

# Climate Justice & Health

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**The time is always right  
to do what is right**



**Good Trouble**

**Holy Chutzpah**

1964 Civil  
Rights Act

1971 CEQ report  
acknowledges  
disproportionate  
impacts of  
pollution

1983 GAO  
Report

1990  
Dumping  
in Dixie

1991  
EPA Office of  
Environmental  
Equity

1968 Sanitation  
Strike w/Dr. King

1982 Warren  
County Protest

1987 Toxic  
Waste & Race

1991 First Nat'l  
People of Color  
Summit

1993 First state  
environmental  
equity legislation

Sources:

“Environmental Justice Timeline” A project of the ACRE-Duke Partnership  
to Improve Sanitation Access in Lowndes County, Alabama

“Environmental Justice Timeline” U.S. EPA

# Executive Order 12898, 1994



## Equality



The assumption is that everyone benefits from the same supports. This is equal treatment.

## Equity



Everyone gets the supports they need (this is the concept of "affirmative action"), thus producing equity.

## Justice



All 3 can see the game without supports or accommodations because the cause(s) of the inequity was addressed. The systemic barrier has been removed.



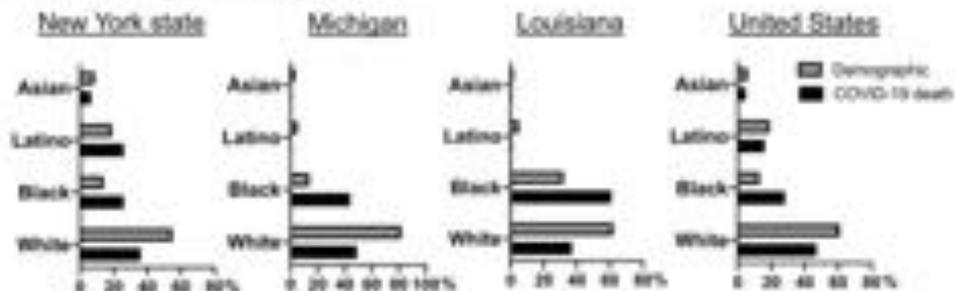
# Environmental Burden of Disease

~ 25% of global disease burden is attributable to environmental risks



# Health Disparities

## COVID-19 fatality rates

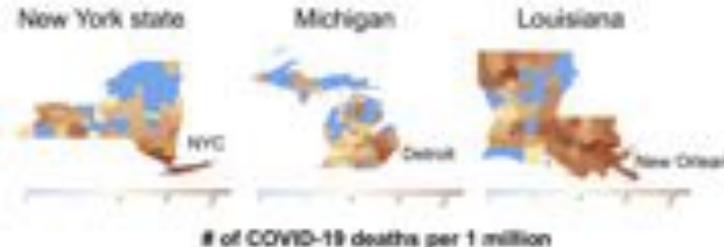


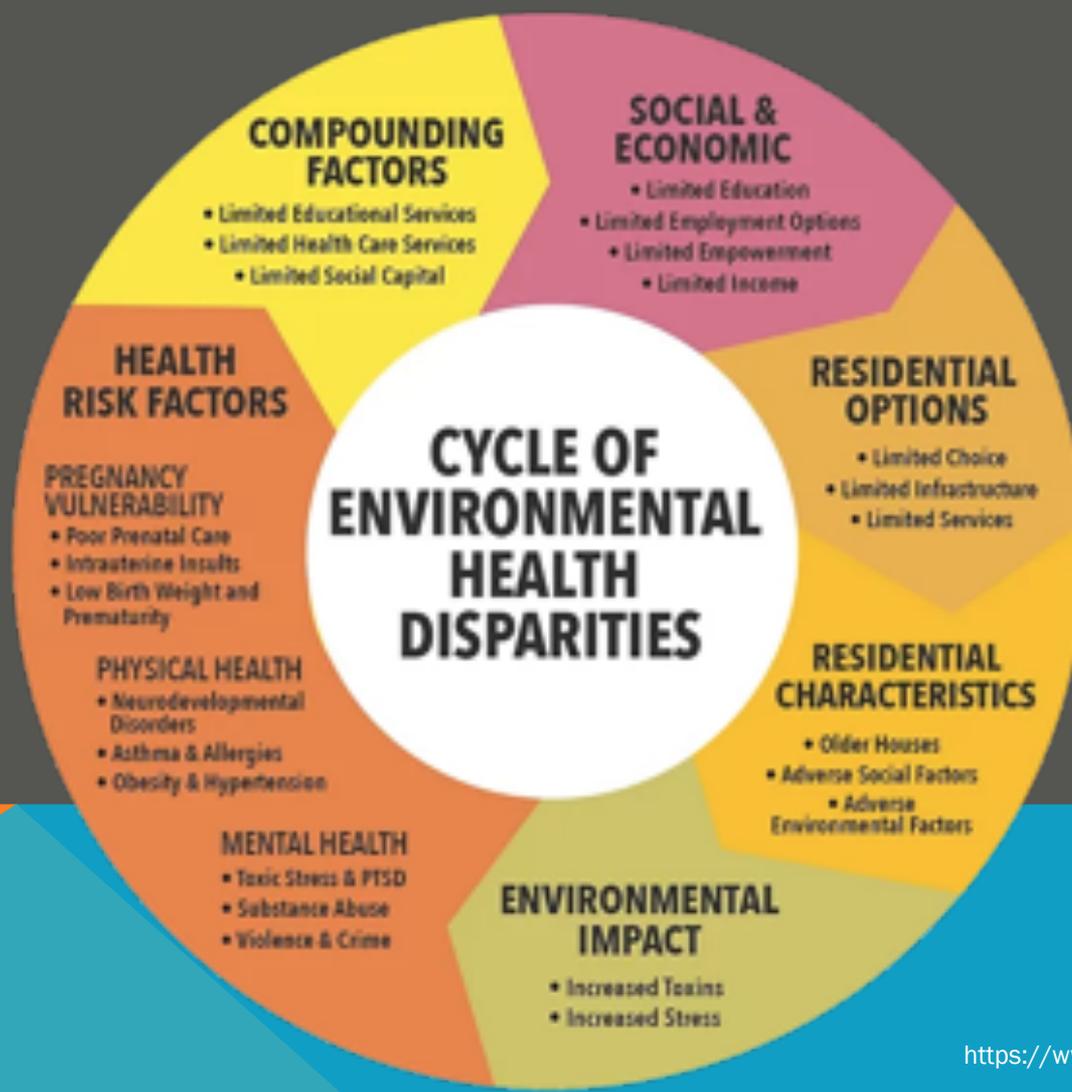
## Contributing socioeconomic, racial & environmental factors:

- Structural racism
- Crowded living conditions, multi-generational homes
- Limited access to health care and healthy foods
- Working in low paying "essential" jobs
- Chronic exposure to air pollution

