

Worcester Board of Health Meeting
Meeting Minutes
Meeting Held at 25 Meade St. Room 109
Monday, February 5, 2024
6:30 pm
Minutes by Aidan Giasson

Welcome and Introductions

Board Members Present: Interim Chair Frances Anthes, Vice Chair Chareese Allen, Gary Rosen, Leopoldo Negrón Cruz

Staff Present: Dr. Mike Hirsh, Medical Director; Soloe Dennis, Director of DPH and CMRPHA; Ian Wong, Deputy Director of DPH; Ameliah Houghton, Chief of Public Health Nursing; Nikki Nixon, Chief of Epidemiology

Guests Present: Judy Schaechter, UMiami/FCCA; Henry Schwan, Worcester Telegram & Gazette; Anna Bogwrsky, UMass Medical Student; Katie Merport, UMass Medical Student; Chhimi Sherpa, Emerald Cities Collaboration/Clark University; Mara Pentlarge, Worcester Congregations for Climate & Environmental Justice/350 Central Mass; Lynn Gostyla, Worcester Citizen; Betty Jenewin, Worcester Citizen; Paul Popinchalk 350 Central Mass/NAACP E & EJ Committee/Worcester Resident; James McCoy, UMass Medical Student; Patricia Hobbs, Green Island Resident

Online Guests: Bella Vogt; Dailianys Barrios; KayAnn Gunning, UMass Medical; Maggie Reynolds; Jessica Orofino; Mollie Smith, UMass Medical; Michael Lee; Rahi Patel; Astrid Veloz-Maury; Ken McDonnell; Renee Gao, UMass Medical; Jennie Savage; Ydalia Heimann; WDPH Staff; Sandy Amoakohene, WDPH Staff; David Coyne; Ken McDonnell; Monica Royo; Vivien Tran

Review and Approve January 22 Meeting Minutes

Chareese Allen moved to approve the minutes from January 22, 2024. Leopoldo Negrón Cruz seconded the motion. All members voted in favor of approving the minutes as written.

Covid Update

Dr. Hirsh provided an update on COVID infections. We are still seeing new cases of the JN.1 variant of COVID with a 3% increase in the last two weeks. Wastewater numbers have gone down by 70% which is an indicator that the level of disease is coming down in the community.

UMass Memorial and St. Vincent Hospitals are on emergency status because of large number of patients overwhelming their facilities. Dr. Hirsh spoke to the Chief Medical Officer of UMass Memorial who stated that long wait times are present in all facilities due to shortfalls in staffing.

Dr. Hirsh reminded the board, if you are presenting with cold like symptoms, you should test for COVID. If you have COVID, you need to quarantine for five days and wear a mask in public for the next 5 days after you are done with quarantine. You can apply to get 4 test kits through USPS on the [CDC website](#).

Dr. Hirsh noted that less than 25% of the community took advantage of the Monovalent COVID vaccine, which protects against severe illness for the JN.1 variant.

WDPH Communicable Disease Update

Nikki Nixon, the Chief of Epidemiology and Amelia Houghton, the Chief of Public Health Nursing at WDPH presented a report on communicable diseases in Worcester created by the Epidemiology Office and Office of Public Health Nursing. This report displays trends within communicable diseases and the work the public health nurses have been doing.

Confirmed case: one in which the clinical case description is met, and the laboratory confirmation requirement is met. A case may also be considered confirmed if it is linked to a laboratory-confirmed case. Certain diseases may not include laboratory findings as testing is not available.

Probable case: one in which the clinical case description is met and there is supportive or presumptive laboratory results consistent with the diagnosis but, it does not meet the laboratory confirmed criteria.

Suspect case: one in which the clinical case description is met.

Revoked case: one in which neither the suspect, probable, nor confirmed case definition is met.

There were 5,631 confirmed communicable disease cases from January 1- December 31st, 2023.

62% (3,485) of the communicable disease cases were COVID. From January 1, 2019 to December 31st, 2023, there have been 69,243 cases of COVID in Worcester. Ms. Nixon stressed that this is an underestimation because of the home test kits currently being used don't go to the lab.

Excluding COVID, the top 5 reported communicable diseases in Worcester are Influenza, Tuberculosis, Hepatitis C, Salmonellosis, and Group A streptococcus. There was a sharp rise in influenza cases in 2022 which could be tied to COVID as doctors often check for both when patients present with COVID like symptoms. Tuberculosis cases have also been increasing over the years.

There were 1,392 probable communicable disease cases in 2023 with 80% of those cases being attributed to COVID.

There were 191 revoked communicable disease cases in 2023 with Hepatitis C constituting 56% of these cases.

There were 355 suspect communicable disease cases in 2023 and Lyme Disease contributed to 34% of these cases.

Chief of Nursing Amelia Houghton stated that the public health nurses are not required to call persons with active COVID cases like they are other communicable diseases but may call when there is special circumstances.

Health Impacts of Climate Change

Please view the attached slides for all of the topics covered.

Dr. Hirsh introduced the guest that he invited to present, his long-time colleague Dr. Judy Schaechter. Dr. Schaechter evolved from being a pediatrician and trauma specialist at Miami Children's Hospital, Miller School of Medicine became Chief of Pediatrics. From October 2021 – June 2023, Dr. Schaechter was President and CEO of the American Board of Pediatrics.

Scientific Foundation & Epidemiology

Dr. Schaechter started with an explanation of the scientific foundation and epidemiology of climate change. Climate change (CC) is causing extreme weather and changes to our environment including but not limited to drought, flooding, ocean acidification, and wildfires. Dr. Schaechter stated that climate change is no longer something far off and is something we currently face with the impact being felt everywhere. The data shows a drastic increase in carbon dioxide levels, average temperature, and sea level over various time frames.

According to the United Nation CC refers to long-term shifts in temperatures and weather patterns, mainly caused by human activities, especially the burning of fossil fuels.

Health Impacts & Equity Issues

CC threatens our health through worsening air & water quality, land use changes and biodiversity loss, which interacts with biologic and social-ecological factors that worsen health outcomes. CC health outcomes include mental illness, allergies, cardiovascular, infectious & respiratory diseases, and more.

The direct threats to human health include problems of heat, air quality, changing animal & plant distribution, lack of food & water and others. While we have dealt with many of these threats before we have never dealt with them in as strong, long, impactful, and routine a challenge as we are seeing now. The climate change manifestations we are seeing impact the body in many ways which is illustrated on slide 13.

Dr. Schaechter discussed the intersections between CC and health equity. Dr. Schaechter emphasized that there are high risk groups and that we need to pay attention to how climate change will make health inequity worse if we do not actively pay attention to it and take steps to mitigate it. While no one will escape the impacts of climate change, if we do not address inequities some groups will suffer the burden more than others as shown on slide 14.

Dr. Schaechter said that children are experiencing a health disparity related to CC. Slide 15 lists many of reasons children are more vulnerable to CC. Heat is a real threat to children that has already contributed to children's deaths and created laws like the Zachary Martin Act 2020. More people need to be educated on the heat index which includes the ambient temperature & relative humidity and helps us determine what temperature it feels like to our bodies.

The other health impact Dr. Schaechter focused on is air quality & respiratory disease. The asthma incidence rate has increased as climate change causes more molds, pollens, and algae blooms associated with increased temperature & CO₂. Information on how heat waves and air pollution impact maternal-child health is on slide 24. Dr. Schaechter recommends using [AirNow.Gov](https://www.airnow.gov) for the public to find the current air quality in their area.

Mental Health issues from climate change is one of the least talked about and long-standing impacts. CC is associated with increased mental health visits to emergency departments. Exposure to Extreme Weather Events (EWE) cause trauma that leads to depression, anxiety, substance abuse, and other mental health issues. Extreme heat can cause increased aggression rates and violence.

Opportunities & Action Steps to Improve to Community Health

Dr. Schaechter explained ways that the Board and others in the room can help the public understand how CC impacts health. Identifying at risk patients is important so that we can target communication to them and their families to inform them that they may be more vulnerable in these situations. Educating the public on how to use air quality and heat indexes is important. Practitioners should be screening patients to see if they have access to electricity, air conditioning, and HEPA filters, which are all things helpful in combating CC impacts in the home.

From a public health lens, it's important to evaluate community preparedness for an EWE which includes making sure our healthcare system is prepared to provide care for a large influx of patients. After an EWE, we need plans to make sure we check on those who were displaced, lost jobs, or schooling.

Dr. Schaechter discussed co-benefits which are available to support individual people's health as well as the planet. The three main co-benefits are eating a plant-based diet, more active and public transportation, and using more renewable energy sources.

The US health sector contributes 8.5% of global greenhouse gas (GHG) emissions, which is more than many countries. The JCAHO Sustainable Health Carte Certification asks hospitals to report their carbon emissions, set reduction target, and report back on progress. The board could encourage UMass Memorial and Saint Vincent hospital to take part in this voluntary accreditation. The White House Climate Pledge and Planetary Health Report Card are other options that show commitment to protecting our community from CC.

It is important that public health workers are included in the conversations on topics like built environment and transportation, so that the lead agencies are aware of the health impacts of the changes that are being proposed. Climate and nutrition literacy can help get the public become more educated and engaged in public health.

The Board of Health (BOH) Members expressed appreciated to Dr. Schaechter for her informative presentation. Members of the board and community members present were invited to ask Dr. Schaechter questions and offer comments. Those in attendance agreed that the BOH should invite the city officials responsible for climate change efforts to address the BOH in a future meeting.

Next Meeting Dates and Topics

March 4 at 6:30

Adjournment

Gary Rosen moved to adjourn the meeting at 8:16 PM. Chareese Allen seconded the motion. All voted in favor.



