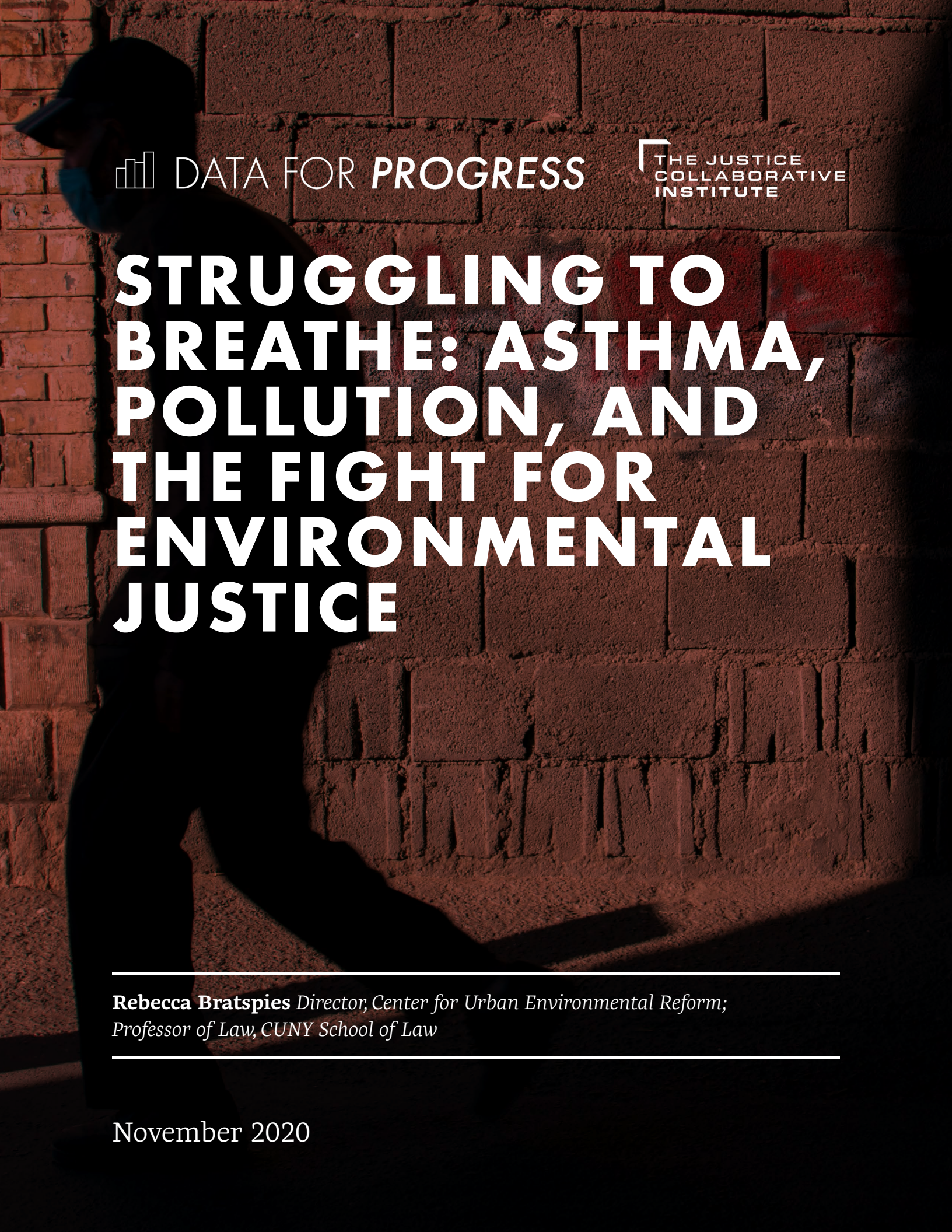

DATA FOR *PROGRESS*

THE JUSTICE COLLABORATIVE INSTITUTE

STRUGGLING TO BREATHE: ASTHMA, POLLUTION, AND THE FIGHT FOR ENVIRONMENTAL JUSTICE

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EXECUTIVE SUMMARY

Asthma rates in the United States are intimately connected with environmental policy choices. Weak regulation or non-compliance with pollution control has resulted in uneven air quality across the country and corresponding elevated health risks. The disease burden has fallen primarily on nonwhite communities, and particularly nonwhite children, who—due to America's racialized housing geography—tend to live in more heavily-polluted communities.

