

Health communication and the ecological determinants of health: The final frontier

Edward Maibach, MPH, PhD
@MaibachEd

DCHC 2023

Health Communication in a Changing World

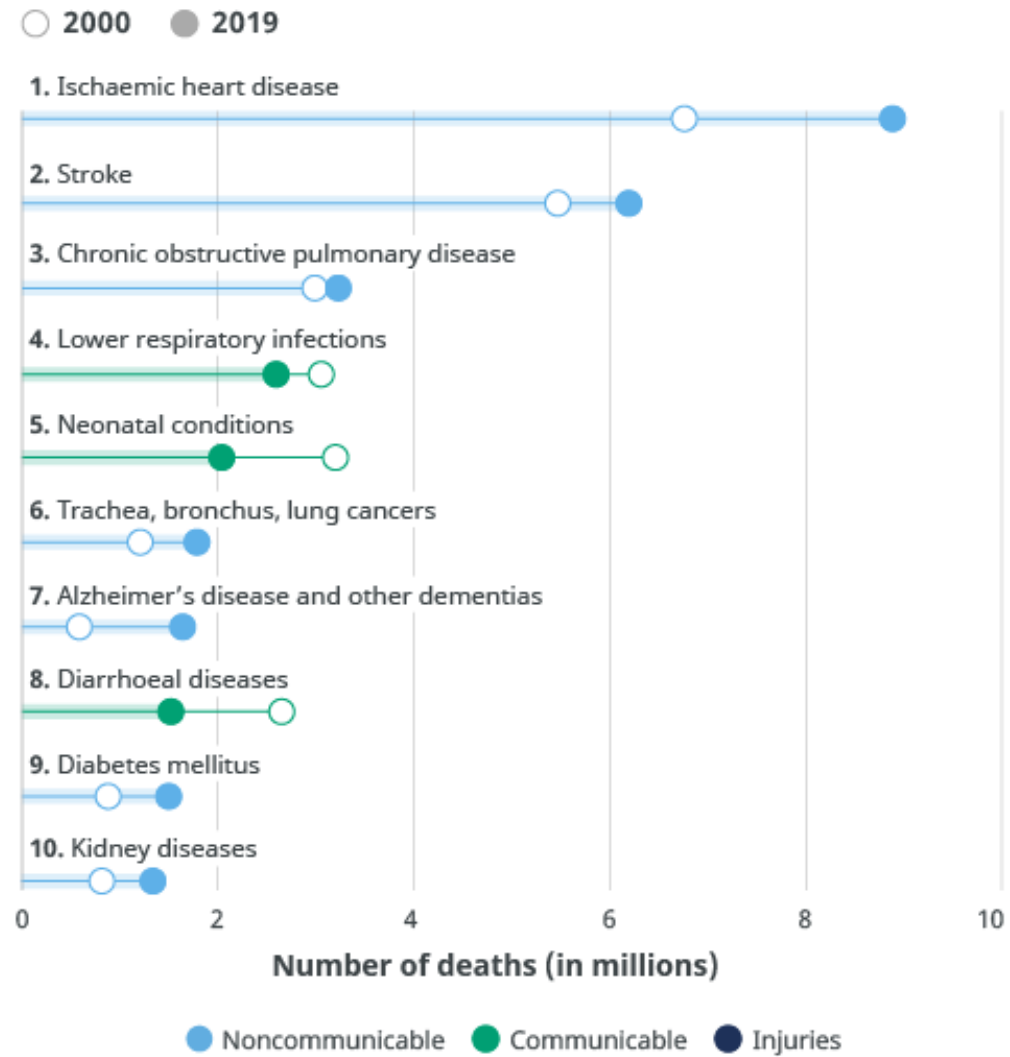


GEORGE MASON UNIVERSITY
CENTER *for* CLIMATE CHANGE
COMMUNICATION

**What is the leading cause of
morbidity (disease/medical conditions)
and mortality (premature death)
globally?**



Leading causes of death globally



Source: WHO Global Health Estimates.

Tobacco has long been seen as Public Health Enemy #1

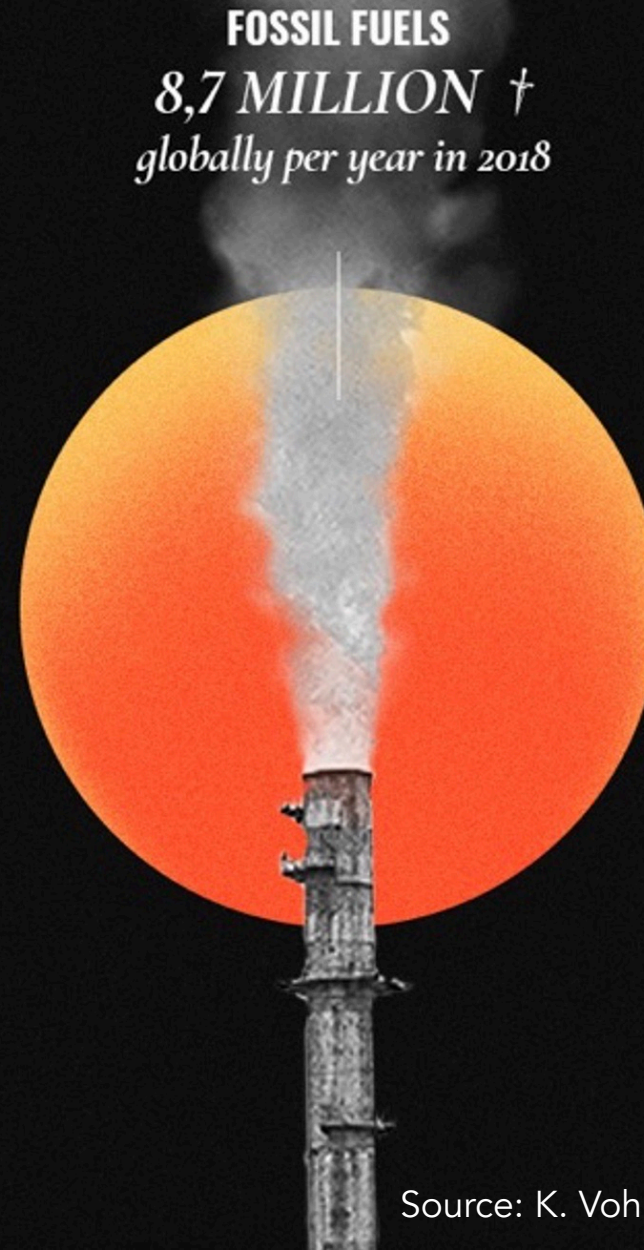
TOBACCO
7,69 MILLION †
globally per year in 2019