COMMUNICABLE DISEASE SURVEILLANCE REPORT 2023

Presented by:

Nikki Nixon - Chief of Data, Research and Epidemiology

Amelia Houghton - Chief of Public Health Nursing

An annual overview of the public health surveillance of communicable diseases in the

City of Worcester, MA

January 1 – December 31, 2023

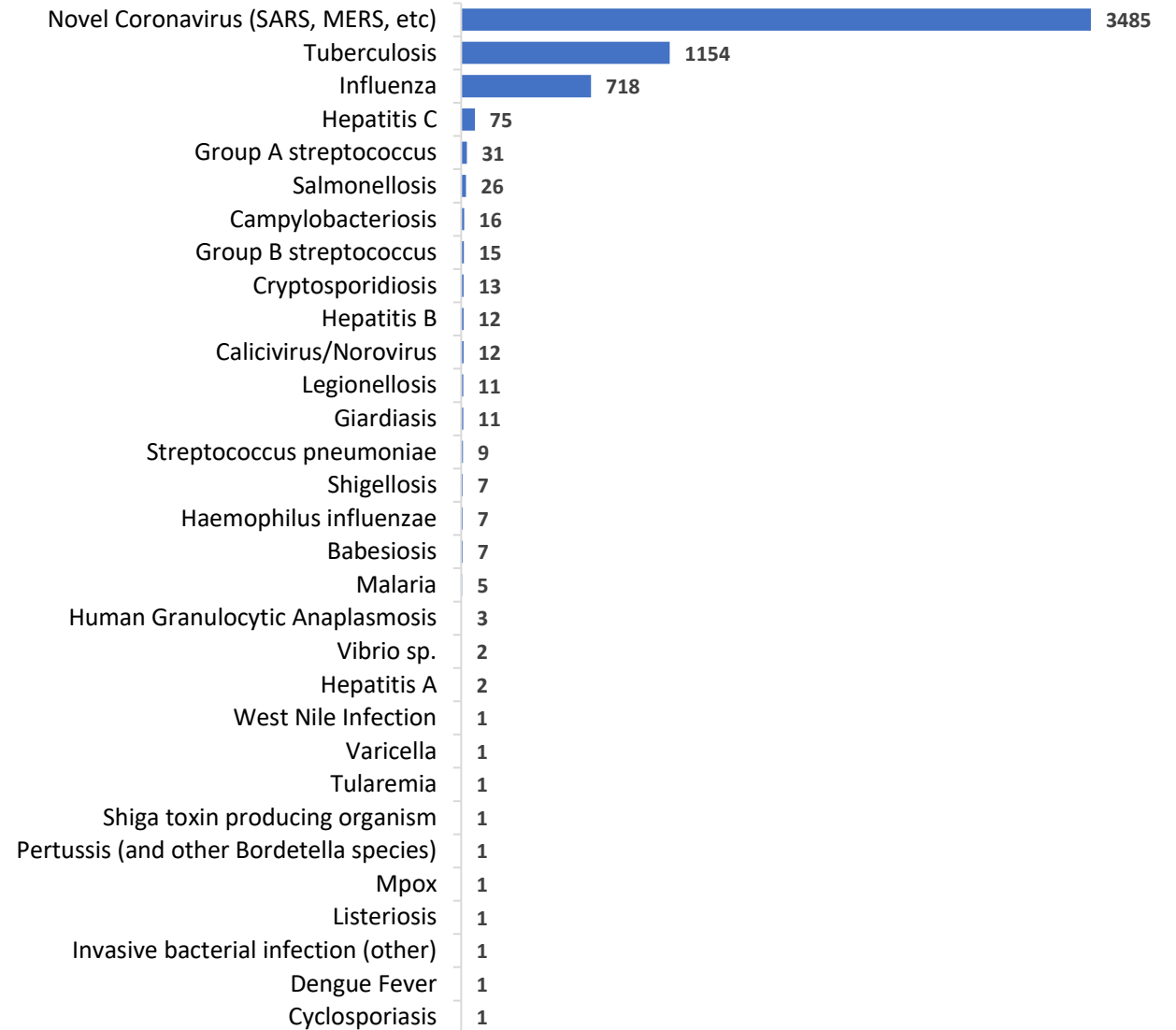
Case Classification Definitions

- A **confirmed** case is one in which the clinical case description is met, and the laboratory confirmation requirement is met. A case may also be considered confirmed if it is linked to a laboratory-confirmed case. Certain diseases may not include laboratory findings as testing is not available.
- A **probable** case is one in which the clinical case description is met and there is supportive or presumptive laboratory results consistent with the diagnosis but, it does not meet the laboratory confirmed criteria.
- A **suspect** case is one in which the clinical case description is met.
- A **revoked** case is one in which neither the suspect, probable, nor confirmed case definition is met.

Confirmed Communicable Diseases

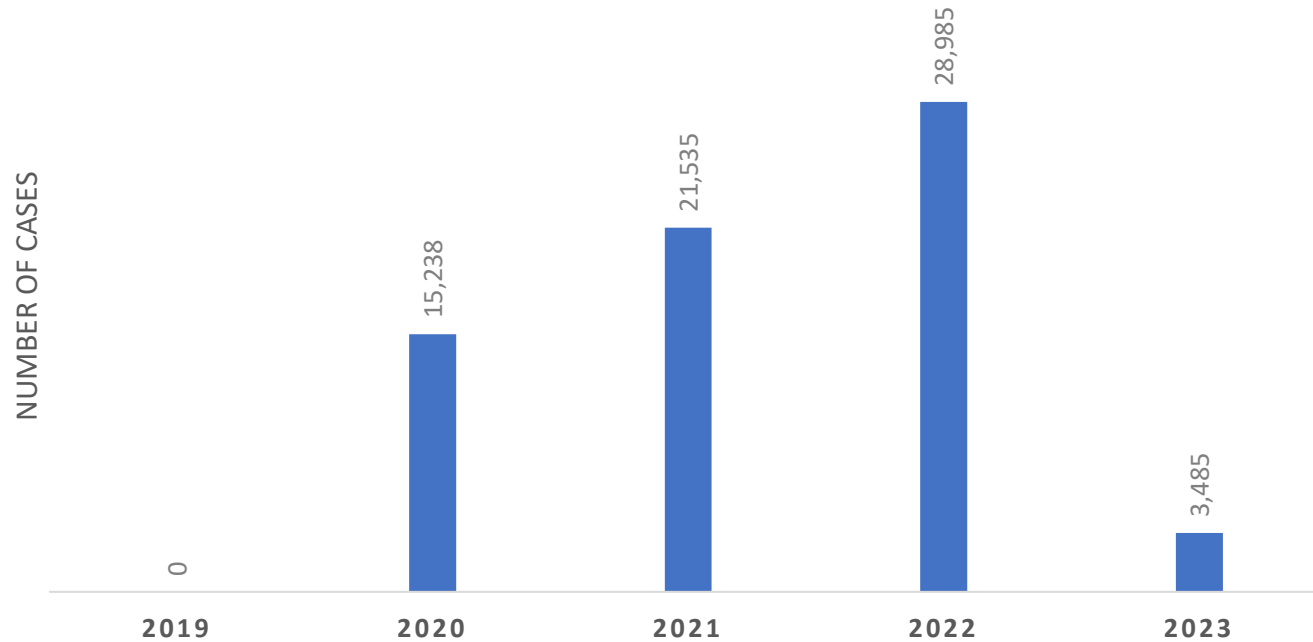
- There were a total of **5,631** confirmed communicable disease cases from January 1 – December 31, 2023.
- The Novel Coronavirus comprised of **62%** (**3,485**) of these confirmed cases.

Confirmed Communicable Diseases in Worcester, MA
(Jan 1 - Dec 31, 2023)



Confirmed Communicable Diseases

TREND OF NOVEL CORONAVIRUS WORCESTER
(2019-2023)

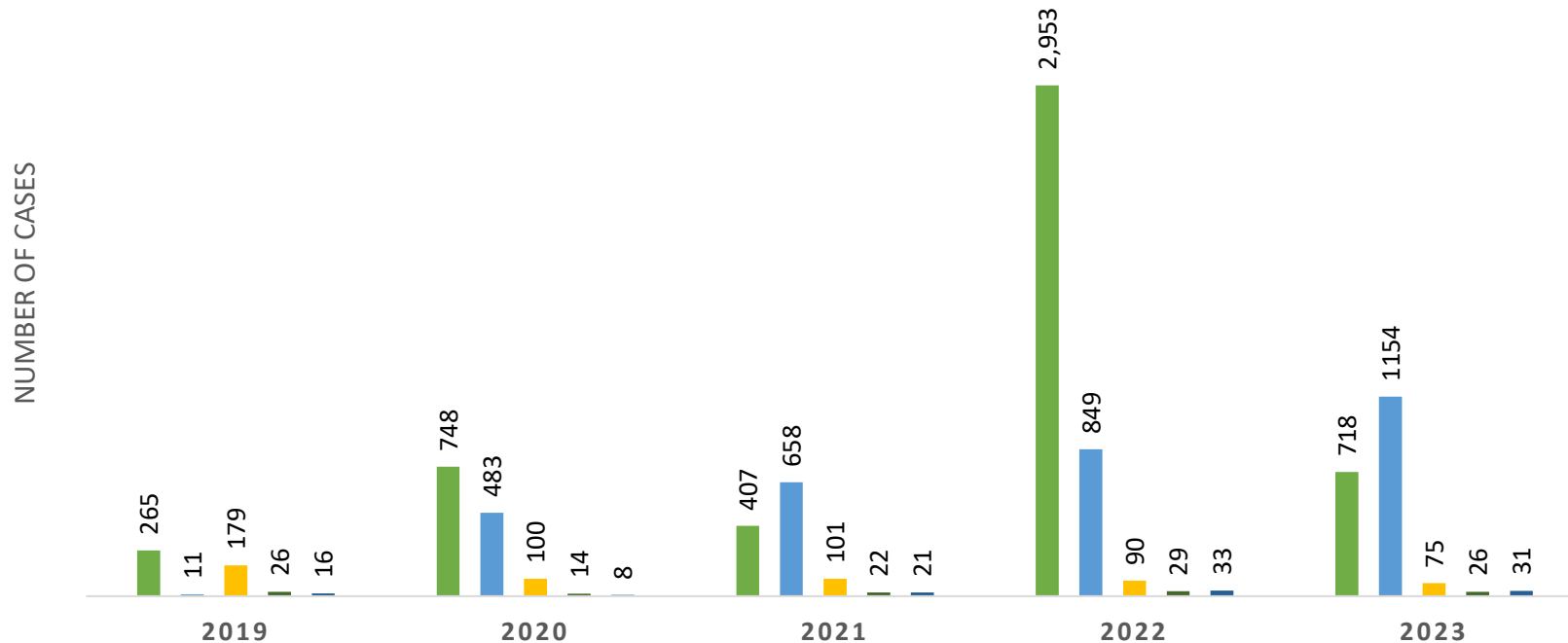


- There were a total of ***69,243** confirmed Novel Coronavirus cases from January 1, 2019 – December 31, 2023.
- *Number is an under-estimation due to:
 - Use of at-home kit testing
 - End to free testing site as of May 11, 2023

