

# Climate Change and Health Equity: Introduction to the new OCCHE

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Office of  
Climate Change  
and Health Equity

## Overview

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- How Climate Change and Health Equity are Connected
- How Climate Change Impacts the Health of Underserved Populations
- Introduction to the Office of Climate Change and Health Equity
- How OCCHE can Partner with HRSA and the National Health Service Corps



Office of  
Climate Change  
and Health Equity

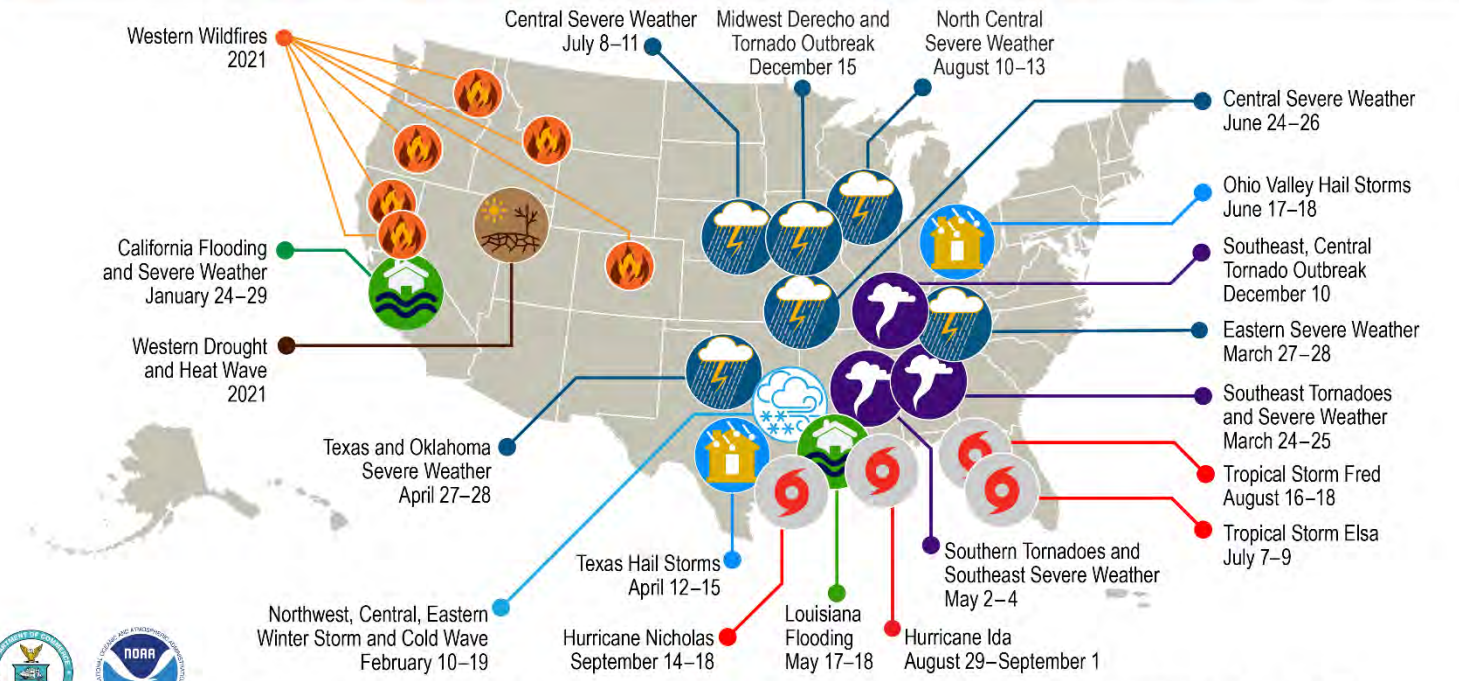
SENIOR CENTER

WEAR A MASK  
WASH YOUR HANDS  
SOCIAL DISTANCE  
STAY SAFE

COME JOIN US

### U.S. 2021 Billion-Dollar Weather and Climate Disasters

- Drought/Heat Wave
- Flooding
- Hail
- Hurricane
- Tornado Outbreak
- Severe Weather
- Wildfire
- Winter Storm/Cold Wave