Global mortality from tobacco use and fossil fuel air pollution (PM2.5)



Source: WHO 2021



Source: K. Vohra 2021 @ChristineArena

Burning fossil fuels profoundly harms human health

Mortality:

FOSSIL FUELS
8,7 MILLION †
globally per year in 2018



Childhood Morbidity:

- Pregnancy: Low birth weight, HBP, stillbirth, preterm birth
- Neuro-development: ADHD, reduced IQ, autism
- Respiratory: asthma, chronic bronchitis

Adult Morbidity:

- Respiratory: asthma, emphysema, COPD, chronic bronchitis
- Cardiovascular diseases: increased MI/stroke risk, reduced HDL
- Cancer: breast, lung
- Neuro-degeneration: Alzheimer's and other dementias, Parkinson's disease

Climate change harms health through eight distinct pathways



FOSSIL FUELS
8,7 MILLION †
globally per year in 2018

Morbidity & Mortality:

- **Air pollution**
- Extreme heat
- Extreme weather
- Vector-borne illness
- Water-borne illness
- Food-borne illness
- Hunger and malnutrition
- Mental health harms

Our climate and our health have a common enemy: fossil fuels.



@ChristineArena

Paris Climate Agreement: 2015

The goal: Limit global warming to well below 2.0 °C, ideally 1.5.



Paris France





IPCC Special Report on Global Warming of 1.5 °C (2018)

Key finding: A half degree of warming beyond 1.5 ° C would mean substantially more poverty, extreme heat, sea level rise, habitat and coral reef loss, and drought. **Every tenth of a degree of warming has grave public health consequences.**



"There is no kind way to put it: We are sleepwalking to climate catastrophe. The 1.5 degree C goal is on life support. It is in intensive care."

United Nation's Secretary-General António Guterres responding to the IPCC AR6 Report, March 2022



"Nearly half of humanity is living in the danger zone—now."

"Unchecked carbon pollution is forcing the world's most vulnerable (people) on a frog march to destruction—now."

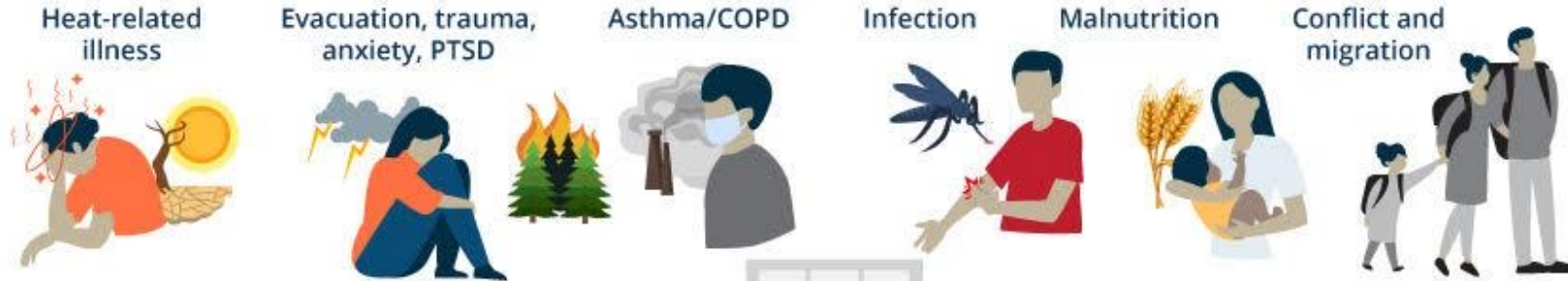
"Delay equals death."

United Nation's Secretary-General António Guterres responding to the IPCC AR6 Report, March 2022



Climate-related impacts on

Health



Health systems



Social & structural determinants of health



Ecological determinants of health



Limiting global warming to 1.5 - 2.0° C: A necessary and unique role for health professionals.

PLOS MEDICINE

 OPEN ACCESS

EDITORIAL

Limiting global warming to 1.5 to 2.0°C—A unique and necessary role for health professionals

Edward W. Maibach , Mona Sarfaty, Mark Mitchell, Rob Gould

Published: May 14, 2019 • <https://doi.org/10.1371/journal.pmed.1002804>

Why it's necessary for health professionals to play a role:

Because climate change and the continued use of fossil fuels are humanity's greatest threats to public health.

This is our lane.



GEORGE MASON UNIVERSITY
CENTER *for* CLIMATE CHANGE
COMMUNICATION

What's our unique role?