Confirmed Communicable Diseases

TOP 5 CONFIRMED COMMUNICABLE DISEASES WORCESTER (TREND FROM 2019-2023)

■ Influenza ■ Tuberculosis ■ Hepatitis C ■ Salmonellosis ■ Group A streptococcus



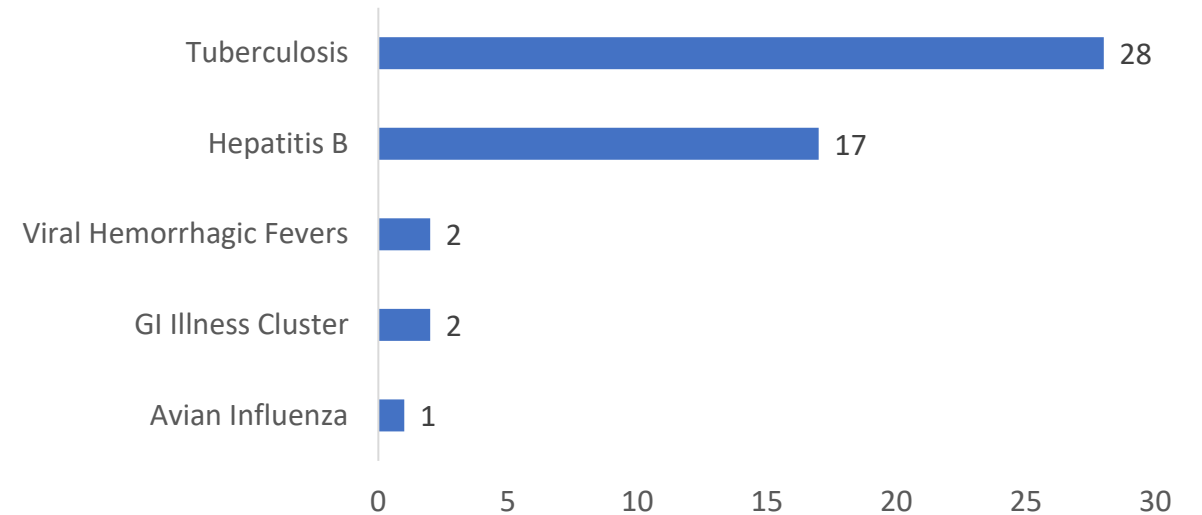
Excluding Novel Coronavirus, the top 5 confirmed communicable diseases are presented in the chart.

- Influenza had the highest number of confirmed cases in 2022 within the 5 years.
- **Tuberculosis cases are rising with each year.**

Contact Communicable Diseases

- There were **50** contact communicable disease cases from January 1 – December 31, 2023.
- Tuberculosis comprised of **56% (28)** of these cases.

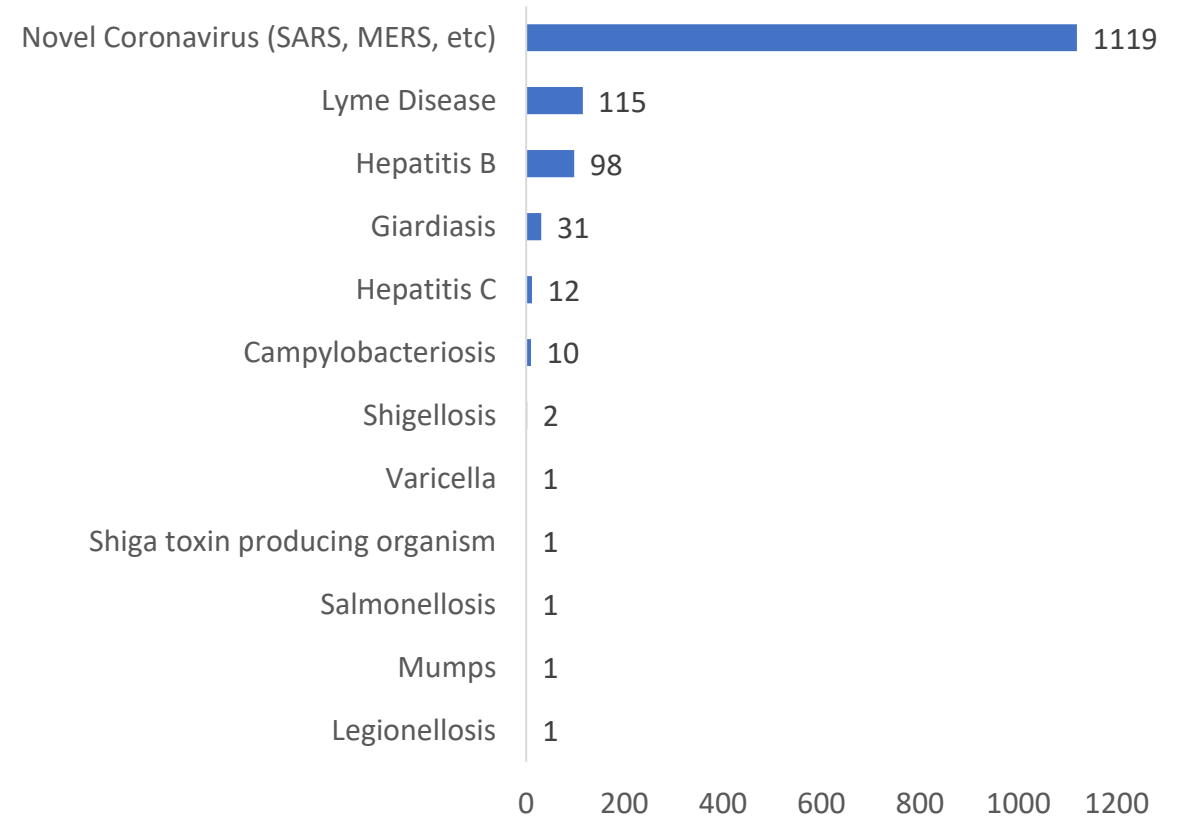
Contact Communicable Diseases in Worcester, MA (Jan 1 - Dec 31, 2023)



Probable Communicable Diseases

- There were **1,392** probable communicable disease cases from January 1 – December 31, 2023.
- Novel Coronavirus contributed to **80% (1,119)** of these cases

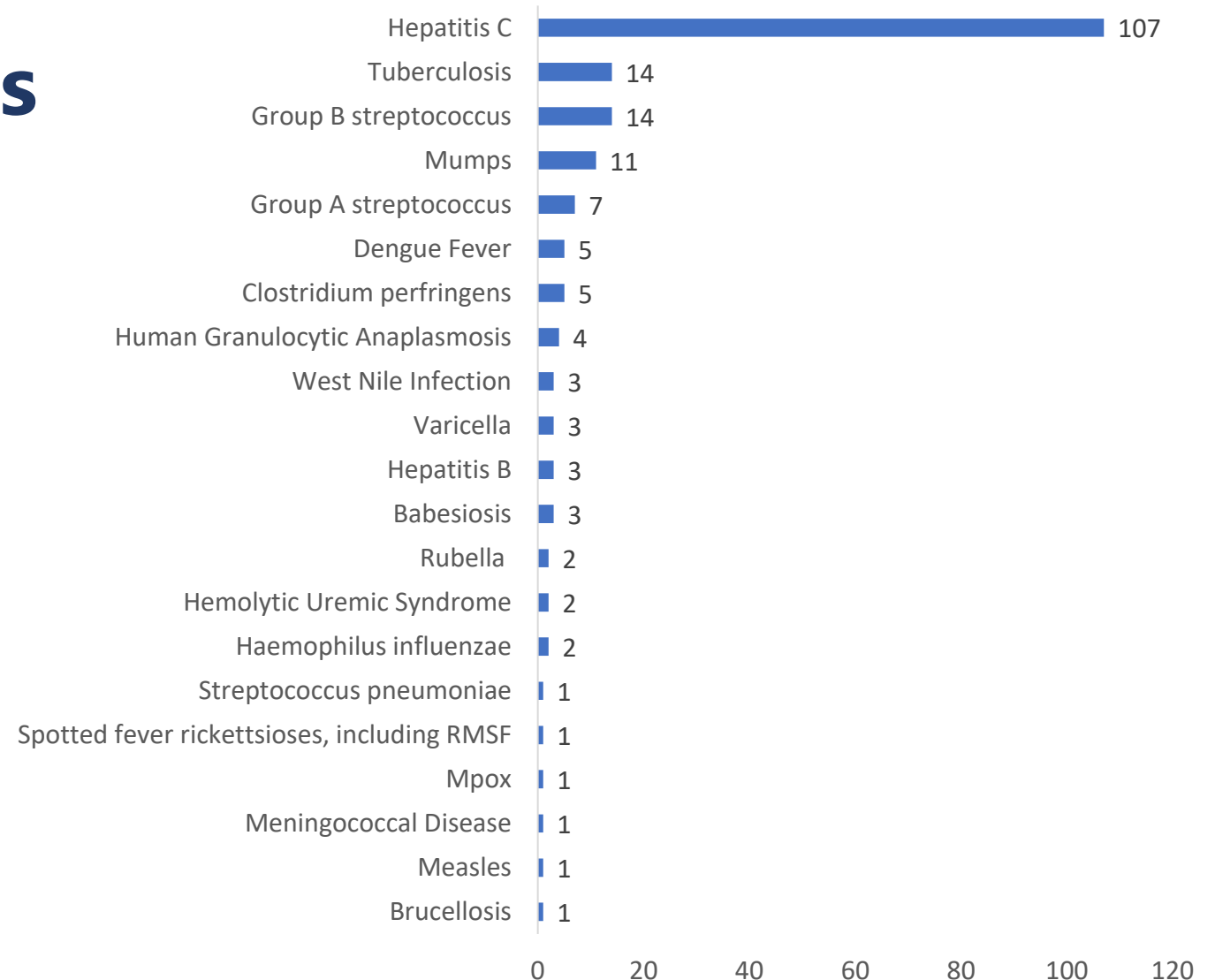
Probable Communicable Diseases in Worcester, MA (Jan 1 - Dec 31, 2023)



