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October 12, 2023

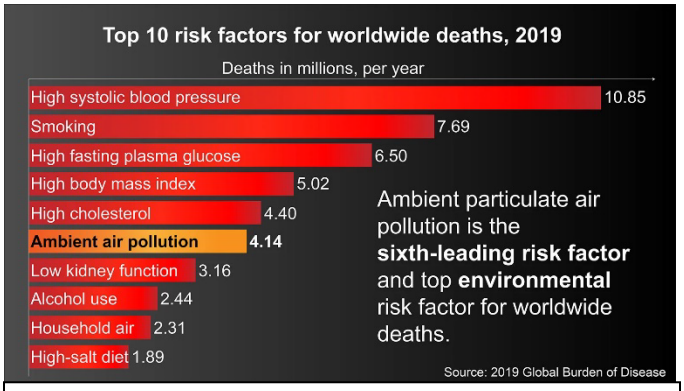
Dr. Howard Shelanski, Director
Office of Information and Regulatory Affairs (OIRA)
Office of Management and Budget
Executive Office of The President
The White House
1600 Pennsylvania Ave NW
Washington, DC 20500

Ref: *National Ambient Air Quality Standards for Particulate Matter*
RIN 2060-AV52 (PM NAAQS)
Docket ID No. EPA-HQ-OAR-2015-0072

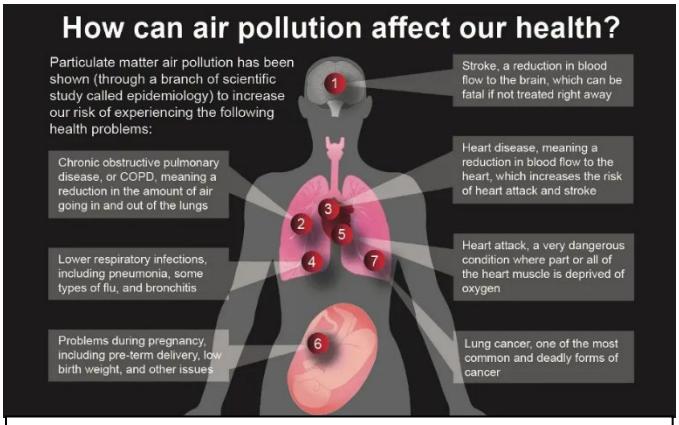
Dear Dr. Shelanski,

As pro-life evangelicals, we have a special concern for the unborn. We want children to be born unhindered by the ravages of pollution even before they take their first breath, and we want that first precious breath—and every breath thereafter—to be healthy. We have a long way to go.

Dirty soot ($PM_{2.5}$)—tiny particles 2.5 microns in size mainly produced by the combustion of coal, diesel, gasoline, biofuels, and related high-temperature industrial activities—kills up to 200,000[i] individuals each year and is the leading cause in 1 out of every 9 premature pregnancies (1 in 5 if the mother is African American).[ii] And despite our advances in neonatal care, 35% of premature babies still die in the United States.[iii] Soot is also a leading factor in nine different causes of premature death[iv] in the United States including heart, lung, and kidney diseases. What's more, new medical studies suggest that soot may even play a role in the progression of dementia[v] and even an 8% increase in breast cancer.[vi]



Getting to the Heart of the Particulate Matter

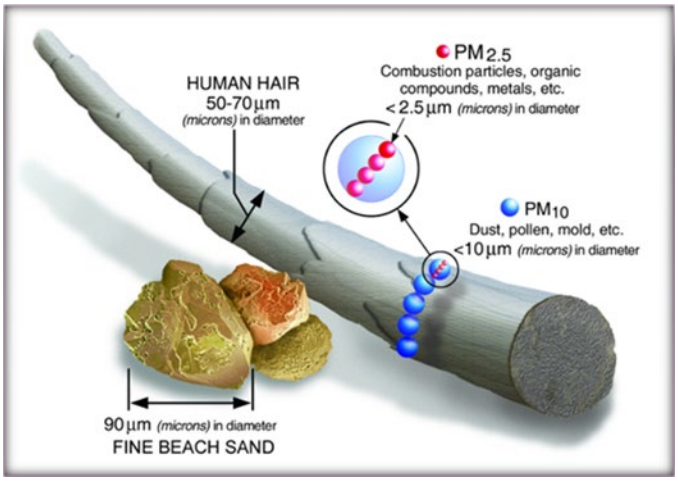


Particulate matter air pollution is associated with numerous adverse health effects. Credit: NASA/JPL-Caltech