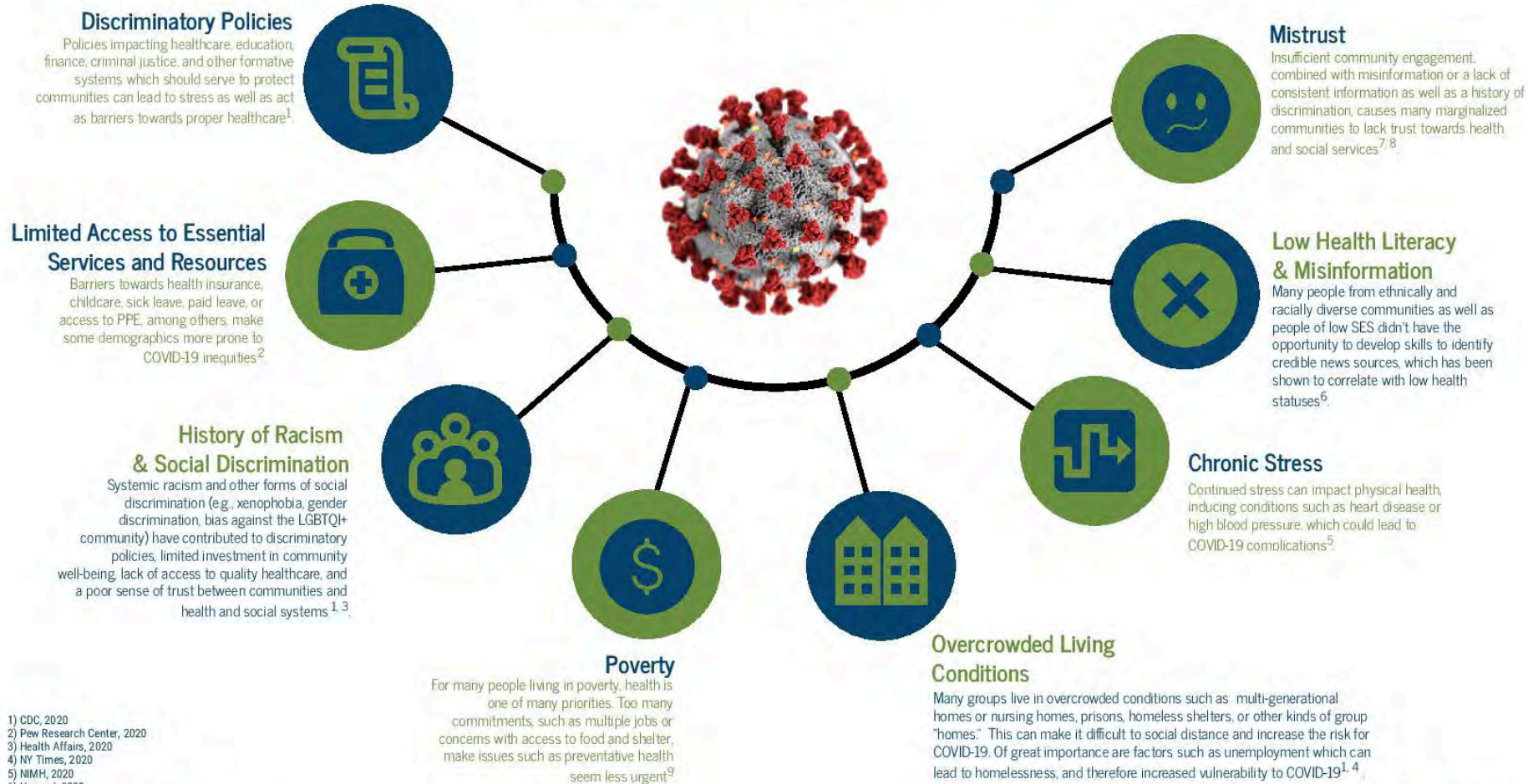
This map denotes the approximate location for each of the 20 separate billion-dollar weather and climate disasters that impacted the United States in 2021



# COVID-19 is a Health Equity Issue: Key Drivers of Disease Inequities

## COVID-19 Inequities

Many social, political and environmental factors\* affect community health and contribute to adverse health outcomes, social inequities, and health inequities. The COVID-19 pandemic has further exacerbated existing inequities, with many people suffering from chronic illnesses and other conditions that increase their risk to severe illness. In addition, the lack of investment in addressing barriers to healthy and productive lives in marginalized communities leads to many other health and social consequences. Below are examples of some key interdependent drivers of disease inequities. A multi-sectoral approach is needed to reduce the impact of COVID-19 and other health issues among marginalized, vulnerable, and underserved communities.



1) CDC, 2020  
2) Pew Research Center, 2020  
3) Health Affairs, 2020  
4) NY Times, 2020  
5) NIMH, 2020  
6) Harvard, 2020  
7) L.C. Cooper and D.C. Crews, 2020  
8) J. Jaiswal, C. LoSchiavo, and D. C. Perlman, 2020  
9) CDC, 2020

# Unequal Climate Vulnerability

## Root Causes<sup>1</sup>

Racism, historical and current disenfranchisement, unequal distribution of power and resources rooted in institutions and processes