We can make better environmental policy choices that will lead to dramatic improvements to community health. The federal government can set stricter limitations on emissions and can more rigorously enforce existing regulations. States and local governments can act in the absence of federal enforcement by eliminating the dirtiest fuel oils, rerouting trucks, and requiring companies they contract with to use vehicles that meet stringent pollution control standards. We can also reduce the impact of pollution by investing in green infrastructure, such as planting more trees, and by empowering communities to reduce asthma triggers in homes and schools.

There is significant popular support for the actions necessary to improve air quality and reduce asthma rates. Polling from Data for Progress and The Justice Collaborative Institute found that a majority of likely voters (65%), including 59% of Republicans and 56% of Independents, support stricter air quality standards even when it results in increased costs to the companies who produce the pollutants.

When asked about reasons to increase EPA standards for air pollution, 79% of respondents found convincing, with a majority (55%) finding strongly convincing, the argument that every child—no matter whether they are white, Black, or brown—deserves clean air. This response was consistent across party affiliation, with support from Republicans (74%), Independents (69%), and Democrats (93%). Additionally, a majority of likely voters (61%) found convincing the reason to increase EPA standards is air pollution has disproportionately impacted poor and nonwhite communities and made them more vulnerable to COVID-19.

INTRODUCTION

We all need to breathe. The average adult breathes 16 times every minute, more if they are exercising. Children breathe even more frequently. Infants take 60 breaths per minute while the typical pre-teen breathes 20 times a minute. But for the 2.5 million Americans living with asthma, each breath can be a struggle. Worse, in polluted neighborhoods, each breath takes in not only much-needed oxygen, but also unsafe levels of particulates, nitrous oxides, sulfur oxides, and ozone. These common pollutants, which are produced when fossil fuels are burned by everything from traffic to heavy industry, make asthma and other cardio-pulmonary diseases more likely and more severe. Living with pollution takes a well-documented toll on the health of children and adults alike. But young people are particularly vulnerable to long-term effects from exposure to air pollution because their bodies are still developing.

Asthma has become a scourge of childhood. Across the United States more than 10% of adolescents have asthma. One out of six pediatric emergency visits is asthma-related. Each year, children miss more than 10 million school days due to asthma.

This disease burden is not shared equally. A Black child in New York City is 42% more likely to have asthma than a white child, eight times more likely to be hospitalized for asthma-related ailments, and two or three times as likely to miss school because of asthma. Racially disparate asthma statistics hold true across the country, with the percentage of Black children suffering asthma more than double that of white children. Overall, Black Americans have more than double the risk of dying from asthma-related complications. There are many reasons for these disparities, but disproportionate exposure to pollution is a major driver of the outsized asthma burden that Black Americans bear.

You are Where You Live

The United States Clean Air Act requires the United States Environmental Protection Agency (EPA) to set air quality standards at a level "requisite to protect the public health" with an adequate margin of safety. These standards, introduced in the 1970s, are credited with significantly improving air quality in many parts of the country. Yet, hundreds of counties remain out of compliance.

A closer look at the data shows that the impacts of noncompliance with these air quality standards hit low income and minority communities particularly hard. For example, New York City is a serious noncompliance zone for ozone, one of the pollutants regulated by the Clean Air Act. That means that New Yorkers routinely breathe air that does not meet the standard of "requisite to protect the public health." However, that city-wide characterization obscures a more nuanced situation in which the city's low-income and nonwhite communities bear the brunt of the health impacts from this pollution while whiter, wealthier communities breathe cleaner air. For example, the overwhelmingly Black and Latinx Bronx neighborhood of Hunts Point/Mott Haven has extremely high levels of ozone and particulate pollution. Asthma rates there are more than double the city-wide average, and affected children visit hospital emergency rooms for asthma-related ailments at a rate many times greater than the city-wide average. By contrast, Tottenville, a relatively wealthy, overwhelmingly white neighborhood on Staten Island has significantly less pollution, and its children visit hospital emergency rooms for asthma-related ailments at a rate nearly an order of magnitude below the city-wide average.

