

Testimony of

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Before

The Environmental Protection Agency's
Public Hearing On Proposed Updates To
National Air Quality Standards For Ozone

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Good morning. My name is Dr. Robert Haley. I'm a specialist in internal medicine at Parkland Hospital in Dallas and a medical epidemiologist with 40 years' experience doing epidemiologic research and teaching epidemiology and statistics. My career began with a 10-year tour as an officer in the U.S. Public Health Service at the Centers for Disease Control and Prevention in Atlanta. I'm a past president and board chairman of the Dallas County Medical Society, a member of the TMA House of Delegates, a former member of the TMA Council on Science and Public Health, and for 10 years I've been involved in studying air pollution and its health effects in North Texas and developing statewide policy on clean air for TMA. In my testimony today I represent the 7,000 physicians of the Dallas County Medical Society and the 45,000 physicians of the Texas Medical Association.

The physicians of our state, and particularly of the Northeast Texas region, are very concerned about the effects of air pollution on the health of our patients, especially the effects of high ground-level ozone concentrations on asthma attacks in children, chronic lung disease exacerbations, and heart attacks in our older patients, and premature deaths in all age groups. Our reading of the scientific literature finds compelling evidence for the adverse effects of ozone on human health down to ozone levels of around 40 ppb.

We've heard recent arguments by state environmental officials claiming that ozone levels below 75 ppb do not harm human health and may even be beneficial, based on the fact that asthma rates are highest in the winter when ozone levels are the lowest. However, every physician knows that colds and influenza infections and cold temperatures, which occur mostly in the winter, are the main cause of the high rates of asthma and chronic lung disease exacerbations in the winter, just as high ozone levels are an important contributor in the summer. We also have evidence showing that deaths cluster shortly after high ozone days. As a result we've been very interested in understanding how much benefit we might expect in our patients from lowering the ozone standard—the subject of this hearing.

To explore this question, a group of epidemiologists and GIS experts has developed a computer model to estimate the reduction in hospitalizations and their costs and premature deaths and their economic costs, that would accrue to the citizens of the 10 nonattainment counties in North Texas from reducing the ozone levels by 10 ppb, as we would expect from lowering the standard from 75 ppb down to 65 ppb. The modeling is done with the GIS-based benefits mapping computer software BenMap. We've entered the daily 8-hour maximum ozone readings from all the air quality monitors in the 10 counties in 2008—a moderate ozone year—and in 2013—a high ozone year—and applied the concentration-effect coefficients from the most robust scientific studies to estimate the health and economic effects in our region. Here are the bottom-line findings.

In 2008 if the ozone levels had been 10 ppb lower, the 10-county non-attainment region would have experienced:

- 320** fewer hospitalizations
- \$10 million** less in hospitalization costs
- 77** fewer premature deaths
- \$617 million** less in economic loss from premature death

These numbers show the great health benefits of reducing the ozone standard by 10 ppb *in a moderate ozone year*. These benefits would recur year after year; they would be greater with an even lower standard, say, to 60 ppb; and even greater in high ozone years such as 2012 and 2013.

Another part of our 10-year study has been to collaborate with one of the top environmental engineers in the country to understand the main contributors to our unusually high ozone levels and what measures would be most cost-effective in fixing the problem. We found that retrofitting, or converting to natural gas, 3 antiquated coal-fired power plants in East Texas, combined with the imminent change in gasoline mixtures, would drop our ozone levels 10 ppb for approximately the economic cost of one year's ozone health effects. So the change appears economically responsible.

As physicians who care for these patients and see the asthma attacks, respiratory failure, hospitalizations and premature deaths, we believe the citizens of these 10 counties are paying a high price for ozone air pollution that could potentially be avoided. Therefore, the 7,000 physicians of the Dallas County Medical Society, supported by the 45,000 physicians of the Texas Medical Association, strongly endorse the lowering the ozone standard 10 ppb to 65 ppb, or lower. In the next few days we will have findings relevant to reductions to 60 ppb and for high ozone years.