$PM_{2.5}$ is not some theoretical concern or just an urban issue. I live in York County, Pennsylvania. While York received a passing grade for $PM_{2.5}$ levels from the American Lung Association 2023 State of the Air Report, my neighboring county of Lancaster failed for short-term particle pollution. Other neighboring counties like

Cumberland and Dauphin currently squeak by with almost-failing D's. Pennsylvania's two most populous areas, Pittsburgh, and Philadelphia, both fail for short- and long-term particle pollution.[vii]

According to a 2022 United Health Care Report, Pennsylvania ranks 46th of 50[viii] in state air and water quality. Although the data is somewhat dated, other researchers recently listed my Central Pennsylvania home as the 8th worst in particle pollution.[ix]



Soot isn't just dirt. It is a tiny (more than 26 times smaller than the width of a human hair), complex mixture of soot (black carbon), organic chemicals, nitrates, sulfates, metals, and other toxics that can penetrate deep into the lungs, blood stream and brain. The medical community has long known that unborn children are especially vulnerable to dirty air, especially tiny particle matter.

What is exceedingly clear is that current National Air Quality Standards for $PM_{2.5}$ of yearly 12 ug/m^3 (micrograms per cubic meter) and the 24-hour 35 ug/m^3 fail to defend our children and egregiously harm racial minorities and people with low income.[x]

All of us would agree that our children, both unborn and born, are precious and must be defended from the threats posed by soot. We want EPA to follow the advice of its own Clean Air Scientific Advisory Committee (CASAC), the World Health Organization, and the latest medical research by setting stronger standards for both 24-hour and yearlong exposure to this deadly pollution. Based on their research, the WHO has updated their guidelines to state that the annual average concentrations of $PM_{2.5}$ should not exceed an average of 5 µg/m^3, and 24-hour exposure should not exceed 15 µg/m^3 on more than 3-4 days per year.[xi] The new proposed **EPA *National Ambient Air Quality Standards for Particulate Matter*** are approximately double the WHO recommendations.

While EPA estimates 4,500 lives would be saved with a reduction to its proposed yearly level of 9 µg/m^3, one medical research paper estimates 19,000 lives/year would be saved by lowering the standard just one more microgram to 8 ug/m^3.[xii] Other research reports that for every 1 ug/m^3 $PM_{2.5}$ reduction nationwide, approximately 12,000 lives/year could be saved. This means that the difference between the EPA's proposed yearly levels and the WHO's suggested yearly levels represents 48,000 American lives.

In our efforts to decrease $PM_{2.5}$ in the ***National Ambient Air Quality Standards*** we must address the increased threats associated with wildfire generated particulate matter. According to at least one study, wildfire smoke increased the average annual $PM_{2.5}$ concentrations in nearly three-quarters of states in the lower forty-eight states, eroding some of the previous reduction gains.[xiii] Acting on climate change is the ultimate solution to the multitude wildfires raging throughout North America from Canada to the Western United States and even in Louisiana. The NAAQS cannot directly address climate, but fairness for all demands an attribution methodology accounting for wildfire generated $PM_{2.5}$ must be integral to the new $PM_{2.5}$ standards.

Although many believe that the air quality in the United States is good enough to protect all God's children, in fact we need to lower pollution levels even further. Please prioritize the health of children by proposing and finalizing National Ambient Air Quality Standards for Particulate Matter that match what the science shows is the absolute minimum acceptable level: 8 µg/m^3 for the annual standard and 25 µg/m^3 for the 24-hour standard.