There is a term for this phenomenon—environmental racism. Across the United States, communities of color bear disproportionate pollution burdens and suffer elevated environmental health risks. Black and brown Americans are more likely to live in polluted neighborhoods with heavy truck traffic, and/or close to polluting industries. This is not by accident, or by choice. America's complicated racial geography has its roots in generations of redlining and housing discrimination.

The United States has a long history of steering polluting industry into communities of color. Eighty percent of waste incinerators are in low-income, nonwhite communities. More than 1 million African Americans live within a half-mile of a source of fossil fuel air pollution. Even though air pollution is overwhelmingly generated

by white people, it is Black and brown Americans who breathe it. Overall, Black Americans are 1.5 times more likely than white Americans to live in a neighborhood with unsafe air pollution levels. This disparity has given rise to, and been documented by, a growing environmental justice movement which seeks to remedy this situation.

Asthma is "Common, Deadly, Disruptive, and Expensive"

America's complicated racial geography creates a profound inequality in terms of pollution exposure and its effects. Black children in overburdened neighborhoods suffer from disproportionately high pollution-related asthma rates. This disease burden amplifies other social disadvantages. Black children are already more likely to be attending segregated, under-resourced schools, where they are more likely to be suspended or subject to harsh discipline. Asthma compounds these existing racial inequalities. Black children have higher asthma rates and miss more days of school due to asthma complications. Days missed from school are a stark predictor of academic success. Asthma, and the pollution that exacerbates it, sets up a vicious cycle for vulnerable children. Unequal access to disease management further compounds this cycle.

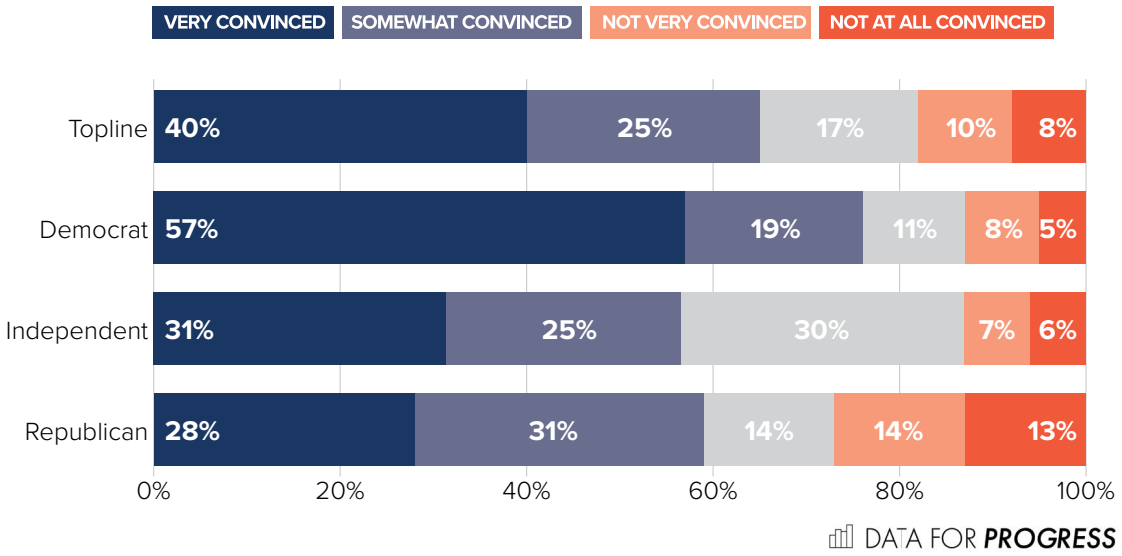
Childhood asthma does not only harm children. It also takes an economic and emotional toll on their family. Caregivers miss work and lose wages to care for sick children and are often forced to divert money from other family needs to cover expensive medications and treatments. These immense economic costs are accompanied by equally large social and emotional costs. Statistics do not begin to capture the trauma that comes from watching a child struggle to breathe. These burdens affect nonwhite parents far more often than they do their white counterparts.