Revoked Communicable Diseases

- There were **191** revoked communicable disease cases from January 1 – December 31, 2023.
- Hepatitis C constituted **56% (107)** of these cases

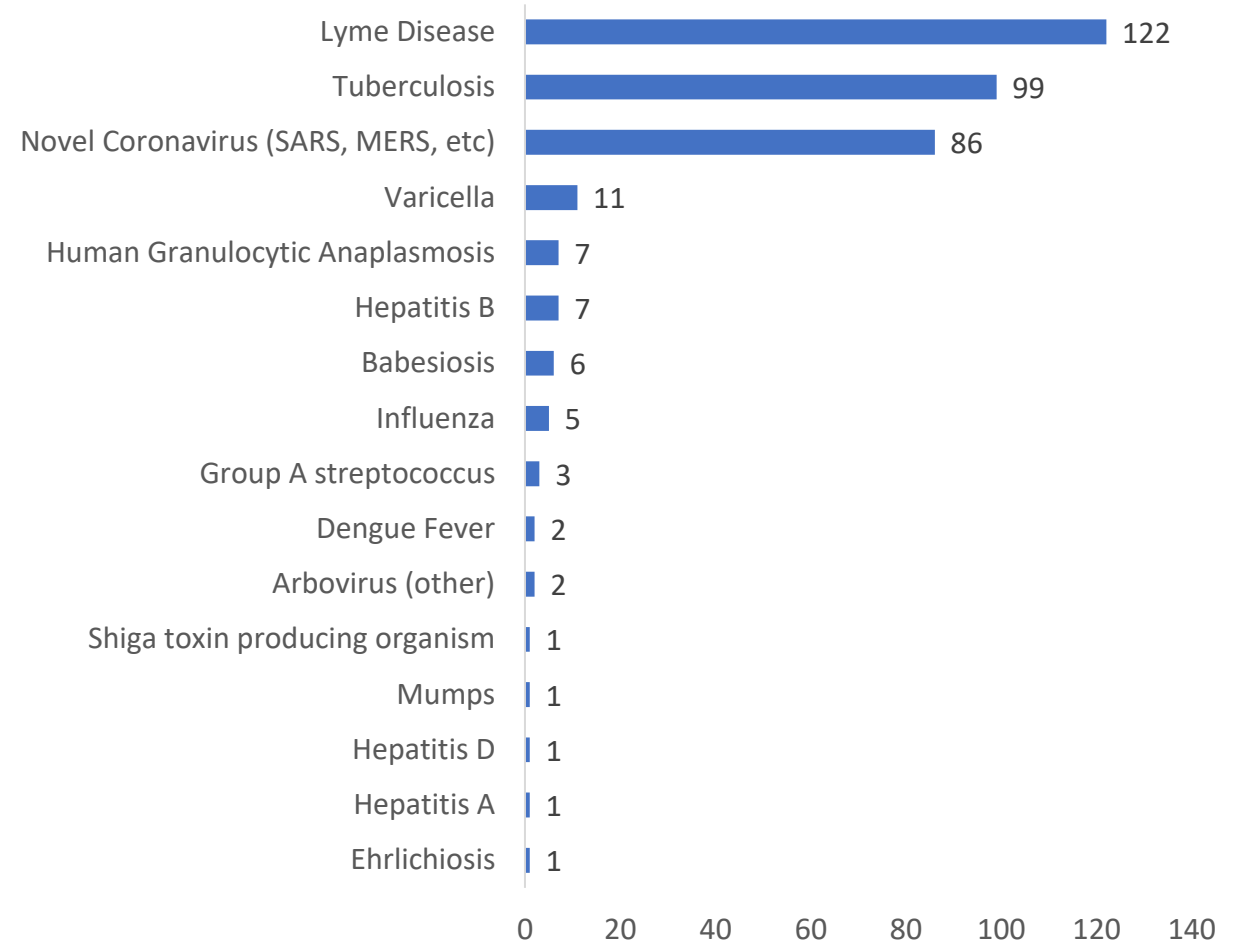
Revoked Communicable Diseases in Worcester, MA
Jan 1 - Dec 31, 2023



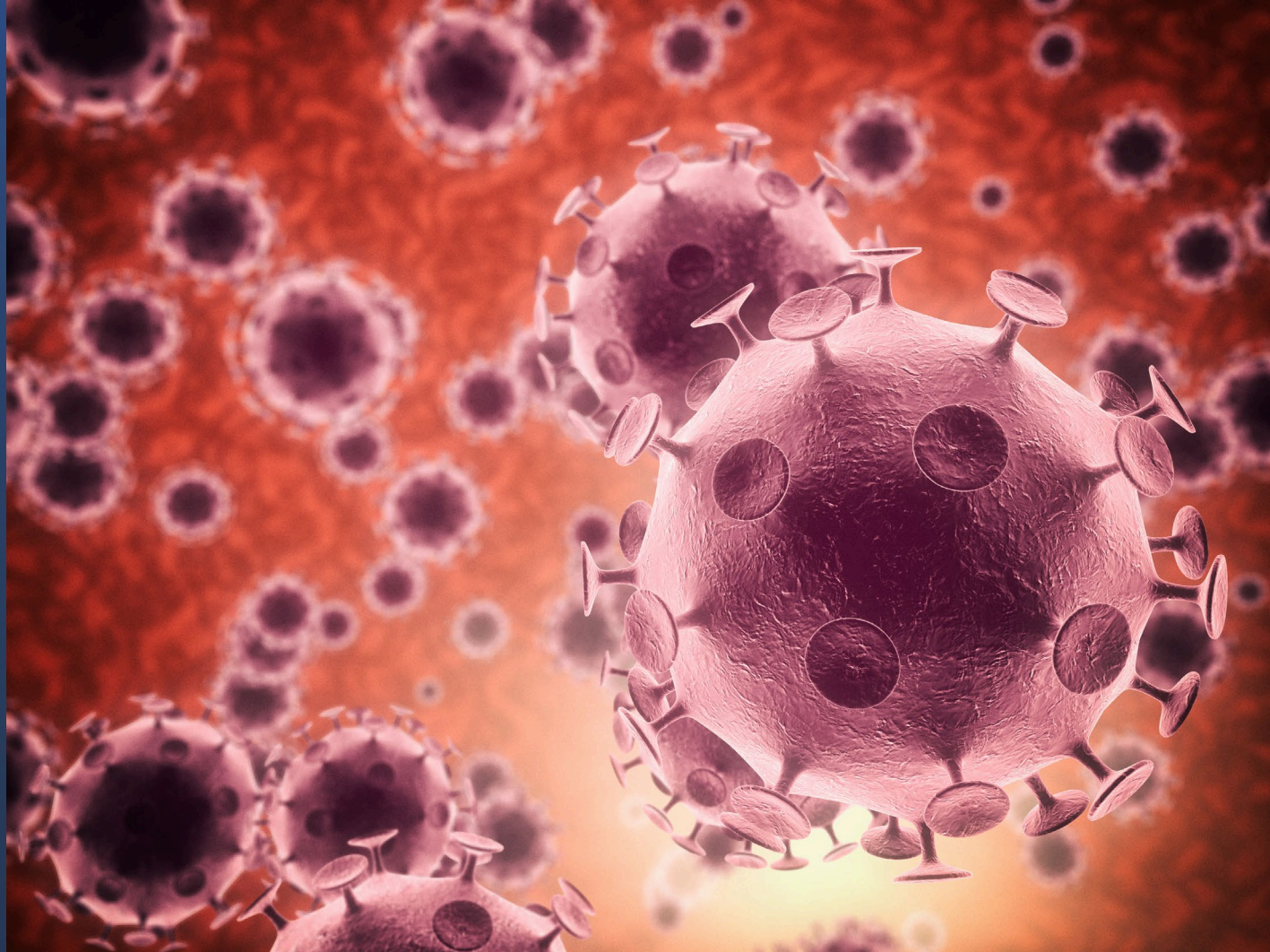
Suspect Communicable Diseases

- There were **355** suspect communicable disease cases from January 1 – December 31, 2023.
- Lyme Disease contributed to **34% (122)** of these cases

Suspect Communicable Diseases in Worcester, MA (Jan 1 - Dec 31, 2023)



Thank You !



Climate Change & Public Health Planning, Preventing, Adapting



City of Worcester
Board of Health

Judy Schaechter, MD, MBA
Strategic Health Officer, MedNetPro
Professor Emerita, University of Miami
Monday, February 5, 2024

Agenda Items

Applying a Public Health Approach

1. Scientific Foundation & Epidemiology

What is climate change?

What is the timeline of climate change?

What are the contributors?

2. Health Impacts & Equity Issues

3. Opportunities & Action Steps to Improve Community Health

Prevention & Adaptation

Resources, Partnerships, Systems

“Not everything that is faced can be changed, but nothing can be changed until it is faced.”