GEORGE MASON UNIVERSITY
CENTER *for* CLIMATE CHANGE
COMMUNICATION

Evidence-based guidance for
effective communication campaigns:

**Simple clear messages,
repeated often,
by a variety of trusted and caring voices.**

**What is the first thing
that comes to mind when you hear
global warming?**





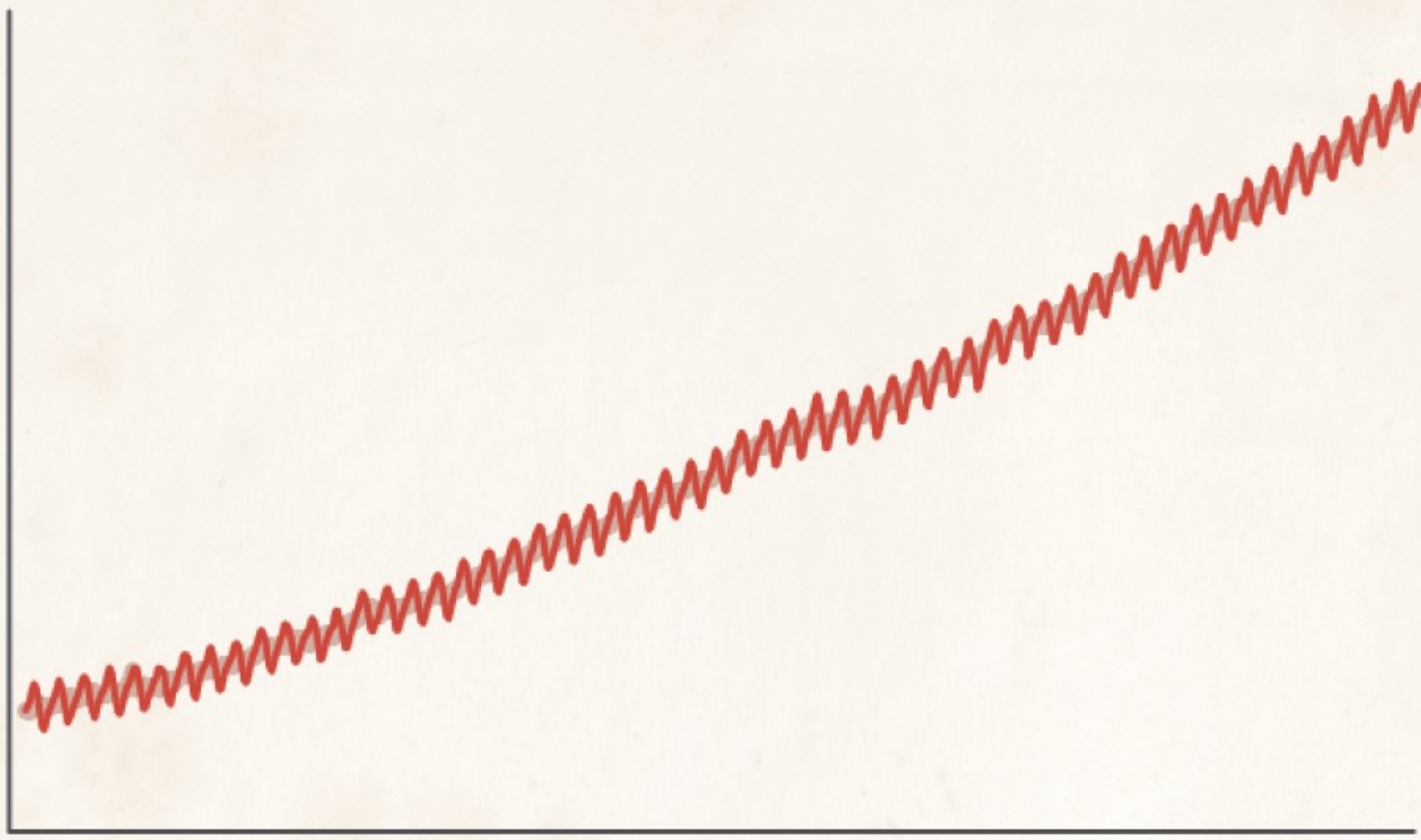
PARTS PER MILLION CO₂