## Environmental justice factors that may increase climate vulnerability<sup>2</sup>

Proximity and exposure to environmental stressors

Unique exposure pathways

Physical infrastructure, such as poor housing

Multiple stressors, cumulative, and compounding impacts

Capacity to participate in decision making

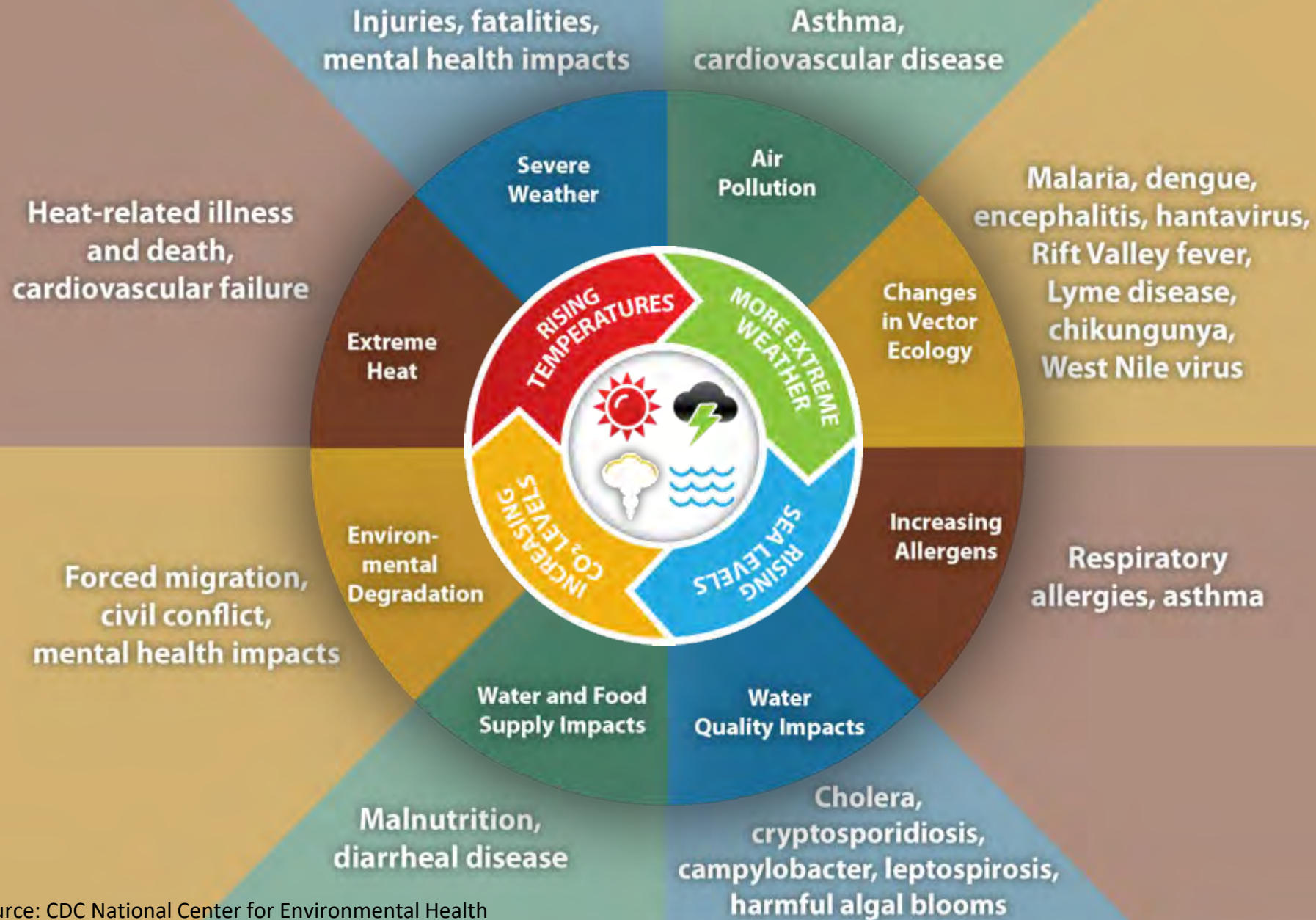
Unequal climate vulnerability

1) Adapted from Climate Change, Health and Equity: A Guide for Health Departments, Public Health Institute and American Public Health Association, 2018

2) Adapted from Guidance on Considering Environmental Justice During Development of Regulatory Actions. EPA, 2015



