The Honorable Andrew Wheeler, Administrator

1200 Pennsylvania Avenue, NW
Washington, DC 20460

Submitted via Regulations.gov

RE: Comments - *Docket ID No. EPA-HQ-OAR-2015-0072:* Proposed Rule on National Ambient Air Quality Standards for Particulate Matter

Dear Administrator Wheeler:

As national medical societies and public health professionals representing tens of thousands of physicians, we provide comments on the U.S. Environmental Protection Agency's proposed rule on the National Ambient Air Quality Standards (NAAQS) for particulate matter (Docket ID No. EPA-HQ-OAR-2015-0072). Our organizations fully understand the public health and medical threats from particle pollution and have a strong interest in standards that adequately protect our tens of thousands of members and the millions of people whose health we work to secure.

Clear and compelling scientific evidence gained since EPA's last particulate matter NAAQS review shows that fine particulate matter (PM 2.5) exposure is far more deadly and dangerous than previously understood. Alarmingly, scientific research shows that exposure to PM 2.5 causes adverse health outcomes at levels far below current standards. These public health impacts are widespread and severe, and disproportionately burden vulnerable populations. **We accordingly oppose EPA's proposal to retain current, inadequate standards for PM 2.5, and strongly recommend that the agency instead strengthen the standards.**

Science and public health protection must always outweigh any other consideration when EPA sets the final NAAQS for particulate matter, and pursuant to applicable legal standards the only appropriate course of actio

provide a reasonable degree of protection against hazards that research has not yet identified"); see also *API v. EPA*,

a manganese NAAQS case, the D.C. Circuit found that Congress "specifically directed the Administrator to allow an adequate margin of safety to protect against effects which have not been uncovered by research and effects whose medical significance is a matter of disagreement." *Lead Indus. Ass'n v. EPA*, 647 F.2d 1130, 1154 (D.C. Cir. 1980). Limited data are not an excuse for

"Congress' direction to the Administrator to provide an adequate margin of safety' alone plainly [illegible] *Id.* at 1154-55.

EPA must [illegible] subpopulations

The NAAQS must be set at levels that not only protect those with enhanced vulnerability to air pollution, but that also guard against adverse effects in vulnerable subpopulations, including people with heart and lung disease, people of color, and people with low socioeconomic status. In fact, courts have repeatedly found that if a certain level of a pollutant "adversely affects the health of those sensitive individuals, EPA must strengthen the entire national standard." *American Lung Ass'n*, 134 F.3d at 390 (citations omitted); see also *American Farm Bureau Fed'n v. EPA*, 559 F.3d 512, 524 (D.C. Cir. 2009); *Coalition of Battery Recyclers Ass'n v. EPA*, 604 F.3d 613, 618 (D.C. Cir. 2010).

EPA must likewise set the NAAQS [illegible] these sensitive subpopulations. *Am. Farm Bureau Fed'n*, 559 F.3d at 526. In other words, NAAQS must "be set at a level at which there is 'an absence of adverse effect' on these sensitive individuals." *Lead Indus. Ass'n*, 647 F.2d at 1153.

New scientific [illegible] levels far below the current NAAQS

Overwhelming evidence shows that PM 2.5 can kill. Particle pollution can increase the risk of heart [illegible] Over 10,000 peer-reviewed scientific studies ov
light on the serious and diverse health effects from breathing PM 2.5.

Studies published since EPA's last review of particle pollution standards have improved our [illegible] of health effects of fine particulate matter. Alarmingly, these newer studies confirm adverse health effects at exposures much lower than current national air quality limits. T
ossession that PM 2.5 can cause numerous adverse health effects in humans at exposure levels for below the current standards.

fine particle pollution, EPA concluded in written findings published in December 2019[1] that breathing PM 2.5 poses serious health threats, including :

¶ early death (both short-term and long-term exposure);

¶ Causes cardiovascular harm (e.g., heart attacks, strokes, heart disease, congestive heart failure);

¶ Likely to cause respiratory harm (e.g., worsened asthma, worsened COPD, inflammation);

¶ Likely to cause cancer;

¶ Likely to cause harm to the nervous system (e.g., reduced brain volume, cognitive effects);

¶ developmental harm

—U.S. Environmental Protection Agency, December 2019. EPA 600/R-19/188.