The Path Forward

Pollution is more than an environmental issue. The Lancet recently characterized pollution as a "transcendent problem" that affects the wellbeing of all of society. The World Health Organization calls air pollution a public health emergency. We need to take this crisis seriously and recognize that everyone has the right to breathe clean air.

Americans overwhelmingly support the stricter air pollution standards needed to make this right a reality. Polling from Data for Progress and The Justice Collaborative Institute found that a majority of likely voters (65%), including 59% of Republicans and 56% of Independents, support stricter air quality standards even when it results in increased costs to the companies who produce the pollutants.

Asthma is a condition that is caused by a combination of factors, including environmental factors. Children who grow up in areas with high levels of air pollution are more likely to have asthma than those who do not. A recent study by the Environmental Protection Agency showed that making air quality standards higher could save over 10,000 lives. Do you support or oppose stricter air quality standards, even if it means that companies that produce pollutants will have higher costs to meet the new standards?



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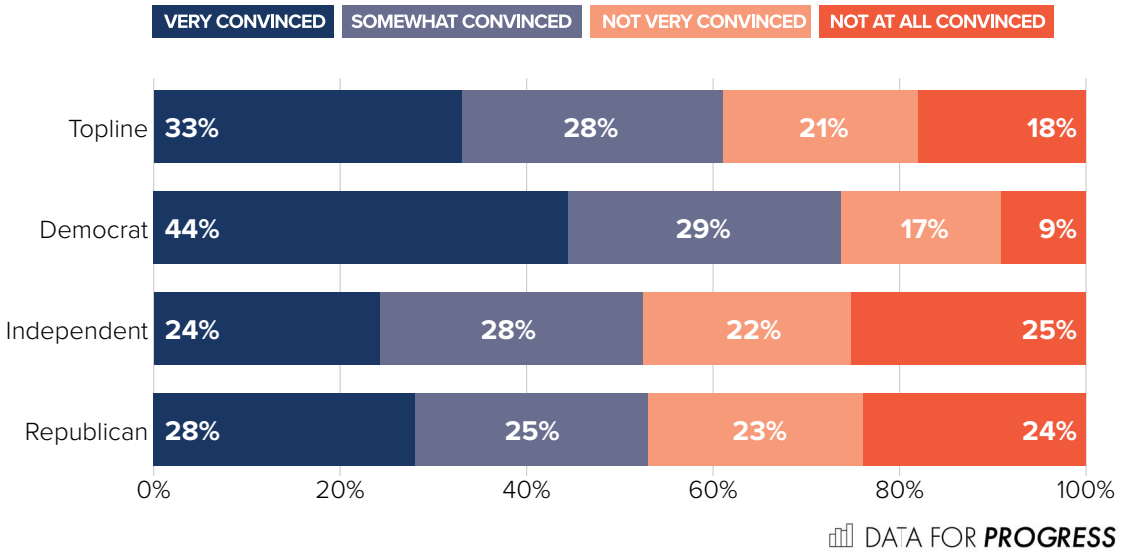
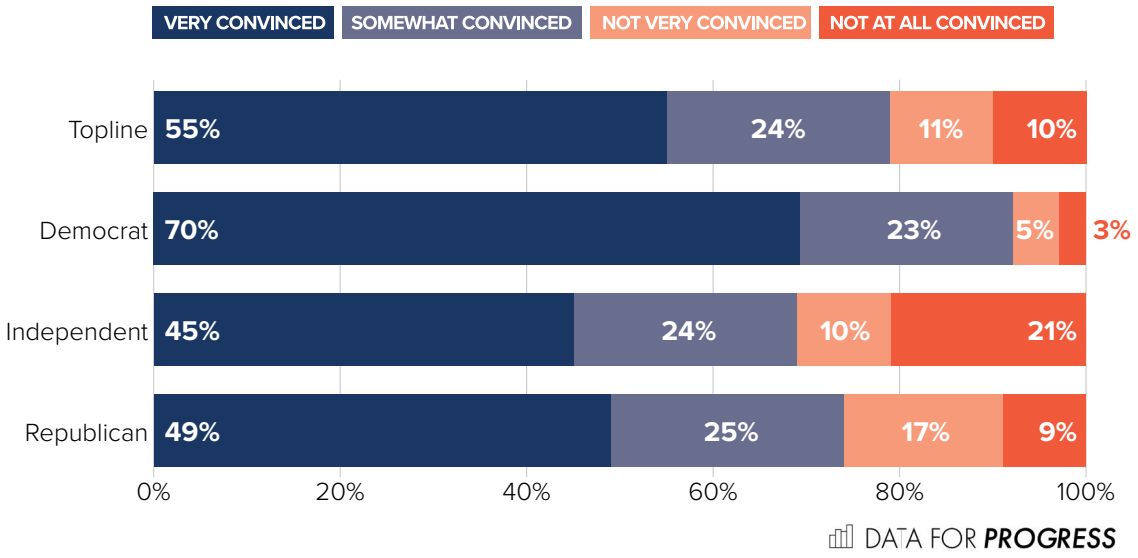
How convincing do you find the following as a reason to increase EPA standards for air pollution: One of the major reasons that COVID-19 has hit Black and brown communities so hard is that air pollution has predisposed many working class and poor people to pollution and bad air quality, which has made them more vunerable. We need to clean up the air for everyone to change this.