# The Public Health Impacts of Climate Change



HUMAN HEALTH

HEALTH CARE DELIVERY

EFFECTS OF CLIMATE CHANGE ON HEALTH SYSTEMS

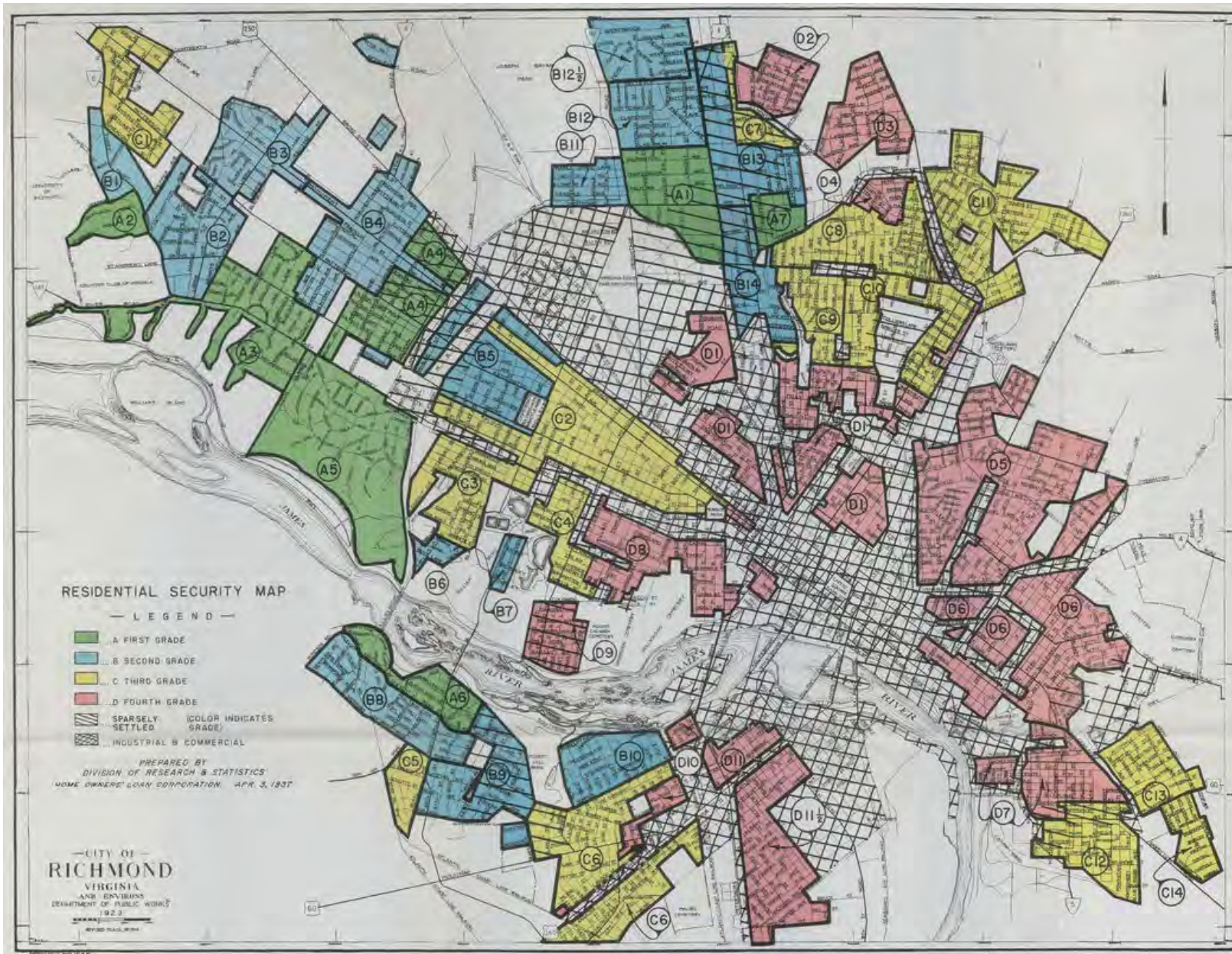


WHAT HEALTH SYSTEMS CAN DO





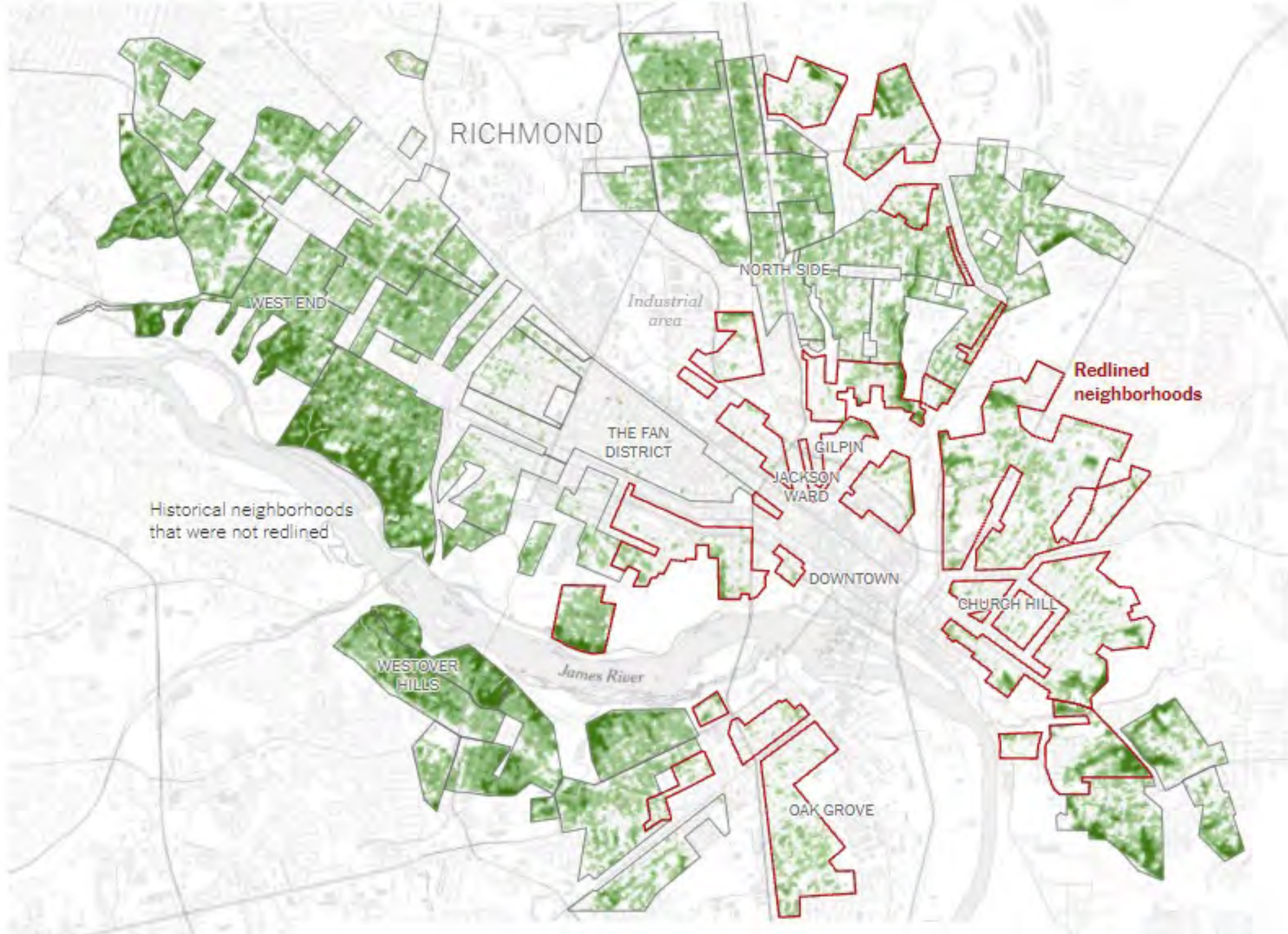
## Redlining and Climate Justice



1923, City of Richmond, Virginia – “Residential Security Map”

Source: Nelson, Winling, Marciano, Connolly, et al., [Mapping Inequality](#)





Formerly redlined areas have less **tree cover** today than areas that weren't redlined.

Source: New York Times. How Decades of Racist Housing Policy Left Neighborhoods Sweltering, Plumer and Popovich, 2020 from Hoffman, Shandas, and Pendleton, Climate, 2020