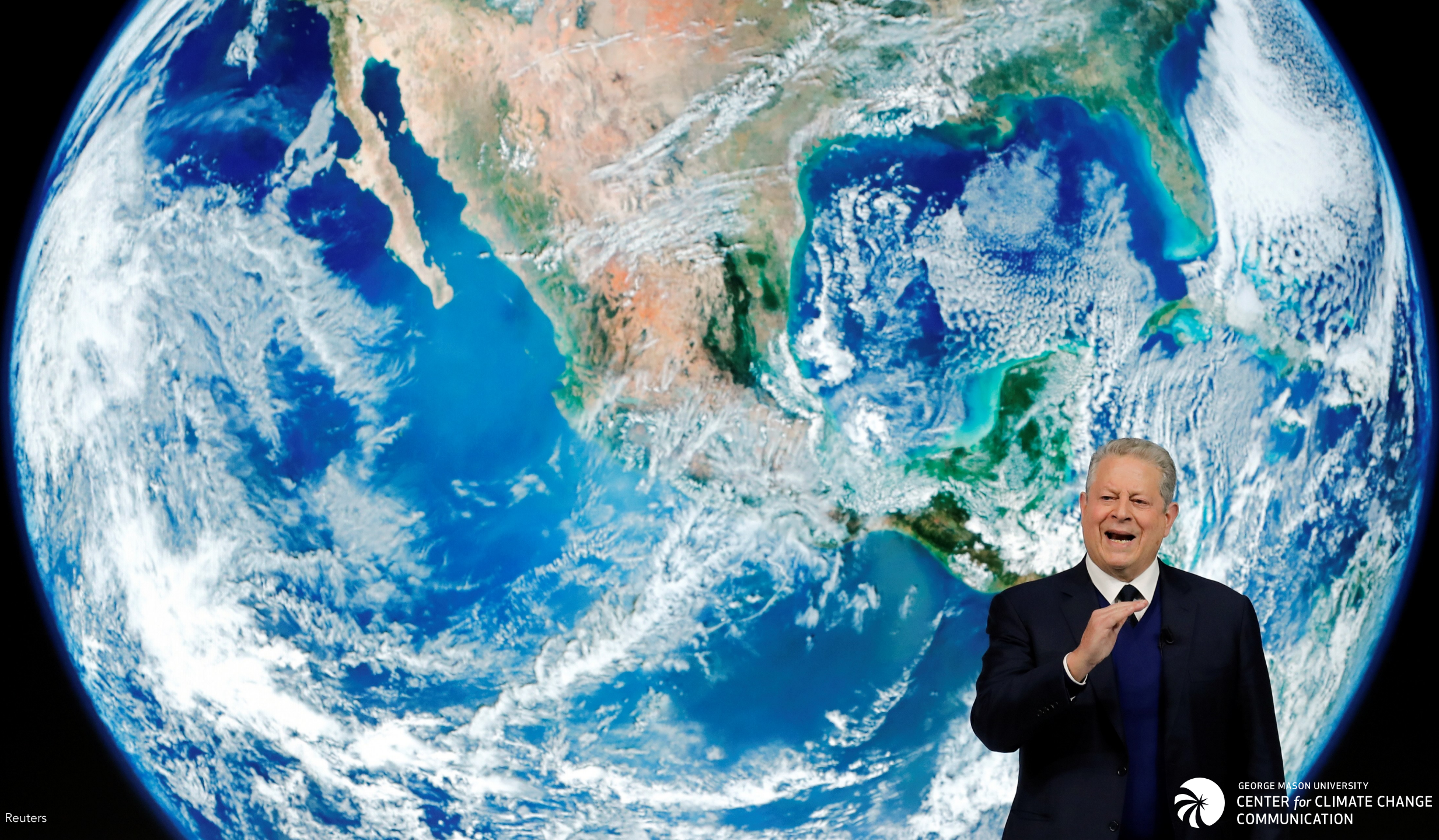
400
380
360
340
320
300

1960

YEAR

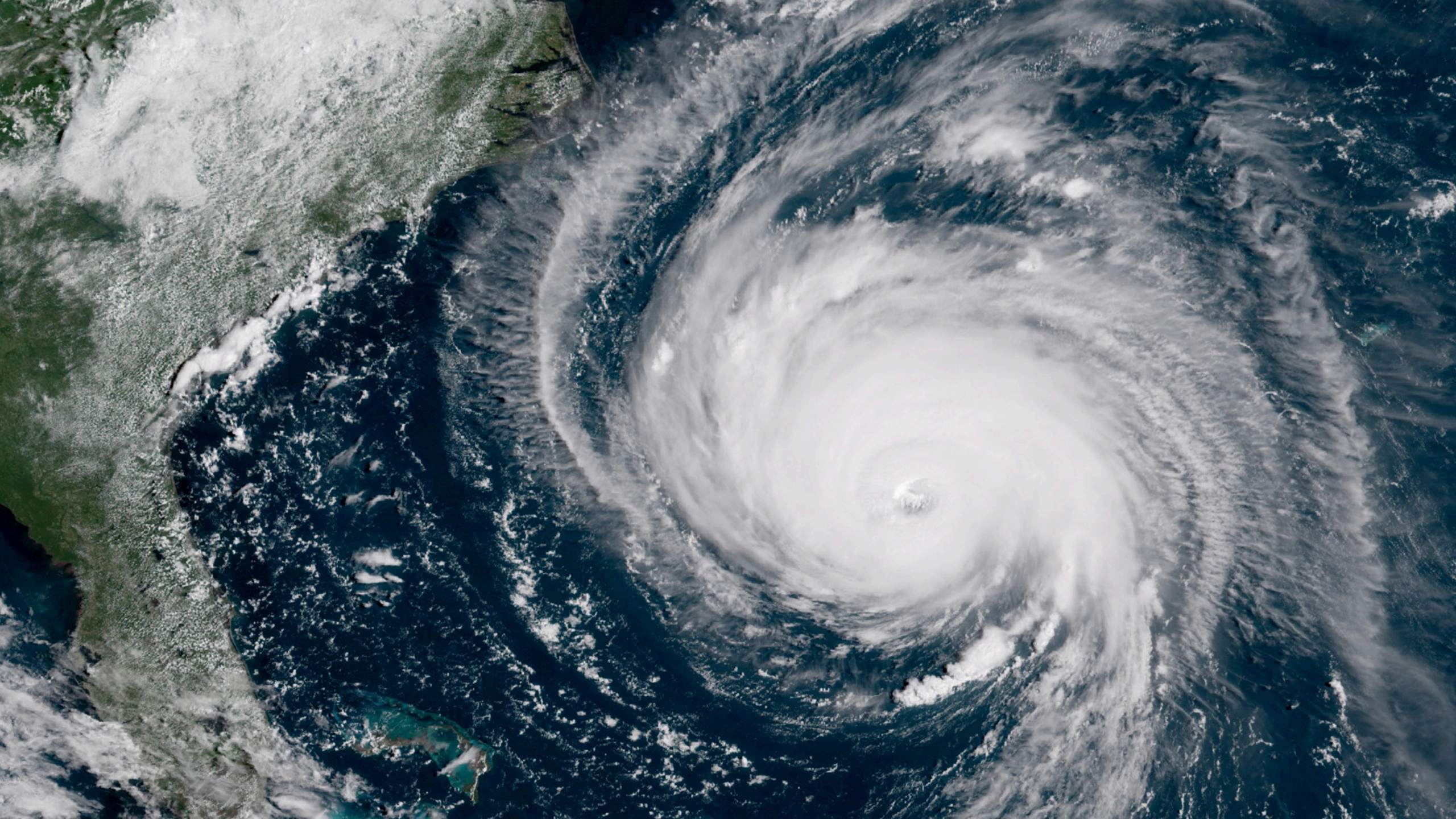
2015







GEORGE MASON UNIVERSITY
CENTER for CLIMATE CHANGE
COMMUNICATION





GEORGE MASON UNIVERSITY
CENTER for CLIMATE CHANGE
COMMUNICATION

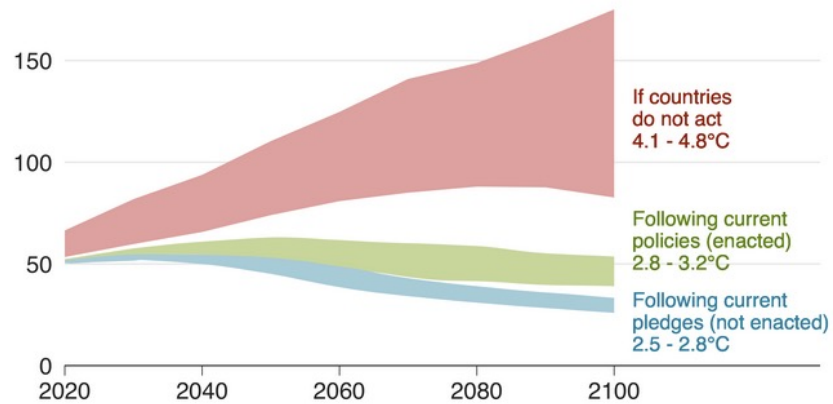
Most Americans understand that climate change is happening.