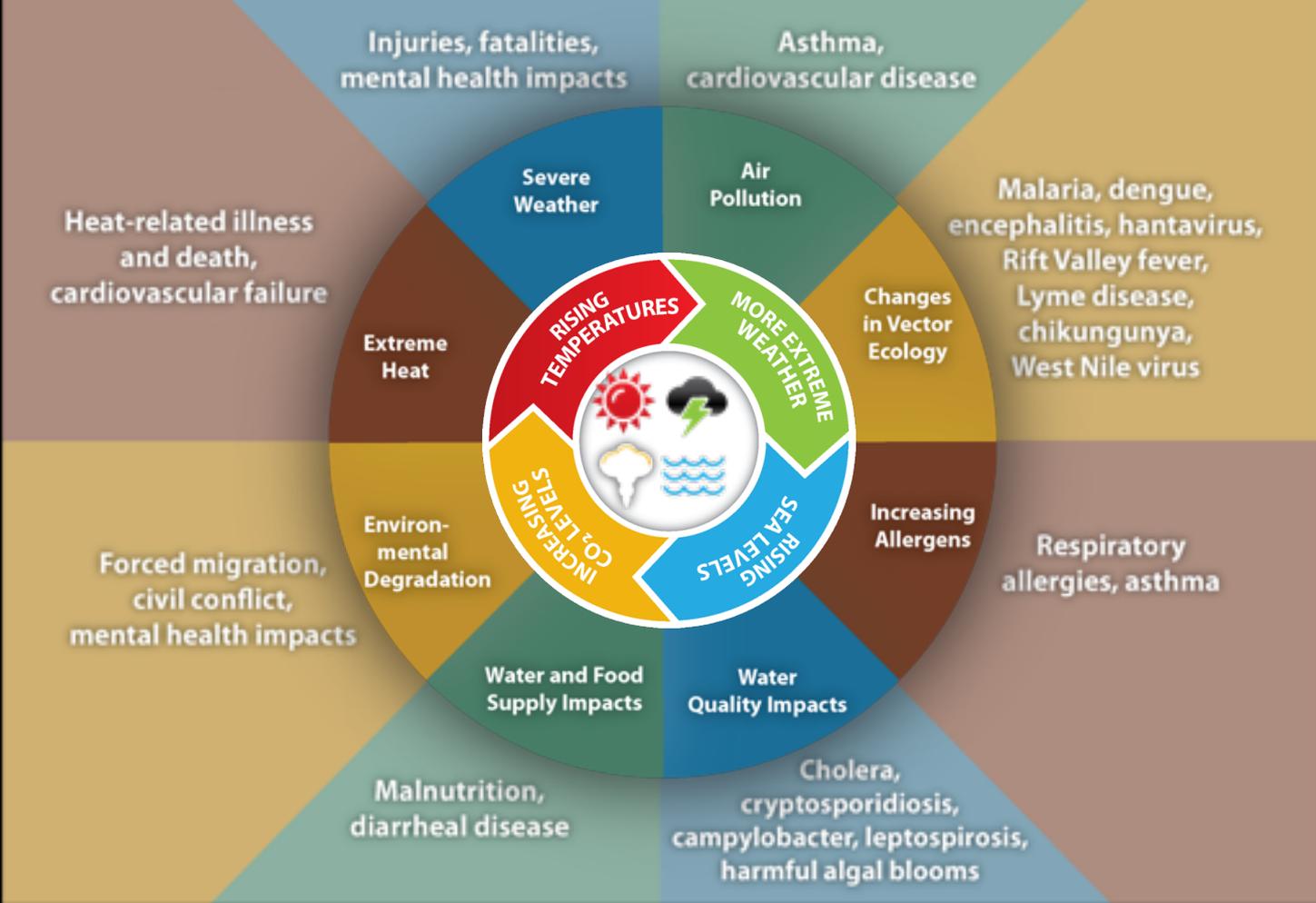
## COVID-19 risk factors

- Age > 65
  - Living in nursing home
- Sex (male)
- Severe obesity
- Diabetes
- Serious heart conditions
  - pulmonary hypertension
- Immunocompromise (cancer...)
- Chronic kidney disease
- Chronic liver disease
- Chronic lung disease
  - COPD
  - Severe Asthma





# Impact of Climate Change on Human Health



# Populations Vulnerable to Climate Change

## COMMUNITIES OF COLOR

Some communities of color living in risk-prone areas face cumulative exposure to multiple pollutants.

Adaptation plans that consider these communities and improve access to healthcare help address social inequities.

## OLDER ADULTS

Older adults are vulnerable to extreme events that cause power outages or require evacuation.

Checking on elderly neighbors and proper emergency communication can save lives.

## CHILDREN

Children have higher risk of heat stroke and illness than adults.

Adults can lessen risk by monitoring exertion and hydration.

## LOW INCOME COMMUNITIES

Low income families are at risk of physical and mental illnesses during flooding and in crowded shelter conditions.

Comprehensive disaster management can improve resiliency for people with limited resources.