Historical neighborhoods that were not redlined

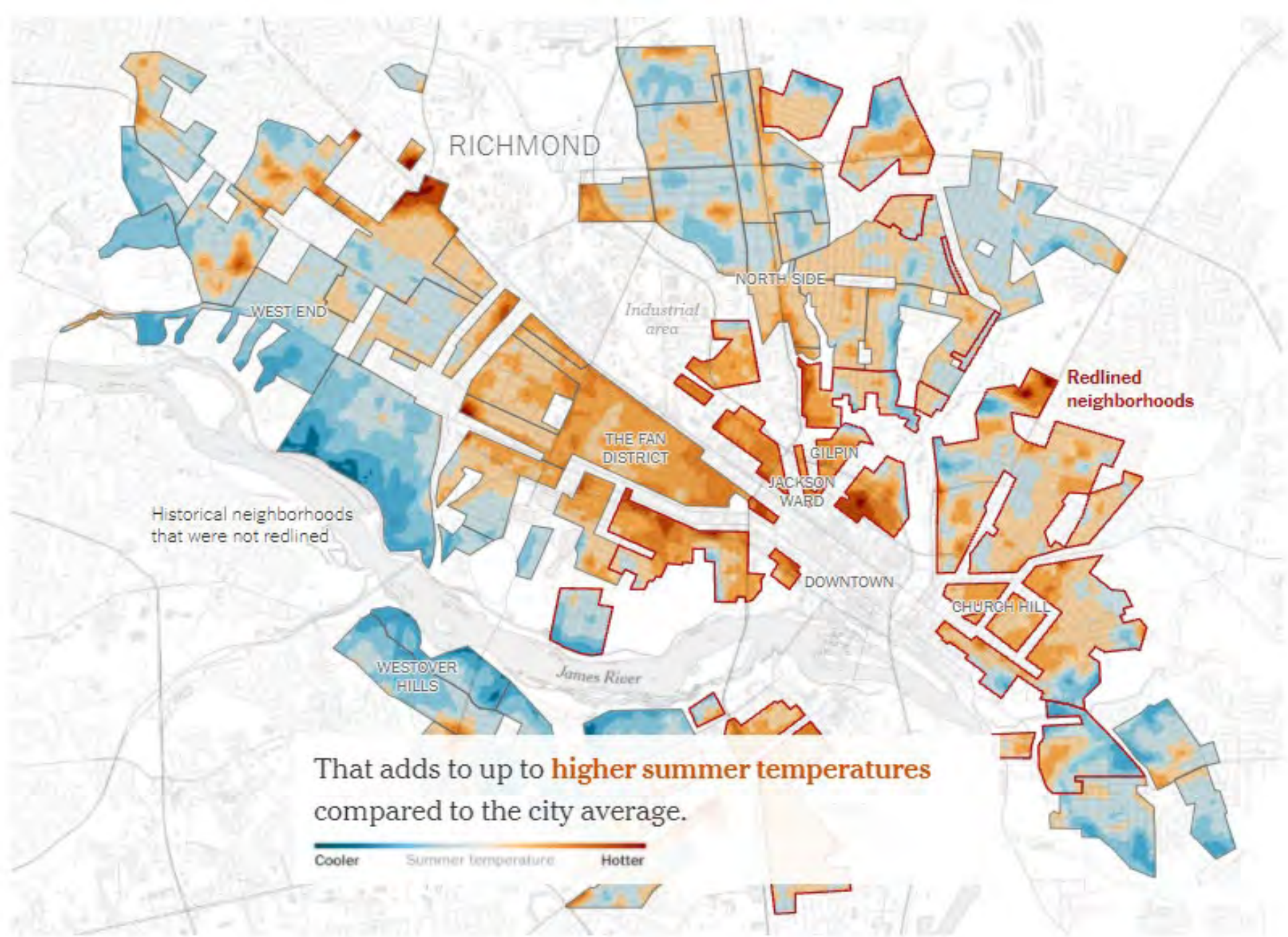
Redlined neighborhoods

They have more paved surfaces, like roads and parking lots, that absorb and radiate heat.

0% Percentage impervious surfaces 100%