However, until recently they saw it as a distant threat...

in time

How much worse will the problem get?

Emissions* and expected warming by 2100



in space



in species

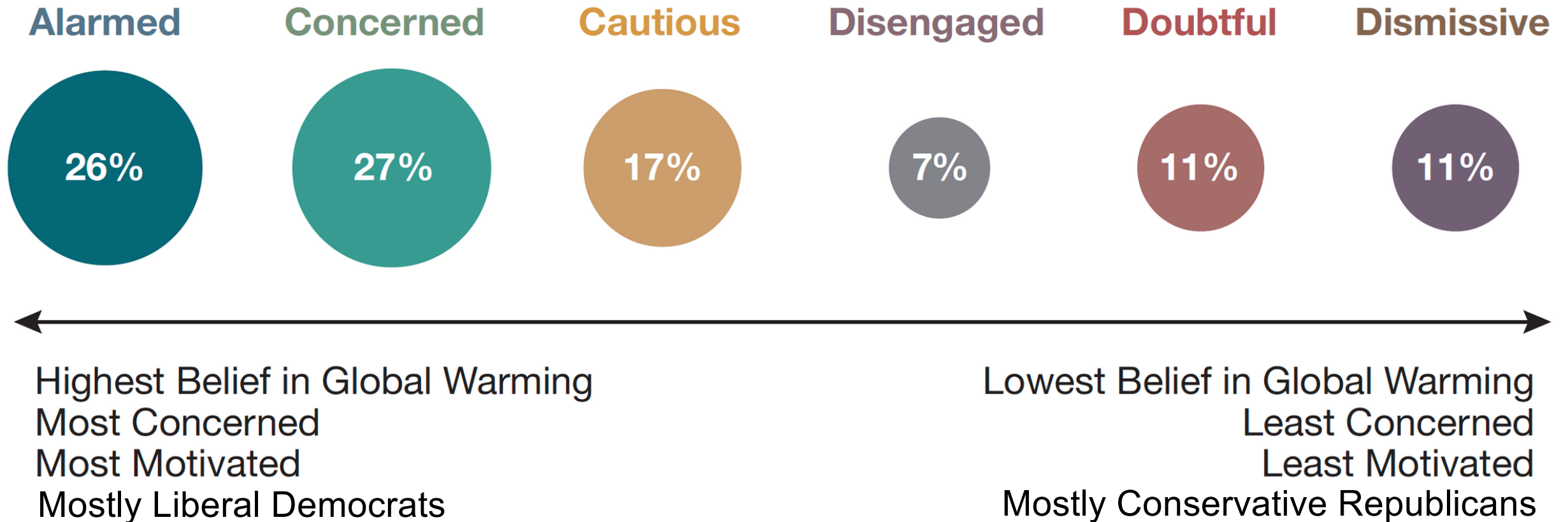


Americans, especially conservative Americans, trust their primary care doctors as a source of information about global warming