How convincing do you find the following as a reason to increase EPA standards for air pollution: Every child, no matter if they are white, Black, or brown, deserves to breathe clean air.



The good news is that we can take concrete steps today to solve this problem. There are three parallel paths forward: decreasing the pollution in overburdened communities, mitigating the effects of pollution within those communities, and empowering asthma sufferers to push for safer environments. We can pursue all three paths at once using proven, well-established technologies and regulatory tools. We just need to muster the political will. Another bit of good news—the many economic and social benefits from preventing pollution far outweigh the costs.

1) DECREASE POLLUTION IN OVERBURDENED COMMUNITIES

To counteract environmental racism in air pollution, federal regulations should set more stringent emissions limits and enforce existing restrictions more aggressively. For example, the federal government's 2015 Clean Power Plan would have dramatically reduced air pollution along with carbon emissions. An Obama-era truck rule would have required better pollution control technology in the heavy trucks that disproportionately traverse nonwhite communities. These regulatory changes would have dramatically improved air quality in environmental justice communities with elevated asthma levels. Unfortunately, the Trump administration reversed course—relaxing regulations to allow more, rather than less, air pollution and using the pandemic to justify lax enforcement. The incoming Biden administration should work quickly to restore these vital protections. By executive order, President Joe Biden could increase pollution monitoring in frontline communities and prioritize rigorously enforcing pollution limits in these vulnerable communities. President Biden could also restore California's ability to issue stringent vehicle emissions standards. However, revamping federal environmental law to address the profound structural inequalities that drive the asthma/pollution crisis will take time.

When federal agencies back away from protecting the most vulnerable, confronting these problems is more complicated. States and local governments can step in to fill many of the gaps created by federal abdication. They can reroute trucks, establish targeted low-emission zones, and require contractors to convert from pollution-heavy diesel trucks to an all-electric fleet. They can also eliminate the use of the dirtiest fuel oils in industrial facilities and dwellings within their jurisdictions. New York City has been phasing out dirty fuel oils since 2015, a move that is credited with significantly reducing particulate and sulfur oxide pollution. In any such program, careful attention is needed to ensure that progress is made in the environmental justice neighborhoods burdened with the highest asthma rates. State and local governments can also electrify their vehicle fleets, including municipal and school bus fleets. Not only will such a switch dramatically reduce air pollution and asthma, it will also save money because electric buses are cheaper to purchase and run.

On a more structural level, states and municipalities can adopt laws, like New Jersey's new environmental justice law. This law not only requires a cumulative impact assessment before adding new pollution sources into overburdened communities, but also empowers the state to reject a permit application if it would compound the cumulative disproportionate impact on an environmental

justice community. Flagging cumulative impacts and then refusing to further compound them is the key to comprehensive planning for cleaner air in the most polluted areas. This approach can include preventing new polluting facilities in overburdened areas but also retrofitting or remediating existing pollution sources.