		Sasha   AGE: 6   BLACK	Mary   AGE: 23   WHITE	Cesar   AGE: 42   LATINK	Young   AGE: 80   ASIAN
					
		Asthma attack from air pollution	Birth complications	Death from heatstroke	Heat-related heart failure
VULNERABILITY CATEGORY	SUSCEPTIBILITY	<ul style="list-style-type: none"> <li>Child</li> <li>Asthma</li> <li>Otherwise healthy</li> </ul>	<ul style="list-style-type: none"> <li>Young adult</li> <li>Pregnant</li> <li>Healthy</li> </ul>	<ul style="list-style-type: none"> <li>Middle age</li> <li>High blood pressure</li> <li>Medication increases heat sensitivity</li> </ul>	<ul style="list-style-type: none"> <li>Older age</li> <li>Heart condition</li> <li>Medication increases heat sensitivity</li> </ul>
	EXPOSURE	<ul style="list-style-type: none"> <li>Person of color*</li> <li>Lives by sources of air pollution</li> <li>Air pollution worsened by heat</li> </ul>	<ul style="list-style-type: none"> <li>Apartment with poor insulation</li> <li>Subway to work doesn't have A/C</li> <li>A/C at work</li> </ul>	<ul style="list-style-type: none"> <li>Person of color*</li> <li>Works outside in the sun</li> <li>No A/C at home</li> </ul>	<ul style="list-style-type: none"> <li>Person of color*</li> <li>Room on top floor</li> <li>Poor A/C in nursing home</li> </ul>
	ABILITY TO ADAPT	<ul style="list-style-type: none"> <li>Inadequate health insurance</li> <li>Middle class</li> <li>Good family support</li> </ul>	<ul style="list-style-type: none"> <li>Health insurance</li> <li>Poor</li> <li>Lack of social support</li> </ul>	<ul style="list-style-type: none"> <li>No health insurance</li> <li>Undocumented immigrant</li> <li>Good social support</li> </ul>	<ul style="list-style-type: none"> <li>Health insurance</li> <li>Middle class</li> <li>Limited mobility</li> </ul>
HEALTH OUTCOME		 Visits emergency department for an asthma attack	 Struggles to protect herself from heat but delivers a healthy baby	 Develops heatstroke and nearly dies	 Long hospitalization for heart failure
ADAPTATION ACTION		Real-time air-quality surveillance program sends warnings to vulnerable residents when pollution levels are high	Doctor is further educated on how heat impacts clinical practice and proactively counsels on heat risk throughout pregnancy	State health officials institute new heat safety regulations to protect outdoor workers	Nursing home implements a heat emergency protocol to protect patients and invests in A/C improvements

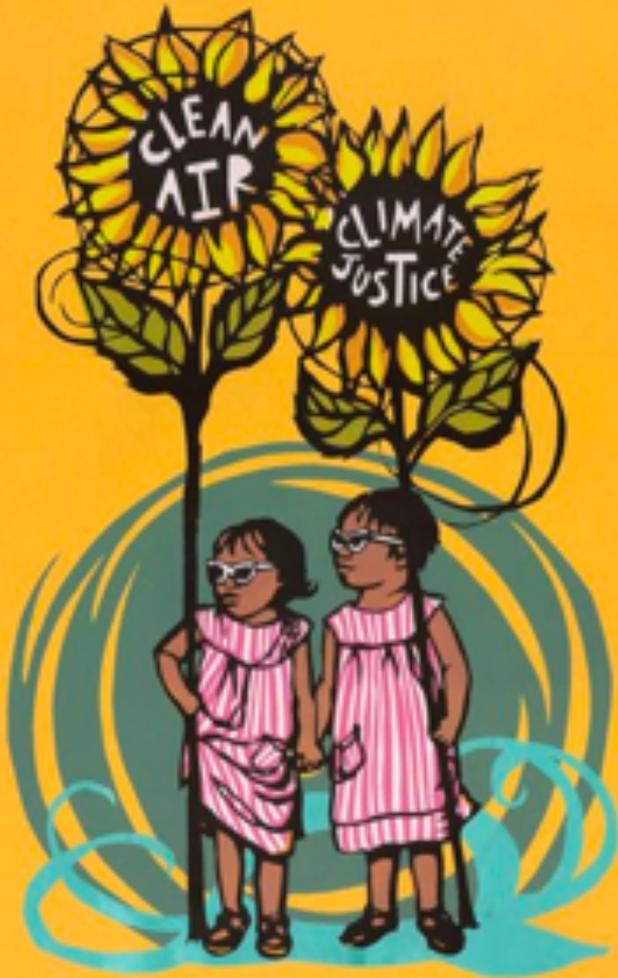
# Unequal Health Vulnerability in a Heatwave