ven at levels that meet current NAAQS, -term PM 2.5 -term particle pollution.[2] Another study in 2017 looked more closely [redacted] -term particle pollution.[3] Looking nationwide in a 2017 study, researchers found more evidence that older adults faced a higher risk of premature death even when levels of short-

This was consistent whether the older adults lived in cities, suburbs or rural areas.[4] Some of the strongest research has documented that short-term exposure to particle pollution causes premature death from respiratory and cardiovascular causes.[5]

It has long been known that be deadly, but recent research has confirmed that long-

[12] including [illegible] air pollution and health inequities.[13] [illegible] concluded that no [illegible] Blacks, faced higher risk from particle pollution.[14]

[illegible]

predominantly Black or African American communities suffered greater risk of premature death from particle pollution than those who live in communities that are predominantly white.[15] Another large study found that Hispanics and Asians, but especially Blacks, had a higher risk of premature death from particle pollution than [illegible] the differences. Higher-[illegible] than those whites, suggesting that the impact of other factors such as chronic stress as a result of discrimination may be playing a role.[16] Other researchers have found greater risk for African Americans from hazardous air pollutants including those pollutants that also come from traffic sources.[17] Due to decades of residential segregation, African Americans tend to live where there is greater exposure to air pollution.[18]

Socioeconomic position also appears tied to [illegible], and multiple large studies show evidence of that link. Low socioeconomic status consistently increased the risk of premature death from fine particle pollution among 13.2 million Medicare recipients studied in the largest examination of particle pollution-related mortality nationwide.[19] In a

[illegible][21] A 2016 [illegible] term exposure to particle polluti[illegible] [illegible][22] [illegible]

the risk of asthma attacks for ZIP Codes where poverty was high and [illegible] Medicaid.[23]

els of poll[illegible] Non-Hispanic Blacks and Hispanics were more likely to live in counties that had worse problems with [illegible] [illegible] counties have monitors, the primarily older, non- [illegible] quality in their [illegible].[24]

Unemployed people, those with low income or low education and non-Hispanic B[illegible] to be more likely to live in areas with higher exposures to particle pollution in a 2012 study. However, the different racial/ethnic and income groups were often breathing very different kinds of [illegible] ructure of these particles may [illegible] impacts.[25]

[illegible] creates additional and unacceptable risks to these [illegible] requirement t[illegible] subpopulations.

Emerging links with the COVID-19 pandemic

[illegible] established that [illegible] Now, [illegible] pandemic, a recent study from Harvard's School of Public Health found that an increase of only 1 μg/m³ in long-term average exposure to PM 2.5 [illegible] increase in the COVID-[illegible].[26] While [illegible]

potential for links between PM 2.5 exposure and COVID-19 provides further justification for

Scientific

Widespread consensus exists in the scientific and medical community that the current air quality

A broad spectrum of public health and medical organizations called for stricter PM 2.5 standards during the last review than were ultimately finalized, including the American Lung Association,

[27]

Moreover, the Independent [28] determined that the current

that show

he annual and 24-hour standards

IPMRP

> US multi-city epidemiological studies supported by consistent results from Canadian multi-city epidemiologic studies, consistent results from accountability studies and coherent results from animal toxicological and controlled human exposure studies, provide clear and compelling scientific evidence that the current PM 2.5 standards are
>
> different lines of study designs and statistical approaches which reduces its robustness.[29]

EPA scientists in the EPA Office of Air Quality Planning and Standards reviewed the adequacy of the current primary PM 2.5 standards and concluded: "

into question the current annual and 24-hour primary PM 2.5 standards."[30] In reaching this conclusion, EPA staff highlighted the following:

- There is a long-standing body of health evidence demonstrating relationships between long- or short-term PM 2.5 exposures and a variety of outcomes, including

mortality and serious morbidity effects. Studies published since the last review have reduced key uncertainties and broadened our understanding of the health effects that can result from exposures to PM

Thank you for considering our comments.

Allergy & Asthma Network

American Academy of Pediatrics

American Heart Association

American Public Health Association

American Thoracic Society

Asthma and Allergy Foundation of America

Center for Climate Change and Health

Children's Environmental Health Network

Health Care Without Harm

International Society for Epidemiology -- North American Chapter

Medical Society Consortium on Climate and Health

Public Health Institute

Regional Asthma Management and Prevention