–James Baldwin

Zika 2016

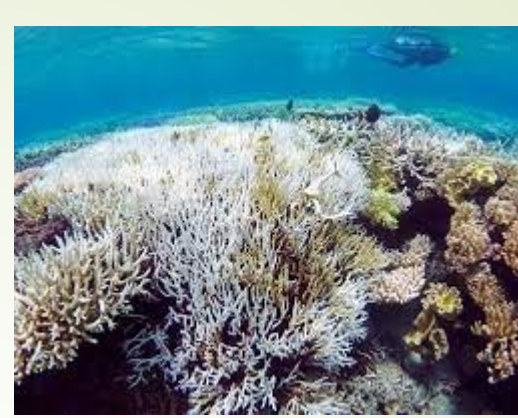




Drought



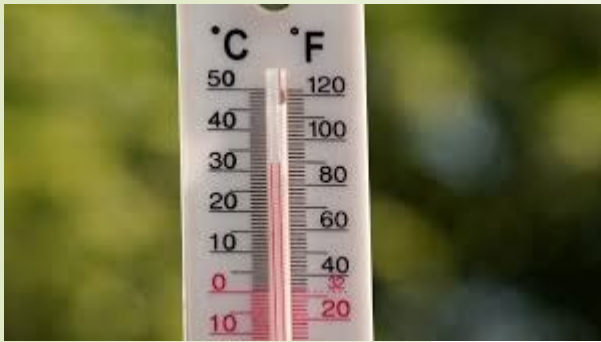
Wildfires



Ocean acidification



Loss of snow cap



Heat

What is Climate Change?

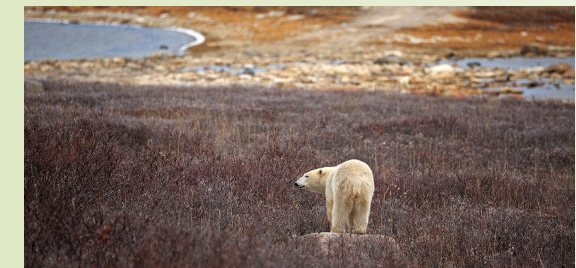


Pests



Flooding

Loss of Biodiversity



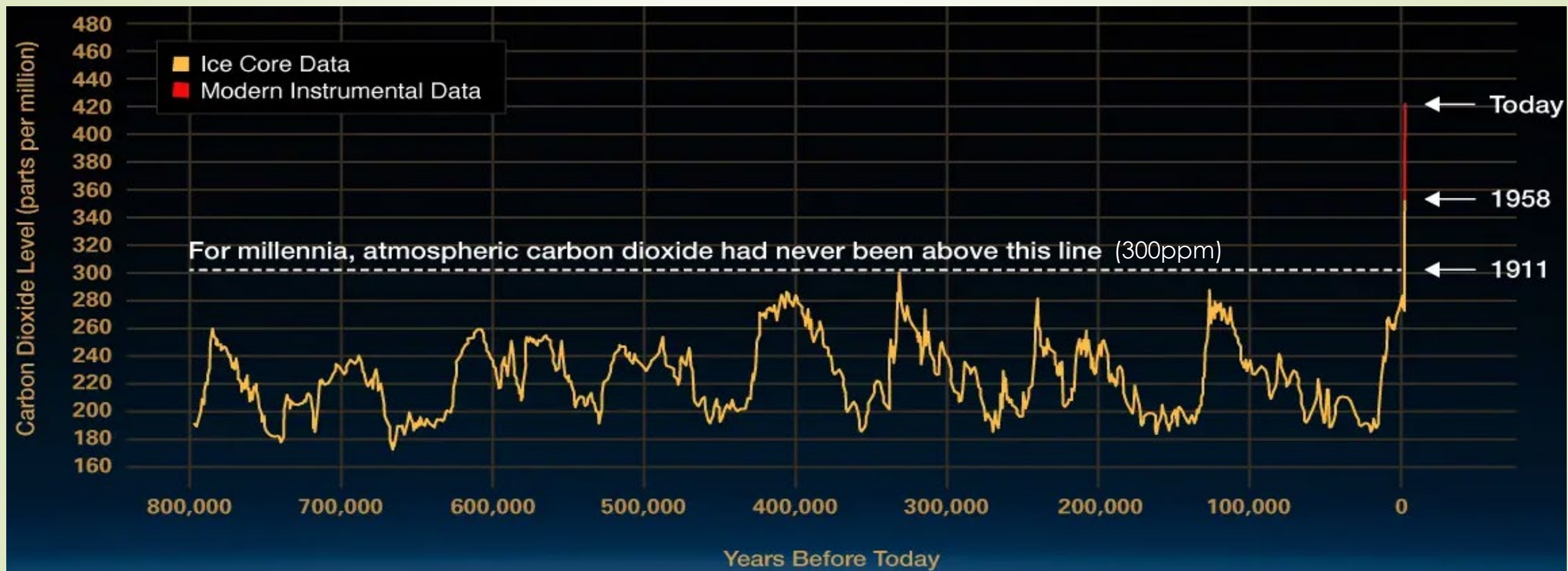
Algae blooms



Storms/Extreme Weather



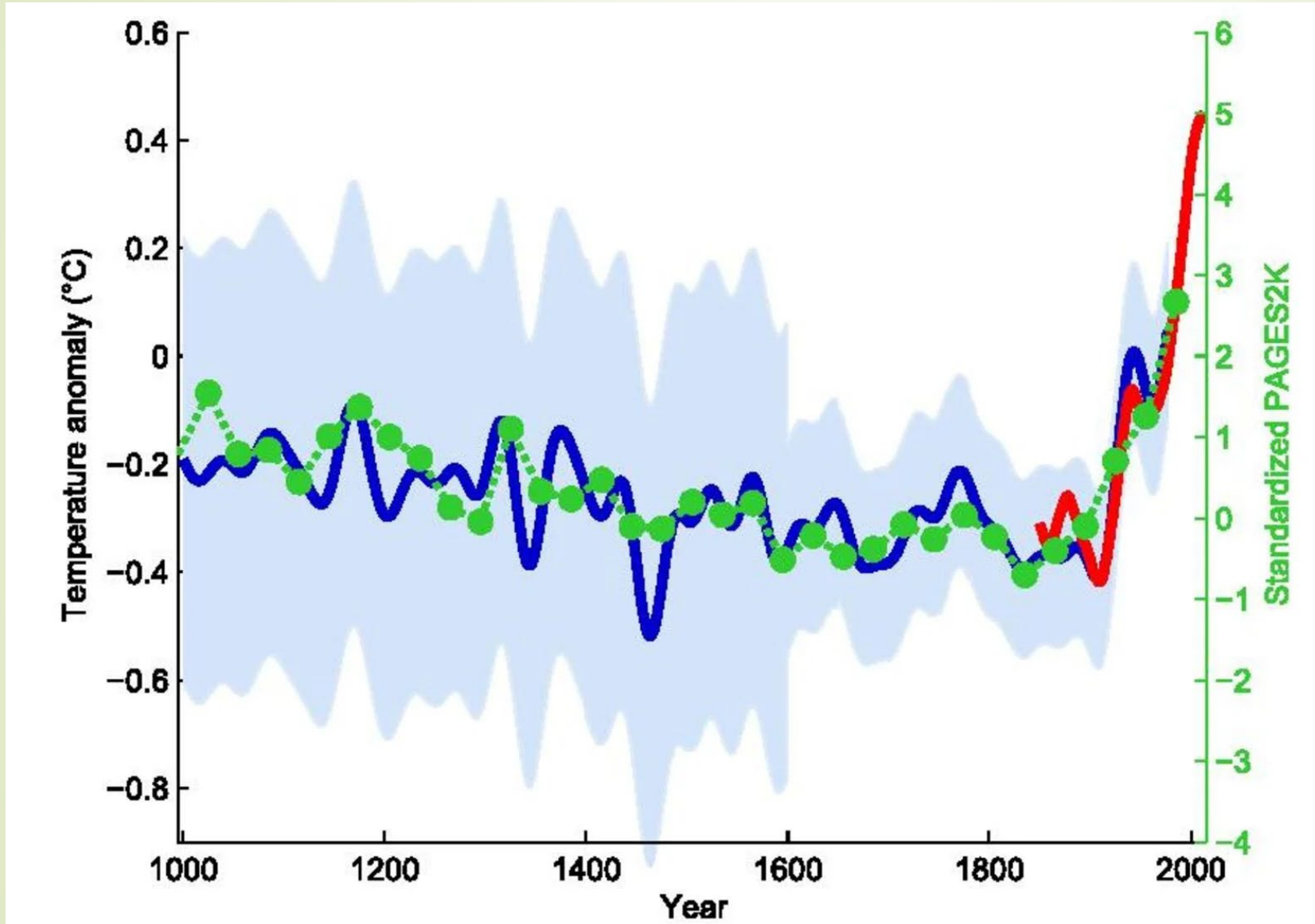
Carbon Dioxide Levels vs. Time



5

NASA: "There is unequivocal evidence that Earth is warming at an unprecedented rate. Human activity is the principal cause."

