lurmann F, Hall J, Brajer V, Alcorn S, Tager I.

Key Finding: Ozone contributes to an increased risk of hospitalization for children with asthma living in California.

Respiratory disease associated with community air pollution and a Steel Mill, Utah Valley. Pope, CA. Am J of Public Health 1989 79 (5):623

Key Finding: Pediatric hospital emissions were two to three times higher during the winters when the mill was open compared to when it was closed

Exposure to traffic: lung function and health status in adults with asthma. J Allergy Clin Immunol. 2009 Mar;123(3):626-31. Epub 2009 Jan 18. Balmes JR, Earnest G, Katz PP, Yelin EH, Eisner MD, Chen H, Trupin L, Lurmann F, Blanc PD.

Key Finding: Traffic-related air pollution lead to measurable decreased in the lung function of adults

TOPIC: Air pollution can kill you

Long-term ambient multipollutant exposures and mortality. Am J Respir Crit Care Med. 2011 Jan 1;183(1):73-8. Epub 2010 Jul 23. Hart JE, Garshick E, Dockery DW, Smith TJ, Ryan L, Laden F.

Key Finding: Residential ambient air pollution exposures were associated with mortality.

Long-term ozone exposure and mortality. N Engl J Med. 2009 Mar 12;360(11):1085-95. Jerrett M, Burnett RT, Pope CA 3rd, Ito K, Thurston G, Krewski D, Shi Y, Calle E, Thun M.

Key Finding: Demonstrates a significant increase in the risk of death from respiratory causes in association with an increase in ozone concentration.

Susceptibility factors to ozone-related mortality: a population-based case-crossover analysis. Am J Respir Crit Care Med. 2010 Aug 1;182(3):376-84. Epub 2010 Mar 25. Stafoggia M, Forastiere F, Faustini A, Biggeri A, Bisanti L,

Cadum E, Cernigliaro A, Mallone S, Pandolfi P, Serinelli M, Tessari R, Vigotti MA, Perucci CA; EpiAir Group.

Key Finding: A greater vulnerability of elderly people and women was indicated; subjects who died at home and had diabetes emerged as especially affected.

TOPIC: Ozone adversely impacts lung function

The effect of air pollution on lung development from 10 to 18 years of age. N Engl J Med. 2004 Sep 9;351(11):1057-67. Gauderman WJ, Avol E, Gilliland F, Vora H, Thomas D, Berhane K, McConnell R, Kuenzli N, Lurmann F, Rappaport E, Margolis H, Bates D, Peters J.

Key Finding: Air pollution alters lung function in children.

Chronic exposure to ambient ozone and lung function in young adults. **Epidemiology.** 2005 Nov;16(6):751-9. Tager IB, Balmes J, Lurmann F, Ngo L, Alcorn S, Künzli N.

Key Finding: Air pollution alters lung function in you adults who are near peak lifetime lung function.

6.6-hour inhalation of ozone concentrations from 60 to 87 parts per billion in healthy humans. Am J Respir Crit Care Med. 2009 Aug 1;180(3):265-72. Epub 2009 May 15. Schelegle ES, Morales CA, Walby WF, Marion S, Allen RP.

Key Finding: Ozone concentrations below 75 ppb decreases FEV1 in health young adults.