Breathe Easier: The American Lung Association's Misleading "State of the Air 2001" Report

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According to "State of the Air," a report released on May 1 by the American Lung Association (ALA), "air pollution remains a major threat" to 141 million Americans, up seven percent from last year. If that were true, air pollution would be one of the most serious health challenges in the United States. However, the ALA report vastly overestimates Americans' exposure to unhealthful air, and misleads the public into believing that air pollution is getting worse, when in fact it has been improving for more than 20 years. So, how did ALA get the numbers so wrong?

First, ALA incorrectly counted many clean-air locations as having unhealthful air. ALA cited a county as having a bad air day when at least one monitor somewhere in the county measured ozone at a level greater than or equal to 85 parts-per-billion (ppb) averaged over an eight-hour period. In fact, many counties with high ozone levels at some monitoring sites actually have other large areas with clean air. For example, in 1999 and 2000, one third of the monitored locations in southern California stayed below the level ALA defined as having an air quality violation. Roughly six or seven million people live in these clean-air locations, but were included by ALA in its tally of people exposed to polluted air. In a similar manner, ALA overestimated the extent of polluted air in other populous parts of the country, inaccurately adding millions of people in clean-air regions to its polluted-air tally.

Second, ALA overestimated the amount of time any given person is exposed to unhealthful air even in regions that exceeded the ozone standard,. ALA calculated the number of bad air days for each county by counting the days in which *any* location in the entire county registered an ozone violation. But this number is much greater than the maximum number of bad air days at any single location, because ozone levels vary a great deal from place to place.

For example, Table 1 displays the number of ozone violation days during the three-year period from 1997 to 1999 at each monitoring location in Los Angeles County. As the table shows, Los Angeles County as a whole had 110 ozone violation days. However, no single location had more than 70 violations, and most had far fewer. Thus, even in the parts of the county that exceeded the ozone standard, ALA overestimated real exposure to polluted air by anywhere from a factor of 1.6 to a factor of 55, depending on the location. The same overestimation occurred in other parts of the country, including the Houston area, where the worst site exceeded the ozone standard on 45 percent fewer days than the

county as a whole. ALA's erroneous method of evaluation results in a substantial nationwide overestimation of people's exposure to polluted air.

Table 1. Number of Ozone Violation Days for Los Angeles County as a Whole Compared with Individual Monitoring Locations

Ozone Monitoring Location in Los Angeles County	Three-Year Total of Ozone Violation Days, 1997–1999 (85 ppb, 8-hour ozone standard)
Anywhere in county	110
Santa Clarita	70
Glendora	68
Azusa	46
Pomona	38
Pasadena	33
Burbank	22
Pico Rivera	21
Downtown Los Angeles	14
Reseda	14
Hawthorne	2
Lynwood	0
North Long Beach	0
West Los Angeles	0

Source: California Air Resources Board

Third, ALA used a grading system that has little relationship to actual health risks from air pollution. ALA won't give a county a clean bill of health, even if its air pollution levels satisfy the Environmental Protection Agency's (EPA) stringent new ozone health standard. But EPA chose this standard specifically to protect those who are most sensitive to the effects of ozone. And even EPA's Clean Air Science Advisory Committee, an independent panel of health scientists, concluded that even less stringent standards than the one EPA chose would be equally protective of public health. By using a standard even tougher than EPA's, ALA was able to classify 30 million additional people as living in areas with poor air quality, even though air quality in those regions meets EPA's stringent health standard.

Fourth, even though moderate ozone levels don't harm most people, ALA included them in its figure for Americans exposed to unhealthful air. The EPA's new ozone standard is set to protect the most sensitive groups—those with respiratory diseases, the elderly, and children with developing lungs. Roughly 90 percent of metropolitan areas that exceed the EPA standard never reach ozone levels that would harm the 60 percent of people that don't fall into one of these sensitive groups. ALA's tally thus includes tens of millions of people who wouldn't be harmed even if ozone levels occasionally exceed the EPA's new standard.

Fifth, ALA blurs the distinction between modest and severe air pollution problems. In the ALA grading system, counties with no pollution violations get a grade of A, and those that average 3.3 or more days per year above the ozone standard get a grade of F. This lumps Osceola, Florida, averaging 3.3 ozone violations per year, with Houston, which averages 61.5 violations per year. That's a huge difference in real health risk between the two areas that's not reflected in the ALA grades. ALA also makes the questionable claim that three or four days a year of ozone at levels slightly greater than an already stringent standard should be considered a "major threat" to public health.

Finally, ALA misleads the public about trends in air pollution levels. The fight against smog is a great success story in environmental protection. Southern California, the region with the worst air in the country, has reduced its number of bad air days by more than 75 percent between the late 1970s and the last few years. High ozone levels also occur over a much smaller region than in the past, exposing far fewer people. Likewise, Houston, the second most polluted area in the country, reduced ozone violations by about 55 percent over the same period. Most, though not all, metropolitan areas have seen similar improvements. Tough EPA pollution standards for new cars and trucks will ensure that air pollution levels continue to go down for the foreseeable future, as the national fleet turns over to new low-polluting vehicles.

Not only does the ALA report fail to show these ongoing reductions in air pollution, it doesn't reflect current air quality particularly well either. For example, southern California's ozone levels have been dropping rapidly for more than 10 years, with 1999 and 2000 the cleanest ever. ALA's analysis masks these recent improvements.

ALA's inaccurate and misleading report could cause tens of millions of people who breathe clean healthful air year-round to now incorrectly believe that their air is unsafe. Tens of millions more might believe that their air poses a major health threat, when in fact their real risk is minimal.

Ironically, ALA's efforts could actually reduce Americans' health and safety. The ALA report could cause the public to demand billions of dollars in expenditures to clean up air that is already clean. These wasted billions would harm people in two ways. First, in a world of limited resources, society can only address some of the many risks people face. Wasting money on phantom risks means that real risks go unmitigated. Second, health and safety improve over time as talented people progressively find cheaper and more effective ways of solving problems. But when people waste effort on fruitless endeavors, fewer real problems get the attention they deserve, reducing health and safety not only in the present, but in the long run as well.

Everyone deserves to breathe clean air, and nobody wants to see people suffering from pollution. A few areas of the country have serious air pollution problems that do threaten the health of people who live there. But exaggerating the public's risk from air pollution is no better than ignoring real air quality problems. If society misspends scarce resources based on inaccurate information, more people will suffer, not fewer.