Our Christian Scriptures demand that we "defend the weak and the fatherless; uphold the cause of the poor and the oppressed. Rescue the weak and the needy (Psalm 82: 3-4 NIV)." Setting adequate $PM_{2.5}$ standards is one way we can follow the Bible's commands. We have the technology and the medical knowledge to set adequate $PM_{2.5}$ standards. The only question that remains is whether we will do the right thing and defend our children's lives or sacrifice their health in the name of maximum industry profit.
As an evangelical who cares deeply for life from conception until nature death, I pray you act for our kids, our seniors, and all of God's precious image bearers. Every one of us deserves clean air.

Sincerely,

The Rev. Mitchell C. Hescox
President Emeritus

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[ii]Nachman RM, Mao G, Zhang X, Hong X, Chen Z, Soria CS, He H, Wang G, Caruso D, Pearson C, Biswal S, Zuckerman B, Wills-Karp M, Wang X. Intrauterine Inflammation and Maternal Exposure to Ambient PM2.5 during Preconception and Specific Periods of Pregnancy: The Boston Birth Cohort. Environ Health Perspect. 2016 Oct;124(10):1608-1615. doi: 10.1289/EHP243. Epub 2016 Apr 27. PMID: 27120296; PMCID: PMC5047781.

[iii] [11]Leonardo Trasande, Patrick Malecha, and Teresa M. Attina, Particulate Matter Exposure and Preterm Birth: Estimates of U.S. Attributable Burden and Economic Costs, ENVIRONMENTAL HEALTH PERSPECTIVES, http://dx.doi.org/10.1289/ehp.1510810, March 2016

[iv] Benjamin Bowe, MPH[1,2]; Yan Xie, MPH[1,2,3]; Yan Yan, MD, PhD[1,4]; et al., Burden of Cause-Specific Mortality Associated With $PM_{2.5}$ Air Pollution in the United States, *JAMA Netw Open.* 2019;2(11): e1915834. doi:10.1001/jamanetworkopen.2019.15834

[v] Tessum CW, Apte JS, Goodkind AL, Muller NZ, Mullins KA, Paolella DA, Polasky S, Springer NP, Thakrar SK, Marshall JD, Hill JD. Inequity in consumption of goods and services adds to racial-ethnic disparities in air pollution exposure. Proc Natl Acad Sci U S A. 2019 Mar 26;116(13):6001-6006. doi: 10.1073/pnas.1818859116. Epub 2019 Mar 11. PMID: 30858319; PMCID: PMC6442600.

[vi] White AJ, Fisher JA, Sweeney MR, Freedman ND, Kaufman JD, Silverman DT, Jones RR. 2023. Ambient fine particulate matter and breast cancer incidence in a large prospective US cohort. Journal of the National Cancer Institute. https://doi.org/10.1093/jnci/djad170(link is external)

[vii] https://www.lung.org/research/sota/city-rankings/states/pennsylvania

[viii] https://www.unitedhealthgroup.com/newsroom/2023/2023-06-13-uhg-releases-2022-sustainability-report.html#:~:text=Healthy%20environment%2C%20through%20its%20commitment,the%20volume%20of%20envelopes%20used.

[ix] https://www.theguardian.com/us-news/2023/mar/08/10-most-air-polluted-places-to-live-us

[x] Qian Di, Yan Wang, Antonella Zanobetti, Yun Wang, Petros Koutrakis, Christine Choirat, Francesca Dominici, Joel D. Schwartz (2017) "Air Pollution and Mortality in the Entire Medicare Population" *New England Journal of Medicine* doi: 10.1056/NEJMoa1702747

[xi] https://www.c40knowledgehub.org/s/article/WHO-Air-Quality-Guidelines?language=en_US

[xii]Turner MC, Jerrett M, Pope CA 3rd, Krewski D, Gapstur SM, Diver WR, Beckerman BS, Marshall JD, Su J, Crouse DL, Burnett RT. Long-Term Ozone Exposure and Mortality in a Large Prospective Study. Am J Respir Crit Care Med. 2016 May 15;193(10):1134-42. doi: 10.1164/rccm.201508-1633OC. PMID: 26680605; PMCID: PMC4872664.

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