Source: Lancet Countdown, 2019: 2019 Lancet Countdown on Health and Climate Change Policy Brief for the United States of America. Salas RN, Knappenberger P, Hess JJ. Lancet Countdown U.S. Policy Brief, London, United Kingdom, 11 pp.

Today, they are some of the **hottest parts of town** in the summer, with few trees and an abundance of heat-trapping pavement.

Cooler Summer temperature Hotter





# Advancing Justice

- **Climate justice is racial justice**
- **Wherever in the spectrum, it is vital to center equity in advocacy and solutions**
- **“The only way to undo racism is to consistently identify and describe it — and then dismantle it.” – Ibram X. Kendi**

**Photo:** Climate Justice poster, tall format, by Bec Young with [www.justseeds.org](http://www.justseeds.org) #PeoplesClimate March

# Intergenerational Justice

**MAKING THE CONNECTION:**

## Climate Changes Children's Health

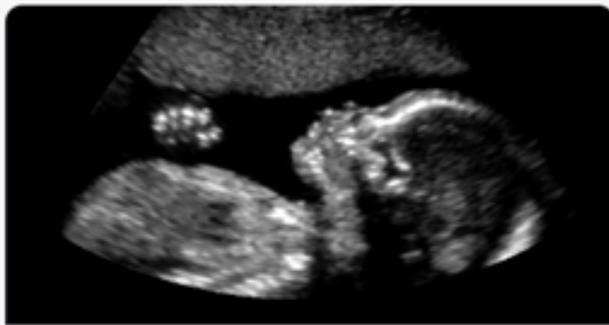
The burning of fossil fuels causes the release of carbon dioxide, which builds up in the atmosphere and causes Earth's temperature to rise—this is climate change. Upstream burning of fossil fuels produces heat-trapping toxins that are released into the air, harming our health downstream. The Earth's average temperature has increased by nearly 1.5°F in the last century, with recent years being the warmest on record. However, climate change refers to the lasting disruption of our weather patterns, not just temperature increases. Some of these weather-related changes include increased floods and droughts, wildfires, intense storms, heat waves, and rising sea levels. These conditions have far-reaching environmental, social, agricultural, and economic effects and are ultimately harmful to our health and well-being. Children's health, wellness, and safety are affected by climate change.

- FAST FACTS**
- Around 88% of the global disease burden of climate change falls on children under 5 years.
  - Ozone is a known trigger for asthma attacks. Over 2 million children who suffer from asthma live in areas of the U.S. with unhealthy ozone levels by the American Lung Association.
  - Rates of heat-related death for infants under 1 year are 4 times as high as for persons 1-44 years old.
  - After Superstorm Sandy children living in homes with damage were over 5 times as likely to show signs of depression. They were over 8 times as likely to have difficulty sleeping and 5 times as likely to show signs of anxiety.

- BACKGROUND ON CHILDREN'S HEALTH**
- Children are especially vulnerable to climate change because of their physical and cognitive immaturity:
- Compared to adults, children breathe more air and drink more fluid for their body weight. Also, because they are shorter and spend more time on the ground, they are closer to ground-level pollutants. These factors cause children to have higher exposure levels than adults.
  - Children engage in different behaviors from adults, including what they eat and activities such as crawling on the ground and hand-to-mouth activities. These behaviors make them more vulnerable to air, water, and soil exposures.
  - Children have immature immune and organ systems. Thus, they are more sensitive to exposures that can cause permanent disabilities.
  - Children are dependent on caregivers and may not be able to respond appropriately to threats. As a result, they are at risk of injury or even death in extreme weather emergencies.
  - Children and adolescents engage in more outdoor activities than adults, leaving them more exposed to heat and outdoor air pollutants like ozone.