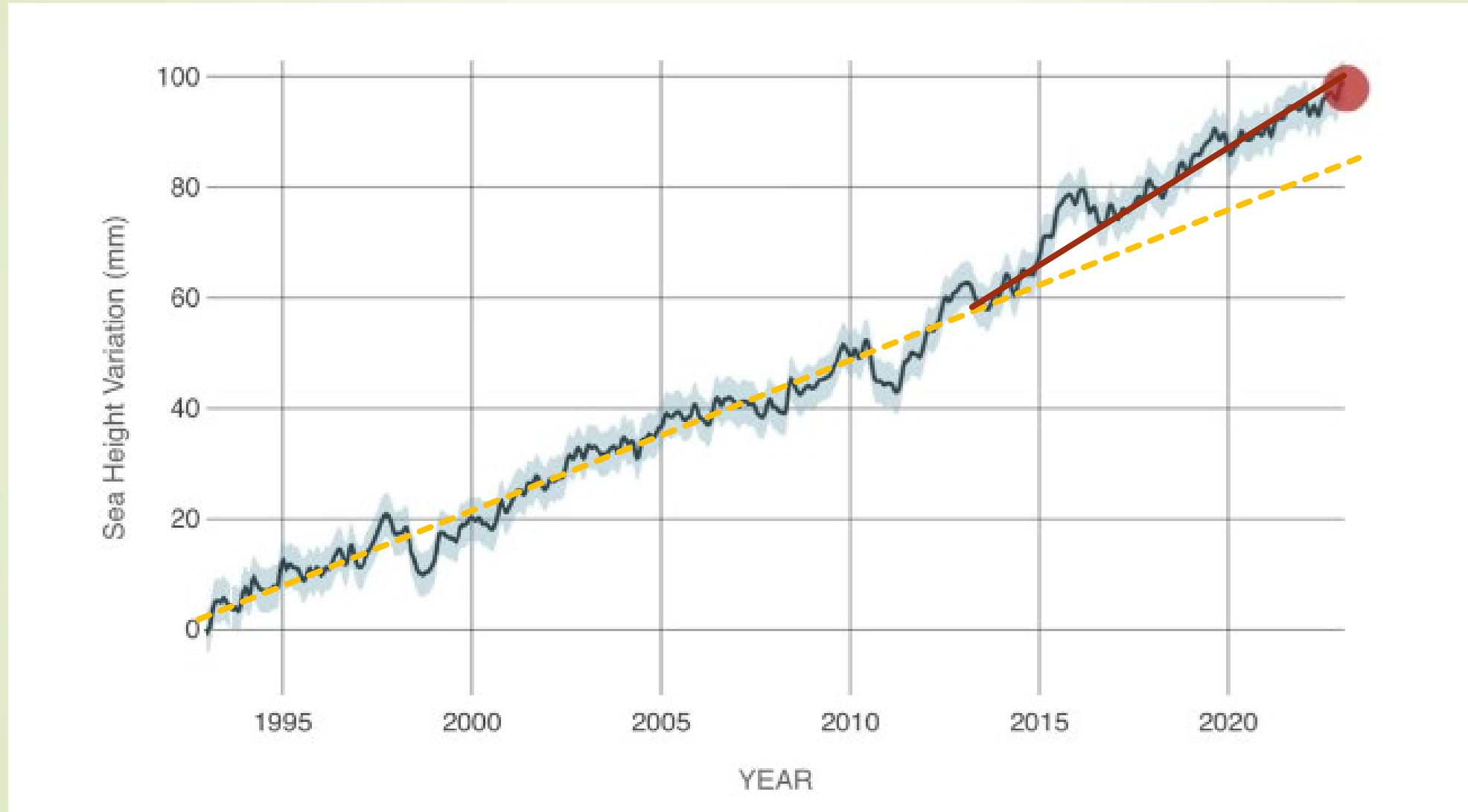
Average Temperature Change over 1000 years



“The Hockey Stick Curve”

- Annual mean
- 5y Mean

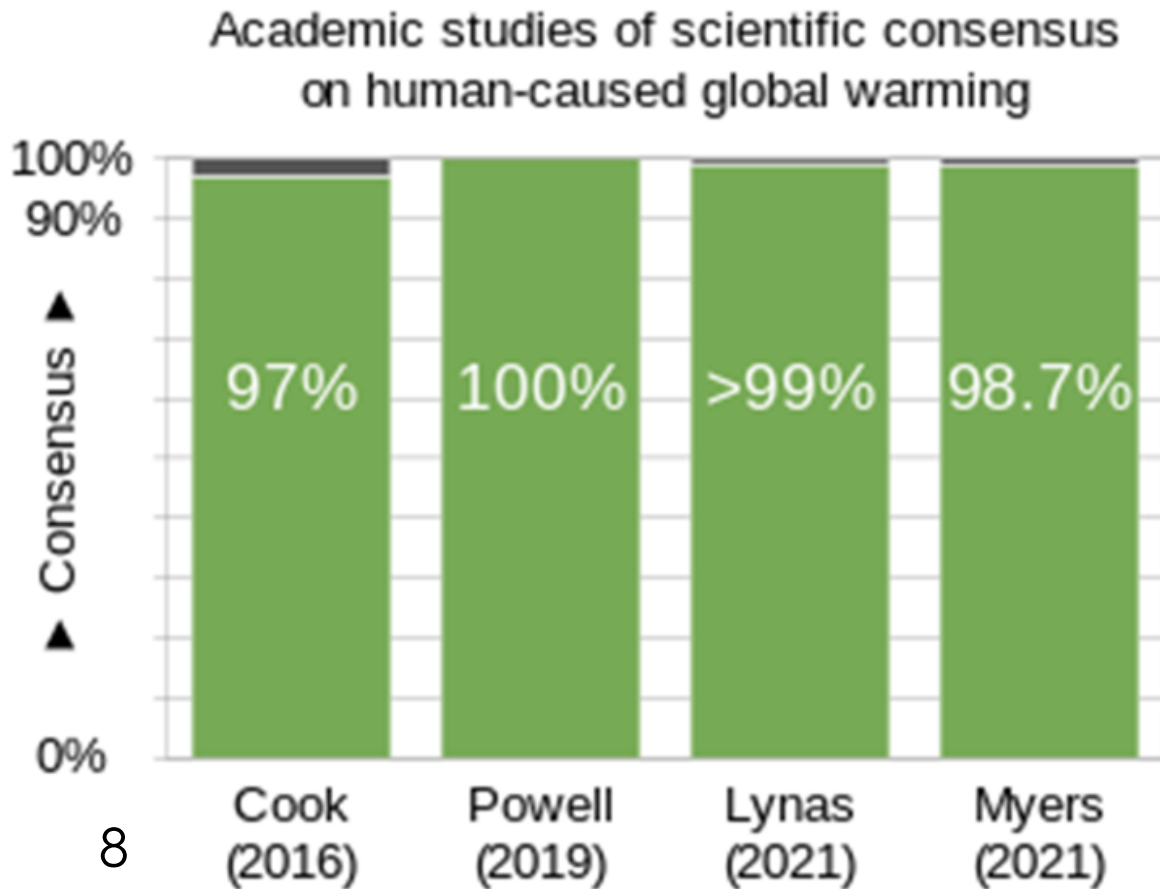
Sea Level Rise Since 1993 -- 9.85 cm (3.9 inches)



What are the Causes of Climate Change?

➔ There is strong scientific consensus

- ➔ Intergovernmental Panel on Climate Change (IPCC) "Human activities - **burning fossil fuels and changes in land use** - release greenhouse gases that trap heat in the atmosphere. Carbon dioxide is responsible for most of global warming, although methane and other greenhouse gases also warm the climate.



Overwhelming, peer reviewed literature & scientific consensus.

What is Climate Change?

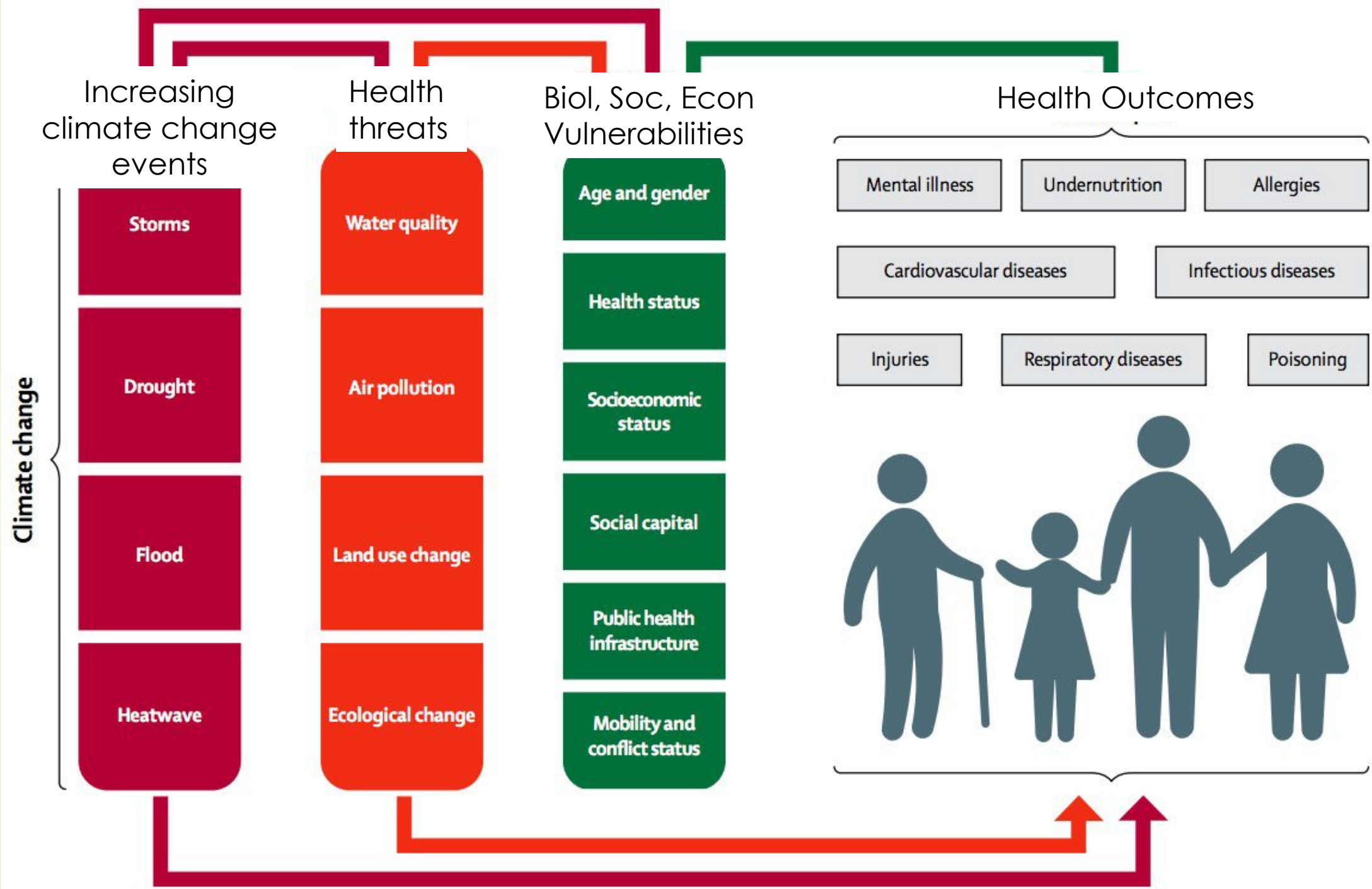
- ▶ **NASA:** Climate change is a long-term change in the average weather patterns that have come to define Earth's local, regional and global climates. These changes have a broad range of observed effects that are synonymous with the term. Changes observed in Earth's climate since the mid-20th century are driven by human activities, particularly fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere, raising Earth's average surface temperature.
- ▶ **United Nations:** Climate change refers to long-term shifts in temperatures and weather patterns, mainly caused by human activities, especially the burning of fossil fuels.
- ▶ **Bottom line:** Our planet's **temperature has already increased $>1.1^{\circ}\text{C}$ (2°F)** since the industrial revolution; following a millennium of stability.