The law also invigorates community engagement rules designed to level the typically uneven playing field between overburdened communities and polluting industry. As part of any permitting process in an overburdened community, the applicant must conduct a public hearing to provide the affected community with the opportunity to comment, and must provide the funding to hire the experts needed to ensure their full participation. The New Jersey law is a model that can be replicated elsewhere.

2) REDUCE IMPACTS OF EXISTING POLLUTION

One straightforward way to reduce the impacts of existing pollution in overburdened communities is by planting trees. Trees sequester pollution and purify the air right where people live. They can be a linchpin of green infrastructure. Neighborhoods that are the most exposed to air pollution generally have the fewest trees. Strategic tree planting, with community involvement and support, can make a real difference to pollution levels and pollution-related asthma rates. For example, there is clear evidence that children living on tree-lined streets are less likely to develop asthma. As a side benefit, trees provide shade and cooling. By reducing energy consumption while simultaneously mitigating the urban heat island effect, planting trees can create a virtuous cycle that decreases pollution load from energy consumption and reduces asthma.

3) EMPOWER ASTHMA SUFFERERS TO CREATE NEEDED CHANGE

One relatively clear way to empower asthma sufferers is to reduce asthma triggers in the home. While the power of this kind of intervention is clear, it is not necessarily easy. Many of those most vulnerable to asthma in environmental justice communities are renters. Because they do not own the structures they inhabit, renters may not be able to remove asthma triggers from their homes. New York City's 2018 Asthma Free Housing Act seeks to address this conundrum by requiring that landlords identify, treat, and mitigate indoor asthma triggers annually. This law specifically creates landlord obligations vis-à-vis asthma triggers like mold and pests and provides tenant remedies if landlords neglect their duties. This local law could be easily replicated elsewhere. Every state in the country already recognizes the implied warranty of habitability, and this approach could breathe new life into that pre-existing legal principle.

Another important step is the adoption and promotion of green cleaning products in schools and homes. EPA has a list of safer choice cleaning products that meet stringent ingredient safety standards. Requiring that schools use unscented safer choices, and encouraging consumers to select these products for home use can improve the indoor air quality and reduce exposure to asthma triggers.

Finally, investing in school nurses can dramatically improve outcomes for children with asthma. Data shows that having access to school nurses helps students with asthma manage their illness, reducing days missed from school and breaking the vicious cycle of asthma absenteeism. Investing in school-based management programs significantly improves outreach to high-risk students, and increases compliance with asthma self-management regimes.

CONCLUSION:

A host of well-documented health burdens flow from long-term exposure to air pollution, including higher rates of asthma, stroke, cardiovascular disease, neurocognitive disease, and some cancers. As COVID-19 has swept the globe, this link between air pollution and illness has become painfully clear. Many of these pollution-related illnesses are the same pre-existing conditions that increase the risk of severe COVID-19 symptoms. A recent Harvard study found that those living in a high pollution area have a significantly elevated risk of dying from COVID-19. Even small increases in long-term exposure to particulate pollution led to a large increase in COVID-19 death rates. Past exposure to pollution thus adds an additional layer of vulnerability to those Black and brown Americans already at greater risk of COVID-19 infection because of their jobs. Worse, there is a direct connection between current exposure to air pollution and the likelihood of acquiring COVID-19 infections because the polluted air that environmental justice communities disproportionately breathe may actually help spread the coronavirus.

COVID-19 has shown us that pollution is a threat multiplier. The converse is true as well—reducing air pollution can be a health multiplier. As a bonus, the changes needed to reduce air pollution are often the same changes needed to reduce the greenhouse gas emissions causing climate change. If we take these steps, a different world is within our grasp. A world where parents need not watch their children struggle to draw a breath, where children do not miss school, and adults do not miss work due to pollution-related asthma; a world where no one suffers the physical, economic, and emotional pain of pollution-induced illness. The result will be fairer, cleaner cities and healthier people.

COVER PHOTO
Javad Esmaeili / UNSPLASH