**Polluted air killing half a million babies a year across globe**  
 State of Global Air report says indoor air quality causing two-thirds of the deaths and affecting health in the womb  
 @theguardian.com



**Climate Change Tied to Pregnancy Risks, Affecting Black Mothers M...**  
 Women exposed to high temperatures or air pollution are more likely to have premature, underweight or stillborn babies, a look at 32 million ...  
 @nytimes.com

CHILDREN'S ENVIRONMENTAL HEALTH NETWORK

## CLIMATE CHANGE

Impacts on Children's Health & Equity in the U.S.

### Physical injury & death

Climate change worsens extreme weather events such as heat waves, hurricanes and flooding. It also causes more wildfires that are also larger and stronger.



Children are more likely to be injured or killed in extreme weather events due to their size, mobility, and dependence on caretakers, as well as other unique physiological and behavioral traits.

Young athletes are especially vulnerable to heat illness which can become life-threatening.

### Displacement

Thousands of U.S. children have been displaced as a result of hurricanes, flooding, and wildfires over the past decade. As a result of Hurricane Katrina (2005), approximately 372,000 children, most of whom were Black and poor, were forced to relocate. Many have not been able to return to this day.



### Mental health

Extreme weather events or climate disasters can result in the loss of loved ones, homes, friends, community, routines, and sense of stability. This increases children's risk for mental health issues such as depression, anxiety, and post-traumatic stress disorder. Mental health implications are especially concerning for those children who are already at higher risk, such as those living in under-resourced areas.

### Respiratory illness exacerbation

Warming temperatures create more smog and lead to longer and more intense pollen seasons—both of which worsens asthma symptoms.



Stronger and more frequent wildfires expose children to high levels of tiny particles in the air that can lodge deep in their lungs and cause or worsen respiratory illness. Black children are ten times more likely to die from asthma than non-Hispanic white children.

### Infectious disease

Increasing temperatures and climate disasters cause more food and water-borne illnesses (such as E.coli and Salmonella), due to flooding, structural damage, and power loss. Altered patterns of rainfall can increase the populations of mosquitoes, ticks and other insects that carry diseases such as Lyme disease, Dengue Fever, West Nile Fever, and Zika.

### Food insecurity

Disasters increase food insecurity for many children, as communities may be cut off from food deliveries, parents may face unpaid time off, and school closures disrupt free or reduced-price meal programs.



Also, power outages lead to food spoilage and may leave stores unable to process Supplemental Nutrition Assistance Program debit-like cards.

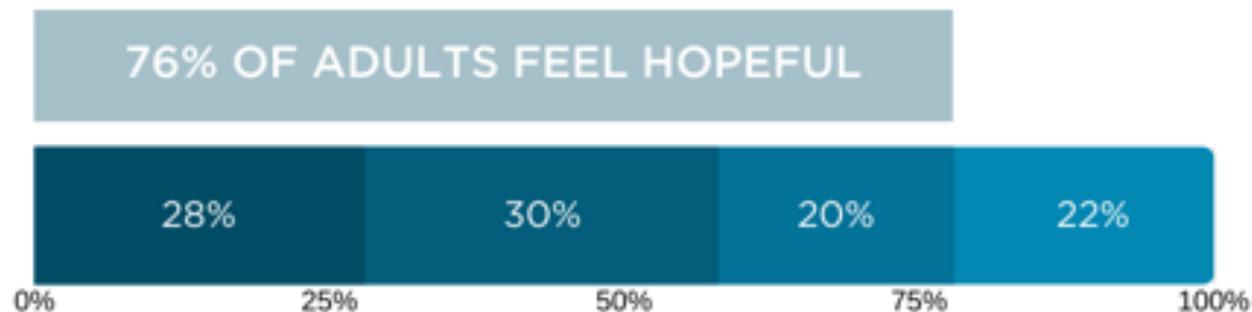
### Interrupted or unavailable services, treatment & education

Climate disasters destroy or threaten access to important community resources like government assistance agencies or community centers, especially in low-wealth areas.