Source: New York Times. How Decades of Racist Housing Policy Left Neighborhoods Sweltering, Plumer and Popovich, 2020 from Hoffman, Shandas, and Pendleton, Climate, 2020

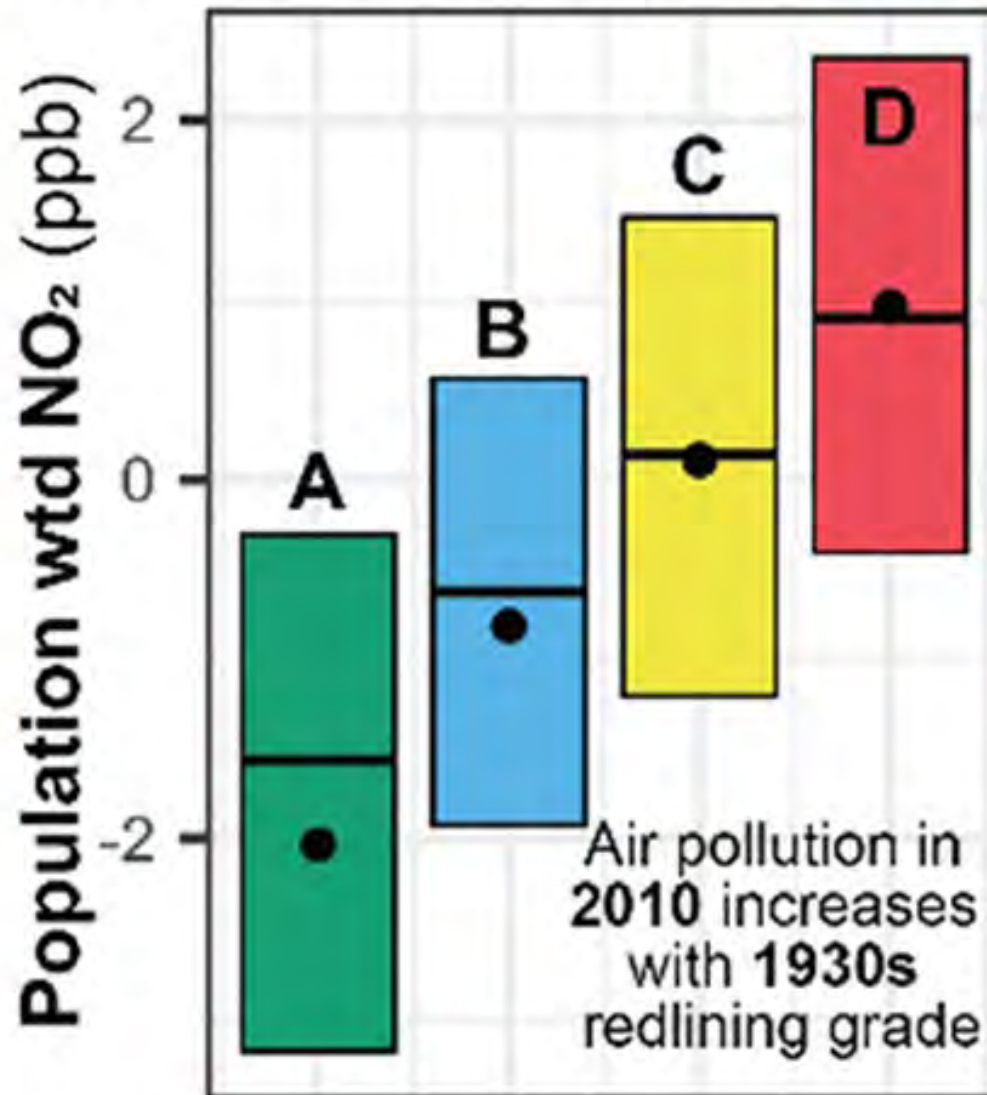
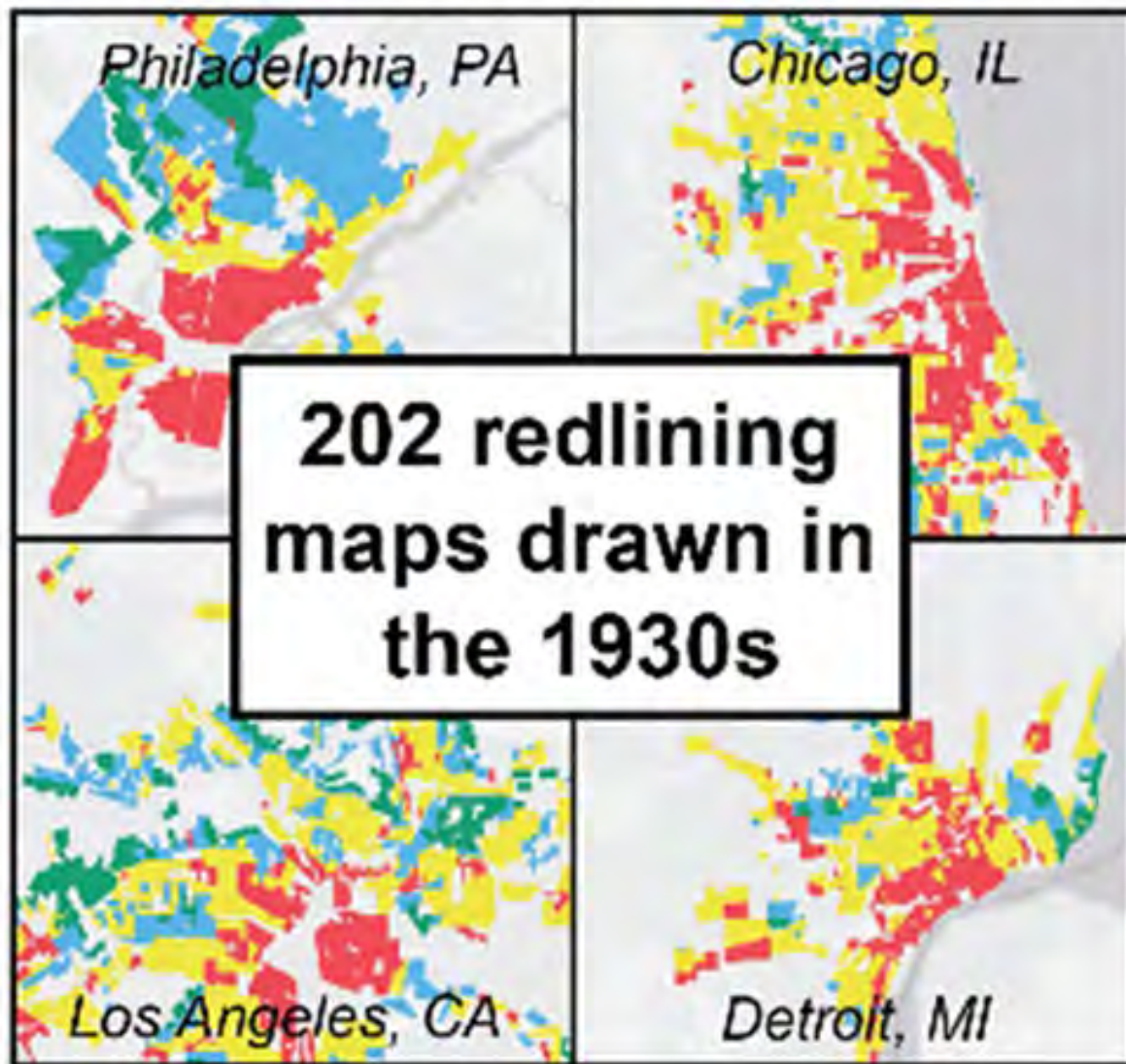