Rank by trust	All Registered Voters	Liberal Democrats	Moderate/Conservative Democrats	Liberal/Moderate Republicans	Conservative Republicans
1	NASA	Climate scientists	Climate scientists	NASA	Family & friends
2	Family & friends	Environmental organizations	EPA	Family & friends	Your primary care doctor
3	Climate scientists	EPA	Environmental organizations	Your primary care doctor	NASA
4	Your primary care doctor	NASA	NASA	Climate scientists	The Fox News Channel
5	EPA	Teachers	Television weather reporters	EPA	Leaders in your religious faith
6	Television weather reporters	President Biden	American Medical Association	Television weather reporters	Television weather reporters
7	Environmental organizations	National Public Radio (NPR)	President Biden	U.S. military leaders	Climate scientists
8	Teachers	Television weather reporters	Your primary care doctor	Teachers	U.S. military leaders
9	American Medical Association	Family & friends	National network news	American Medical Association	American Medical Association
10	Your local newspaper	National network news	National Public Radio (NPR)	Environmental organizations	Teachers
11	National Public Radio (NPR)	American Medical Association	Your local newspaper	Your local newspaper	Oil, gas, and coal companies
12	Local TV news	Your local newspaper	Family & friends	Local TV news	EPA
13	National network news	CNN	Local TV news	National Public Radio (NPR)	Your local newspaper
14	President Biden	Your primary care doctor	Teachers	National network news	Environmental organizations
15	U.S. military leaders	MSNBC	CNN	The Fox News Channel	Your Congressperson
16	CNN	Local TV news	MSNBC	Leaders in your religious faith	Local TV news
17	MSNBC	Your Congressperson	U.S. military leaders	Your Congressperson	National Public Radio (NPR)
18	Your Congressperson	U.S. military leaders	Your Congressperson	CNN	National network news
19	Leaders in your religious faith	Leaders in your religious faith	Leaders in your religious faith	MSNBC	CNN
20	The Fox News Channel	The Fox News Channel	Oil, gas, and coal companies	Oil, gas, and coal companies	MSNBC
21	Oil, gas, and coal companies	Oil, gas, and coal companies	The Fox News Channel	President Biden	President Biden

How much do you trust or distrust the following as a source of information about global warming?

Global Warming's Six Americas



December 2022
(*n* = 1,085)

Six key facts about global warming (in 12 words)

IT'S REAL

Global warming is happening.

IT'S US

Human activity is the main cause.

EXPERTS AGREE

More than **97%** of the world's climate experts are convinced, based on the data, that human activity is warming the planet.

IT'S BAD

The impacts are serious, and they affect people, especially our children and grandchildren.

THERE'S HOPE

There are actions we can take that will make a big difference.

OTHERS CARE

You're not alone.
Most people are worried about global warming, and they support climate action.



Reading brief statements about the eight health-harming pathways of climate change...

- Air pollution
- Extreme heat
- Extreme weather
- Vector-borne illness
- Water-borne illness
- Food-borne illness
- Hunger and malnutrition
- Mental health harms

...and who is most likely to be harmed...

- Babies, children, pregnant women
- Seniors, people with certain chronic illnesses
- People in low-income & communities of color
- Outdoor workers

...increases people's cognitive and affective engagement with the issue,
especially moderates and moderate conservatives.



MEDICAL ALERT!
Climate Change
Is Harming
Our Health

 The Medical
Society Consortium
ON CLIMATE & HEALTH

Five policy solution pathways to improve our climate and our health:

- #1: Use clean, **renewable energy** and reduce energy waste
- #2: Favor **climate-smart foods**, farms, and food systems
- #3: Support clean and **active transportation** options
- #4: Improve our **buildings** and homes
- #5: Improve our **community environments**

The **climate benefits** of these policies **take years to accrue**, in small measures **worldwide**.

But the **health benefits accrue almost immediately** and primarily **locally** in the communities that take the actions.



Effective climate/health messages:

1. Show health impacts

Top three: air pollution; food-borne diseases; extreme weather

2. Identify policy solutions

Top two: clean energy; and improved community design

3. Affirm helpful social norms

"Most Americans agree that we want healthy communities and a healthy climate, [and many of us/but not enough of us] are taking action"

All three types of information increase engagement, but **solutions** information has the most impact.

This is equally true for **conservatives** as for liberals.

Calling out opponents to climate action further strengthens the climate/health narrative

Which opponents?

Fossil fuel CEOs and their lobbyists

Some politicians

Fossil fuel CEOs and their lobbyists, and the politicians who are in their pockets*

What it accomplishes, and with whom?

It significantly strengthens policy support and the intention to advocate

It is most effective with Republicans and Independents, thus providing further evidence of the depolarizing effect of the climate/health narrative

* Most effective treatment condition

Our role is unique.

The climate/health narrative:

Makes the problem personal.

