

Comments from
David G. Hill, MD

Member of the National Board of Directors of the American Lung Association

To the Clean Air Scientific Advisory Committee
on the Supplement to the 2019 Integrated Science Assessment for Particulate Matter,
External Review Draft

Docket No. EPA-HQ-ORD-2014-0859

November 17, 2021

Thank you for this opportunity to share some comments from the American Lung Association on the external review draft of the supplement to the 2019 Integrated Science Assessment for Particulate Matter. We will submit more extensive comments in writing to the Committee.

My name is David Hill and I am a practicing pulmonary and critical care physician in Waterbury, Connecticut. I serve as a member of the faculty of several medical schools. I speak today in my role as a member of the Board of Directors for the American Lung Association where I also serve on the Scientific and Medical Editorial Review Panel.

The American Lung Association appreciates the diligence and thoroughness of the EPA staff in preparing this assessment. As one of the organizations that petitioned EPA for reconsideration of the 2020 National Ambient Air Quality Standards for particulate matter, we applaud the Agency for making the decision to reconsider based on the scientific evidence. The reinstatement of the CASAC PM Panel is a gratifying demonstration of this Administration's commitment to the critical role of science in guiding sound policy decisions.

Taken together, the 2019 Integrated Science Assessment and the recent supplement have provided extensive evidence that strengthens the case for setting more stringent standards for particulate matter.

We agree with EPA's conclusion of a causal determination for premature deaths from both short-term and long-term exposure to particulate matter. We also support the affirmation of previous findings of a linear, no-threshold relationship between long-term PM_{2.5} exposure and all-cause mortality across the range of exposure concentrations well below the current standard. EPA recognizes the abundant evidence from numerous studies that demonstrates beyond question that PM shortens life.

The Lung Association also appreciates the inclusion in this review of a closer look at the evidence for disparities in exposure and risk in populations with environmental justice concerns. The evidence base for the disproportionate impact of PM on communities of color is growing rapidly, and the recent findings clearly merit the Committee's attention.

We recognize the public health need for a streamlined process for reconsideration, and we believe that there is more than sufficient evidence for strengthening the PM standards in the current draft supplement to the ISA. However, we have concerns about the precedent being set by limiting the review to only those health endpoints that were identified as having a causal relationship in the 2019 ISA. The Clean Air Act explicitly recognizes the uncertainty in scientific research in its requirements to periodically review the air pollution criteria and to err on the side of protection. This precautionary principle requires that EPA set air quality standards to protect against effects suggestive of causality.

You won't find what you don't look for. Since the 2018 cutoff date for inclusion in the 2019 ISA, there have been a number of important studies published that could have the potential to influence the outcome of this reconsideration if they were included. For example, Kravitz-Wirz et al in the *International Journal of Environmental Research and Public Health* in 2018 and Garcia et al in *JAMA* in 2019 reinforced earlier findings linking exposure to fine particles with the onset of asthma in children. Another study from Coleman et al published in *Environment Health Perspectives* in 2020 analyzed more than 8.5 million cases of cancer incidences from U.S. registries and were able to establish a consistent association between the incidence of lung cancer and exposure to PM_{2.5} air pollution. Research on the impact of PM exposure on reproductive, developmental, neurological and metabolic health is also advancing rapidly and should be taken into account when evaluating the overall public health burden of this deadly air pollutant. We will include more detail on some of these findings in our written comments.

The recommendations this Committee makes to EPA have the potential to quite literally be life-saving for many Americans. The American Lung Association urges you to follow the science and act assertively to protect those most vulnerable to illness and death from particle pollution. Thank you for this opportunity to comment.