Source: New York Times. How Decades of Racist Housing Policy Left Neighborhoods Sweltering, Plumer and Popovich, 2020 from Hoffman, Shandas, and Pendleton, Climate, 2020



# Modern air pollution disparities in historically redlined areas





## What does this mean for health care systems?

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- Elderly populations
  - **Heat-related morbidity, air pollution effects, West Nile Virus and other ID's, Extreme events**
- Low-income populations
  - **Heat-related morbidity, respiratory diseases from air pollution, molds and pollens, vector-borne diseases (esp. outdoor workers), flooding and extreme events**
- People with chronic medical conditions (durable medical equipment)
  - **Heat or other weather extremes and loss of electricity in homes**
- People with disabilities
  - **Heat or other extreme events and ability to shelter, avoid exposures**
- All populations
  - **Need to improve Social Determinants of Health through infrastructure and other climate change related investments**

## Origins of the Office of Climate Change and Health Equity

### E.O. 14008 - “Tackling the Climate Crisis”

- HHS mandates (Section 222(d))
  - ✓ Office of Climate Change and Health Equity
  - ✓ Interagency Working Group to Decrease Risk of Climate Change to Children, the Elderly, People with Disabilities, and the Vulnerable
  - ✓ Biennial Health Care System Readiness Advisory Council





## Office of Climate Change & Health Equity (OCCHE)

Priority 1: Climate & Health Resilience for Most Vulnerable

Priority 2: Climate Actions to Reduce Health Disparities

Priority 3: Health Sector Resilience & Decarbonization



### Resilient Health Systems

- Capturing **community and health system vulnerabilities** and **logging adaptation gaps**
- **Enhancing the resilience of health systems and communities** to climate change effects
- Building on existing networks and plans to **develop a national plan for health adaptation**

### Low-Carbon Health Systems

- Coordinating Federal health system **greenhouse gas accounting and reduction targets**
- Partnership with private health sector to develop an **action plan for reductions** via incentives, technical assistance, policy guidance, applied research, toolkits, training, use of regulatory authorities as needed, etc.