Rising temperature GHG, Smoke, Sea levels . . . What does it mean for public health?



In 2021, the WHO declared climate change to be “the single biggest health threat facing humanity.”

How Climate Change Impacts Health



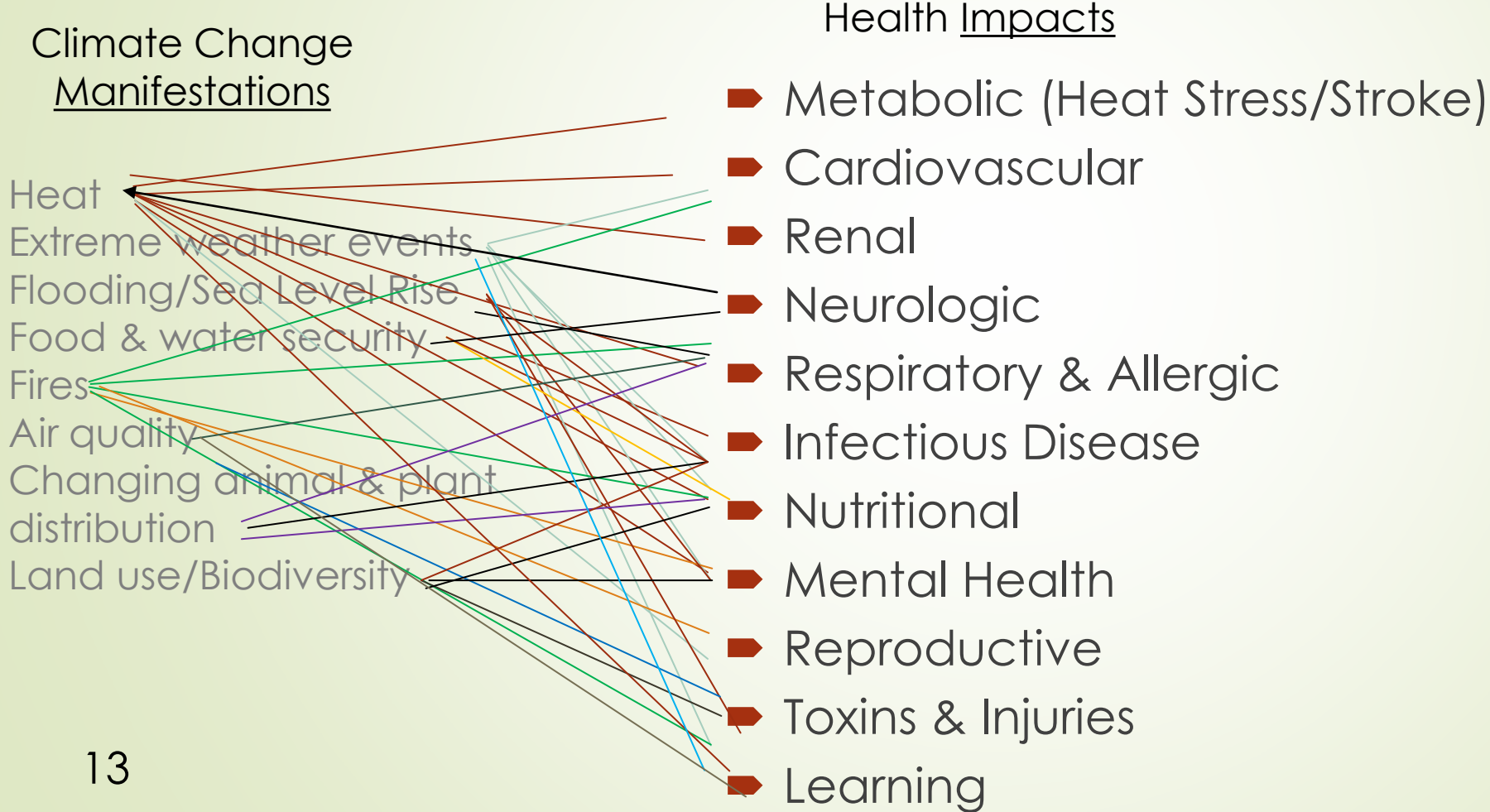
Climate Change Threats to Human Health

Physical, Chemical & Biological

- Heat (continuous & extreme weather events)
- Extreme weather events:
 - Storms (stronger, wetter, more frequent, longer season)
 - Drought/Desertification (drier, longer)
- Fires & smoke
- Flooding (continuous & extreme weather events)
- Sea Level Rise
- Food & water (quantity & quality)
- Air quality (biologic: pollen, molds & chemical: PM, O₃, VOC, NO_x, NH₄)
- Changing animal & plant distribution
- Land use/Biodiversity

What are the Health Impacts of Climate Change?

In 2021, the WHO declared climate change to be “the single biggest health threat facing humanity.”



Climate Change, Health & Equity

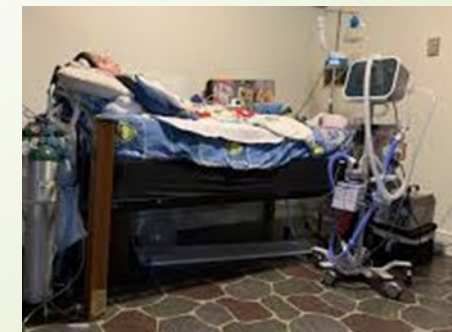
Racism, Redlining, Real Estate

- Accumulated wealth
 - Quality of homes
 - Central AC; Any AC
 - Sealing off from pollutants
 - Neighborhood Safety
 - Windows opened for ventilation
- Built Environment: Urban Heat Islands
 - Greening/Bluing
 - Shade Cover
 - Water Drainage
- Power restoration
- Occupational exposures

Who is most at risk?



Who is least able to adapt?



Climate Change: an *Equity Issue* for Children

- Children account for 28% of all CC deaths – WHO (*16% global pop.*)
- Critical periods of development
- 0-5y most vulnerable (physical, developmental, social)
- Cumulative lifetime risk
- Elevated Exposures – poverty, BIPOC (housing, heat deserts)
- Limited Adaptation resources – poverty, BIPOC (A/C, migration)

Heat

Zachary Martin-Polsenberg, 16y/o - 2017

Zachary Martin Act
2020

High school practice

- Trained staff
- Heat Index
- Limits
- Hydration & Cooling



Heat Exhaustion

Heat Stroke

Signs of Heat Stress

Minutes matter.

Heat Stroke may trigger irreversible end organ damage.



Thermoregulation

Homeostasis = $\pm 37^{\circ}\text{C}$



Warming

- Metabolism
- Exercise (10 min jog raises T 1°C , if cooling mechanisms are absent) & Shivering
- Absorption ($T_{\text{ambient}} > T_{\text{core}}$)

Cooling

1. Vasodilation [requires lower external temp ($T_{\text{skin}} - T_{\text{ambient}}$) & airflow]
2. Perspiration [requires hydration, ambient evaporation (humidity & airflow)]
3. Behavioral adjustments [shade, water, cooler/airflow (AC, fan), clothing]

The **Heat Index** (=Apparent Temperature; "Feels Like")

Factors: Ambient Temperature & Relative Humidity

NWS Heat Index

Temperature (°F)

Relative Humidity (%)	Temperature (°F)															
	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Humidity limits the body's ability to cool through perspiration.