Children remaining in or returning to the community may face interrupted, altered or canceled classes, doctors visits, or other important services. Children with medical conditions may lose access to medication, treatment, and care.

## Youth climate strikes are stoking American emotion:



# U.S. CALL TO ACTION ON CLIMATE, HEALTH, AND EQUITY: A POLICY ACTION AGENDA

2019

**Climate change is one of the greatest threats to health America has ever faced—it is a true public health emergency.** The health, safety and wellbeing of millions of people in the U.S. have already been harmed by human-caused climate change, and health risks in the future are dire without urgent action to fight climate change. As former Surgeon General Richard Carmona and David Satcher said: “We’re all at risk and our leaders must lead on global warming. Now.” But the health crisis caused by climate change also presents a major health opportunity. Building healthy energy, transportation, land use, and agriculture systems now will deliver immediate and sustained health benefits to all and reduce future health risks from climate change.

Our organizations represent physicians, nurses, health and public health professionals and health workers, hospitals and health care systems, health education institutions, and public, environmental, mental, and community-based health agencies and organizations. We have dedicated our lives to improving the health of our patients and communities.

**Therefore, we call on government, business, and civil society leaders, elected officials, and candidates for office to recognize climate change as a health emergency and to work across government agencies and with communities and businesses to prioritize action on this Climate, Health and Equity Policy Action Agenda.**

**Climate change is the “greatest public health challenge of the 21st century.”** Extreme heat, powerful storms and floods, year-round wildfires, droughts, and other climate-related events have already caused thousands of deaths and displaced tens of thousands of people in the U.S. from their homes, with significant personal loss and mental health impacts especially for first responders and children. Air pollution, whose primary driver—fossil fuel combustion—is also the primary driver of climate change, causes hundreds of thousands of deaths in the U.S. annually. Mosquito and tick-borne diseases are spreading to new communities. The agricultural, food, and water systems we depend on for our survival are under threat. Without an urgent and effective response, these harms will greatly increase.

**Action to reduce climate change can dramatically improve health.** Many policies that move us towards safe climate goals have demonstrable and significant health benefits. Climate action in the energy, transportation, land use, housing, agricultural, and other sectors has the potential to avoid thousands of deaths in the U.S. and millions of deaths each year globally. A just transition to clean, safe renewable energy and energy efficiency, sustainable food production and diets, active transportation, and green cities will lower climate pollution while simultaneously reducing the incidence of communicable and non-communicable disease, improving mental health, and promising significant health care cost savings.

**Equity must be central to climate action.** Climate change threatens everyone in the U.S., but is a more immediate danger to some. Climate change exacerbates health inequities, disproportionately harming the most vulnerable among us—children and pregnant women, people with low income, the aged and people with disabilities and chronic illnesses, some communities of color, indigenous people and tribal communities, immigrants, marginalized people of all races and ethnicities, and outdoor workers. Communities that have experienced systemic neglect and environmental racism have the least responsibility for climate pollution, but are the most affected. These communities have less access to the political, economic, social and environmental

# MomentUs Commitment: Our Time for Climate Action

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**We need to address climate change now.** Together, we can bring about ambitious and equitable solutions rooted in shared American values that address climate risks and impacts and bring broad benefits to society. We have a moral imperative to act individually, organizationally and collectively to protect our health, our children, our communities, and our future while there is time left to chart a new path forward.

**We call for ambitious climate policies from local, regional and national policymakers** that eliminate carbon pollution, restore thriving natural systems, and prioritize justice and equity to protect and support all Americans. These **solutions must halve carbon emissions each decade going forward, begin removing existing carbon pollution and correct racial, cultural, and economically based inequities and injustices.**

**We will also take action** in our workplaces, communities, organizations and our homes to eliminate and reverse our contributions to climate pollution, advocate for ambitious policies at the local, regional and national levels, and encourage others to do the same.

Climate change is becoming irreversible, with consequences so dramatic they are impossible to overstate. But as before, in the darkest of times, American ingenuity and compassion can prevail for a brighter and more equitable tomorrow. **Together we can turn this moment of trial into our greatest triumph. We invite you to join us.**