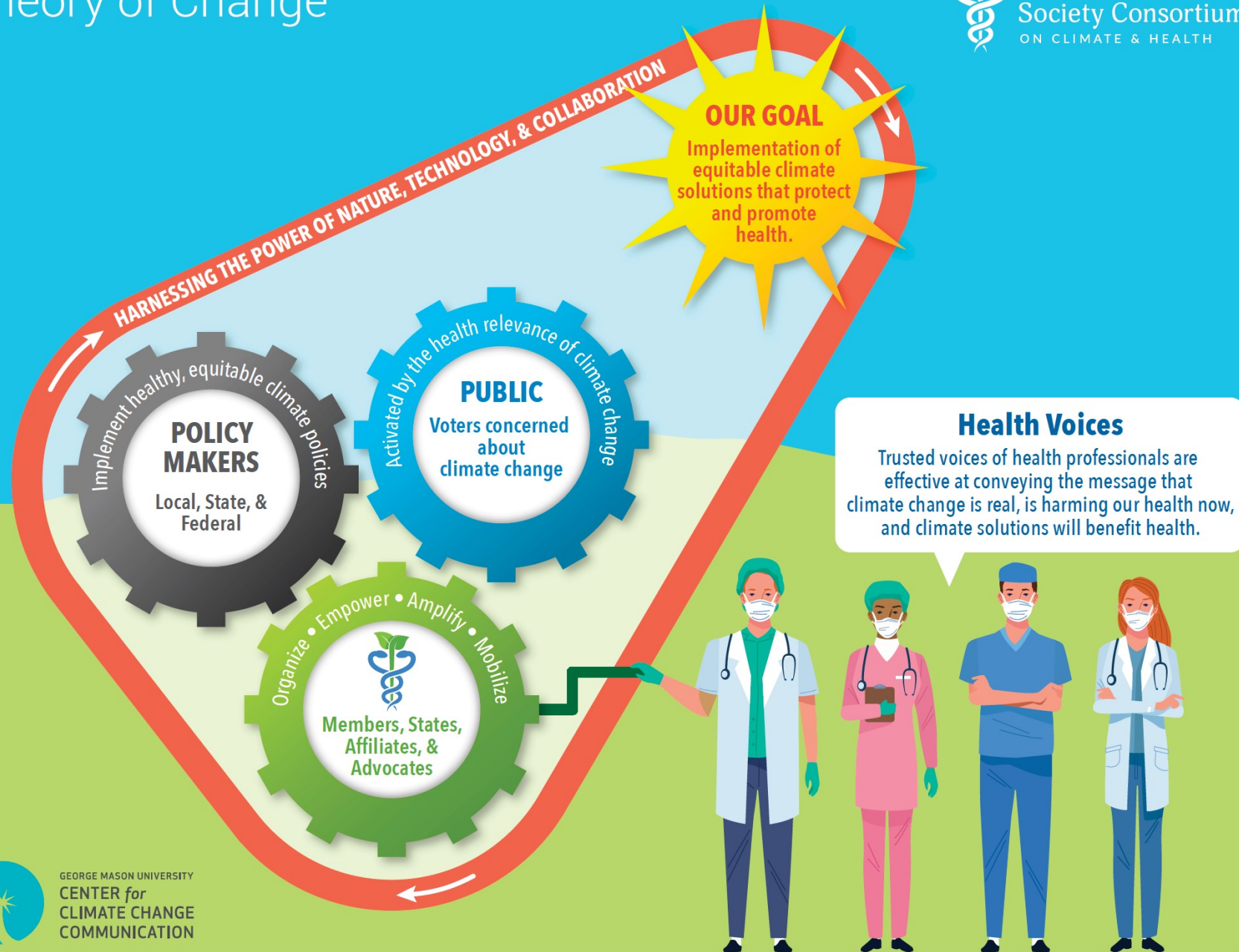
Brings the benefits of solutions into the present,
and into our communities.

Depolarizes the issue.