Zachary in Florida
Temp 91°F
Humidity 80% (avg)
Heat Index: 118°



Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

- Caution
- Extreme Caution
- Danger
- Extreme Danger

Heat Stress -- Chronic Disease & Acute Conditions

Cardiovascular

Asthma

Renal

Endocrine, Diabetes

Sickle Cell



Obesity

Non-ambulatory

Developmental

disorders

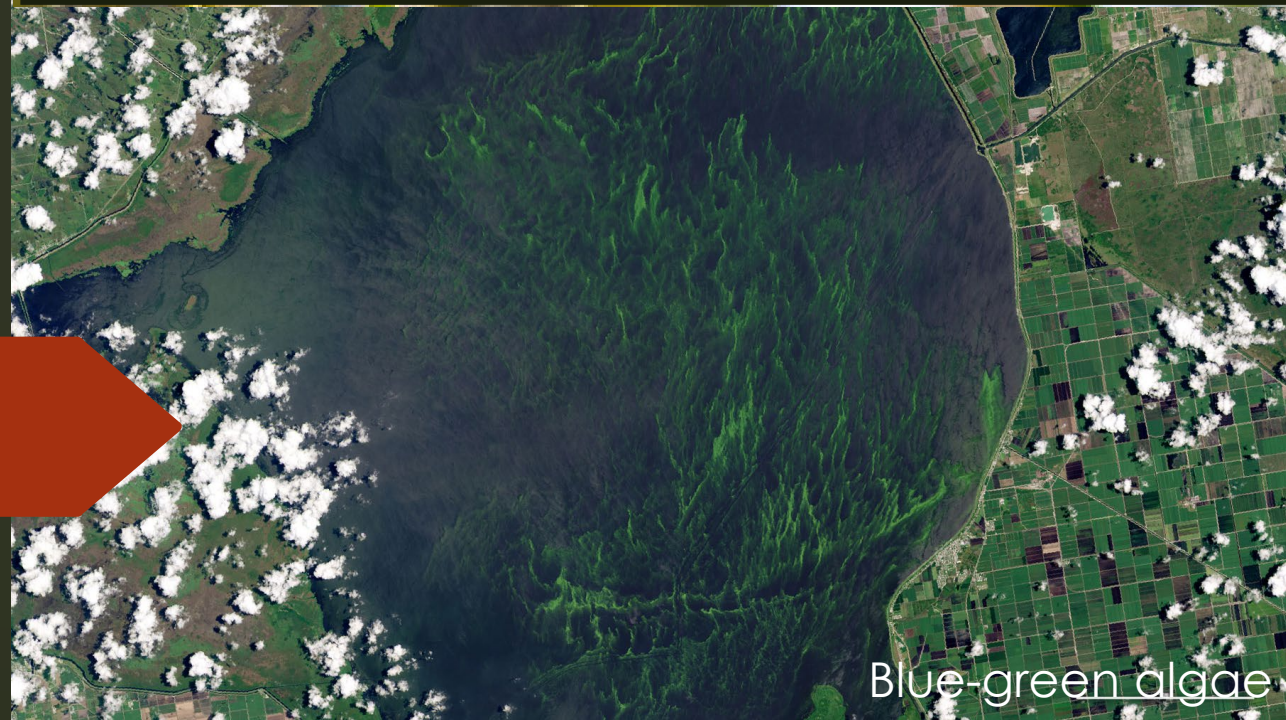
Dehydration

Medications

Mango



Air Quality & Respiratory Disease



Blue-green algae

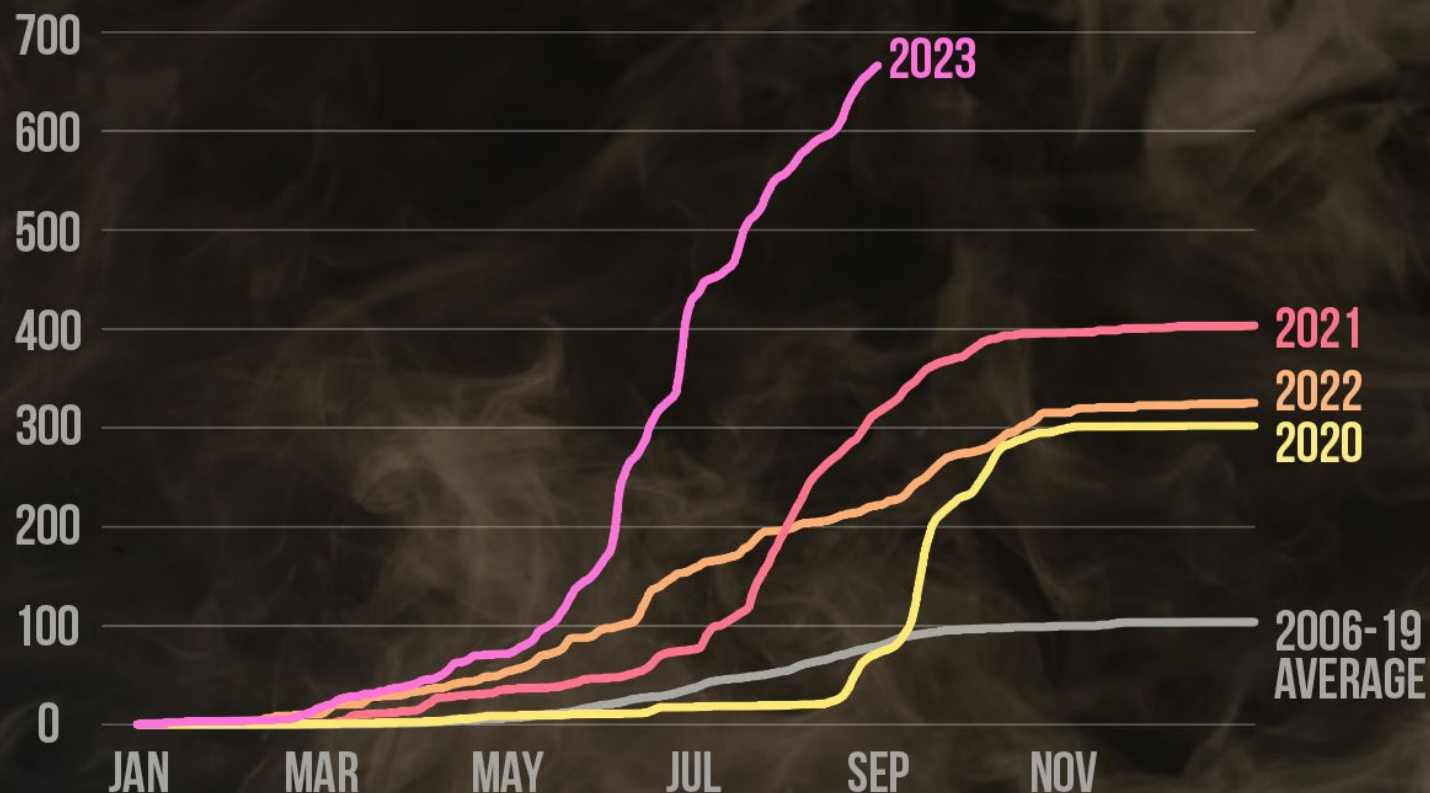
Asthma, Aeroallergens & Air Quality

- ▶ Increased asthma incidence & hospitalizations, assoc./w Climate Change:
 - ▶ Physical: Heat, humidity & flooding (mold)
 - ▶ Chemical: wildfire smoke & burning of fossil fuels (CO₂, CH₄, particulate matter, O₃,)
 - ▶ Biologic: molds, pollens, algal blooms
 - ▶ Mechanisms: Temperature & CO₂ increases assoc./w:
 - ▶ Changes in the timing & duration of the pollen season & geographic distribution
 - ▶ Changes in pollen & fungal spore production & allergenicity
 - ▶ Interactions of allergens & pollutant irritants (O₃ adjuvant effects)
- ▶ Effect Urban > Rural

Wildfires Increase Smoke Inhalation Across the US

RECORD WILDFIRE SMOKE POLLUTION

Smoke PM2.5 ($\mu\text{g}/\text{m}^3$) exposure per person in U.S.



Cumulative smoke-related PM2.5 exposure per-person in U.S. Data through Aug 31, 2023.
Source: Stanford Environmental Change and Human Outcomes Lab

CLIMATE CENTRAL

Unprecedented exposures

- 5 days exposure → 2X asthma rate
- CV/Resp, learning, emotional, maternal-child health effects

Adaptation Inequities:

- Access to air filtration
- “Leaky” homes (pollutant entry)
- Relocation options
housing/shelter,
transportation, education,
social ties

Climate Change Health Impacts Start Early

Maternal-Child Health

Heat Waves (extreme temperatures):

- **Prematurity** – 16% rise in prematurity
- **Low Birth Weight** - 9% rise in LBW
- **Miscarriage** - 46% rise miscarriage rates



Elevated **Air Pollution** associated with disruptions of:

- **Fertility**
- **Prematurity & Miscarriage**
- **Low Birth Weight** & adverse birth outcomes
- **Learning:** school performance, IQ, ADHD

Disparities: urban, low-income, Black mothers



Air Quality Index (AQI) Awareness: & High-Risk Patients

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

50-100: moderate to unhealthy for sensitive children

150-200: unhealthy for some in public/everyone

Airnow.gov

Mental Health



Extreme Weather Events (EWE):
Migration Disruption – school, jobs,
home, social ties.

Climate Change assoc./w:

- Increased mental health visits to EDs
- Acute & PTSD (24-30% EWE)
- Depression (>droughts, migration)
 - Suicide (> heat)
- Anxiety (> EWE, pollutants, migration)
“Climate Anxiety” (APA)
- Aggression/Violence (> heat, migration)
- Substance use
- “Sostalgia”

A photograph of two young children, a girl and a boy, kneeling in a garden and planting a small evergreen tree. The girl is on the left, wearing a grey hoodie and dark pants, and the boy is on the right, wearing a denim jacket and dark pants. They are both focused on the task. The tree is in a hole in the ground, and the children are using their hands to adjust the soil around its base. The background is a lush green garden with various plants and trees.

The best time to plant a tree
was 20 years ago. The second
best time is NOW.

Patient Care & Public Readiness



Education/Anticipatory Guidance

- All Patients/General Public
- At-risk Patients/Persons
 - Chronic Dz (CV, Resp, Renal, SC), Medication effects
 - Anxiety/Prior EWE Trauma;
 - Sports/Exposure precautions
 - Inherent child vulnerabilities/differences
 - Elderly

Screen for Essentials:

- AC, electricity, HEPA filters, water, means to avoid flooding and mold? (SDOH adaptation)
- Identify medically complex/shelter needs

Readiness & Resources

Evaluate Community Preparedness & Knowledge

- Rapid Cooling Capacity (ED, Urgent Care)
- Provider/Public
 - Signs & Symptoms of Heat Stress
 - Location of Cooling Stations
 - Heat Index (weather.gov)
 - AQI (airnow.gov)

Recovery Planning:

Displacement, isolation, mental health

Environmental changes: mold, water, etc.

Long-Term Health “Co-Benefits” for People & Planet

Nutrition: eat less/more plants
> CVR, Overweight/Obesity, Diabetes, Cancer
Improved land use, reduced methane
Empowers adolescents*

Exercise: more active transport
> CVR, overall health
Reduced GHG, Heat & Pollutants
Empowers adolescents*

Clean Air: Renewable Energy, Reduce Use, etc.
> Respiratory, Maternal/Child
Reduced GHG, Pollutants
Empowers adolescents*



The US Health Sector: 8.5% of Global GHG Emissions

What can be done?



Person/Practice

Learn more & put into practice:

AQI, HI, Resource List postings
(cooling stations, power/AC needs, medical shelter patients)

Model Personal Examples

Diet, use of GHG vs renewables
Use/recycle materials, etc.

Educate Talk, write, podcast, blog,
meet with community groups to
translate science & inspire others!

Health Systems & Academic Institutions

GHG accounting & reporting

- JCAHO Sustainable Health Care Certification
- White House Climate Pledge
- Planetary Health Report Card



Mitigation & Adaptation:
built environment, transportation, energy, water & sewage, housing, . . .

Coordination Partnership Complementary Skills, Knowledge & Capacity



Public Health Opportunities

Communication of Health Science – Impacts & Impacts of Impacts

PH Levers -

- Public Awareness (tap vs. bottled water)
- Provider Education & Alerts (CC & H, Heat, Air Quality)
- WIC (nutrition & climate literacy)
- Capacity assessments (extreme weather, heat stress response)



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Community Trust

Thank you



Questions & Reflections