GEORGE MASON UNIVERSITY
CENTER *for* CLIMATE CHANGE
COMMUNICATION

Theory of Change



Members

- 47 medical societies

State Affiliates

- 24 states and growing

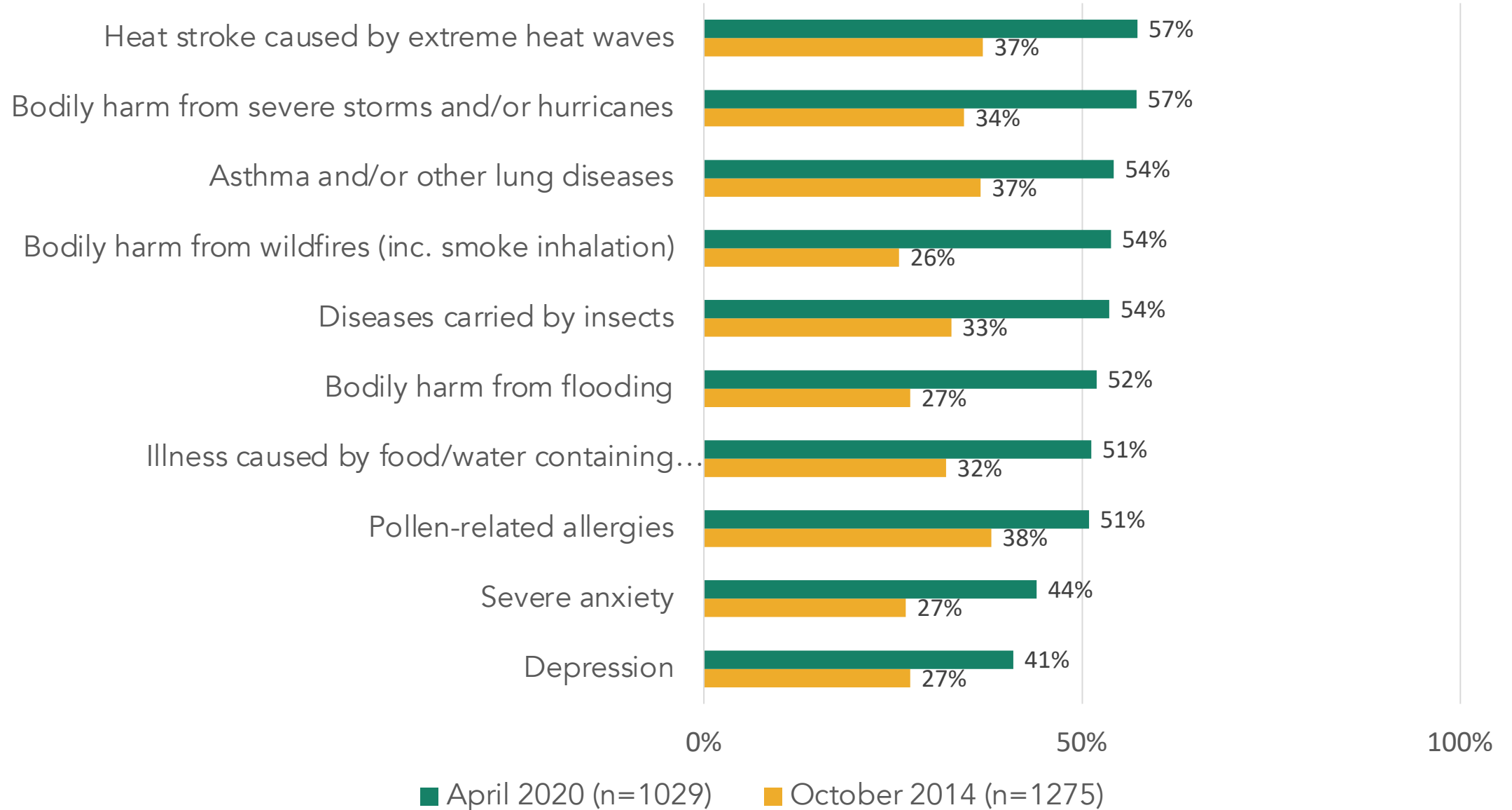
Partners

- Nursing, public health, and other health professional societies
- The big 3 health voluntaries
- Science-based climate organizations



There has been a large increase since 2014 in the number of Americans who see climate change as becoming a danger to health in their community

--% of Americans who think each condition will become more common in their community over the next 10 years as a result of global warming--

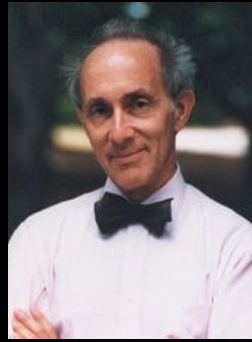




Bernard Lown



James Muller



Eric Chivian



Herb Abrams



Evgeny Chazov



Mikahil Kuzin



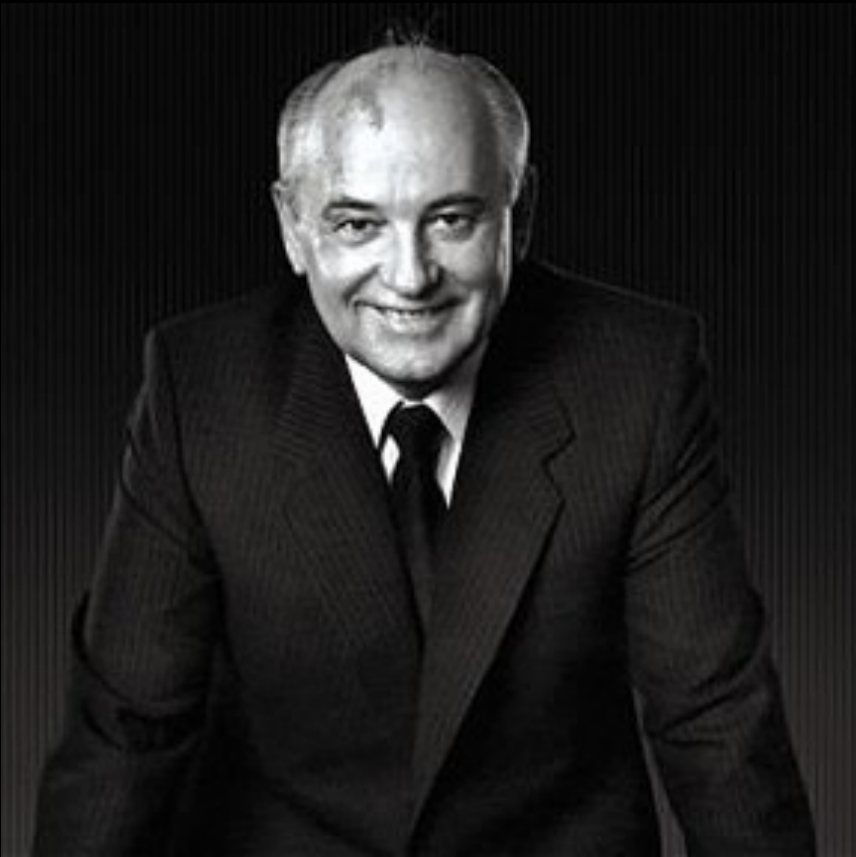
Leonid Illyin



In 1980, seven American and Soviet physicians established the *International Physicians for the Prevention of Nuclear War*.

Their message: A nuclear war would destroy civilization and might extinguish human life.

In 1985 IPPNW was awarded the Nobel Peace Prize for its central role in helping to open arms control discussions between the U.S. and the USSR.



"Their work commands great respect. For what they say and what they do is prompted by accurate knowledge and a passionate desire to warn humanity about the danger looming over it. In light of their arguments and the strictly scientific data they possess, there seems to be no room left for politicking. And no serious politician has the right to disregard their conclusions."

Mikhail Gorbachev (1987)

"I want to thank you [IPPNW] for your great contribution to preventing nuclear war. Without it and other effective antinuclear initiatives this [INF] Treaty would probably have been impossible."

Mikhail Gorbachev (1993)



"Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has."

Margaret Mead (?)

Never doubt that simple, clear messages,
repeated often, by a variety of trusted and
caring health voices can change the world.”

Mead-Maibach mash-up

Join us in using your skills to protect the ecological determinants of health

Point your camera here →



Building evidence-based approaches to communicating about climate change as a health issue

- **Eryn Campbell, PhD:** Social norms messaging as a strategy to activate health professionals as climate/health advocates
- **Nic Badullovich, PhD:** Use of role model stories to activate hospital employees as sustainability champions
- **Lia Zakiyyah, MA:** Are climate/health influential using evidence-based approaches in their Twitter accounts?
- **Richard Amoako, MA:** Harnessing the potential of visual communication to activate climate/health advocacy by health professionals.
- **John Kotcher, PhD:** Does it help when health professionals call out opponents of climate action?