## Examples of initiatives across the 3 priorities

### Priority 1: Climate & Health Resilience for Most Vulnerable

- Extreme Heat IWG (launched)
- Direct outreach (regions, states, cities, tribes)
- Expansion of CDC/NIH Climate and Health programs
- Launch of HHS CC and Health Equity WG

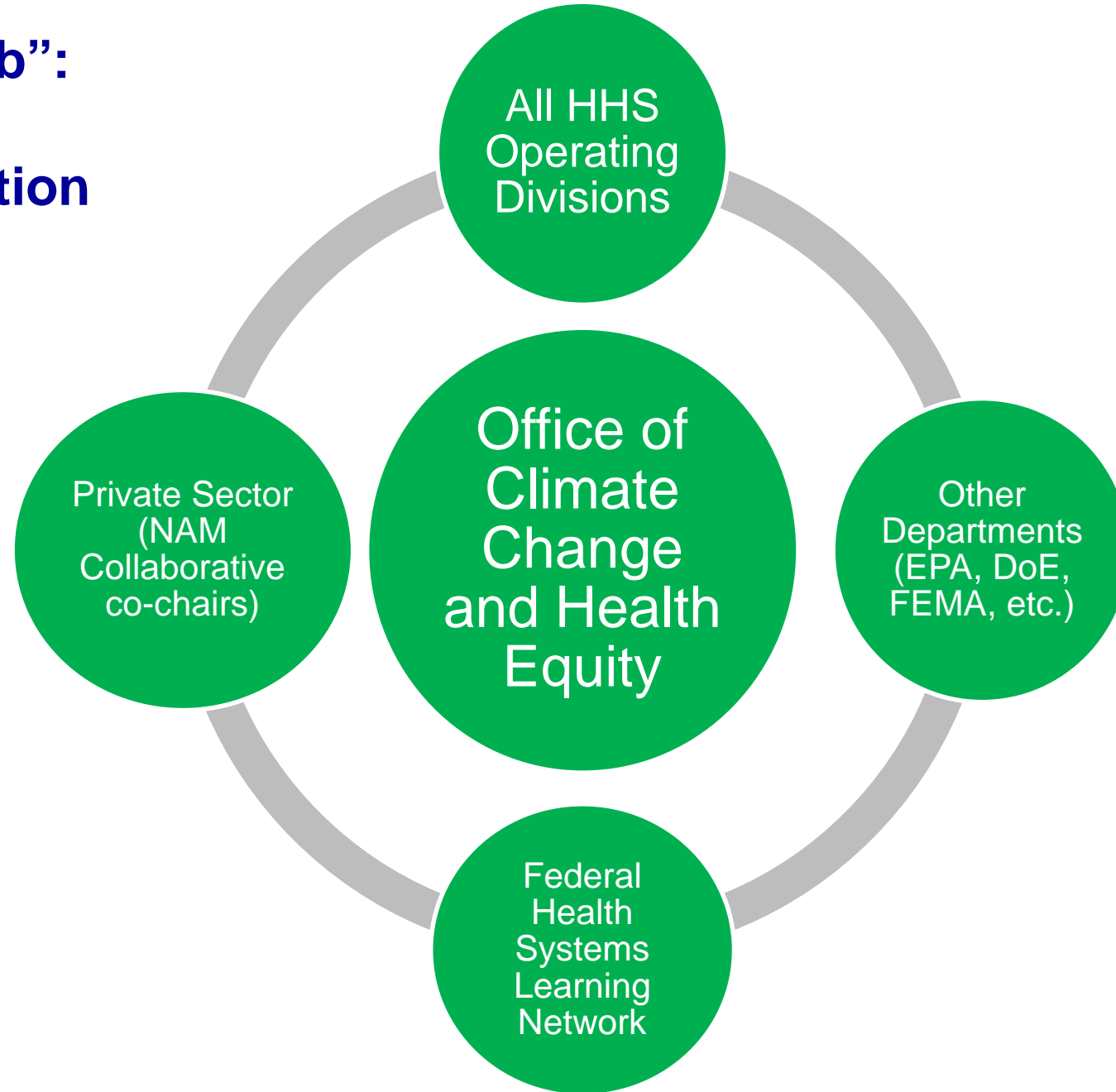
### Priority 2: Climate Actions to Reduce Health Disparities

- Climate health and equity measures in SDOH/ELTRR frameworks
- Exploring climate health considerations in HRSA, SAMHSA, IHS facility renovations

### Priority 3: Health Sector Resilience & Decarbonization

- PPP with National Academy of Medicine
- IHS/VA/DoD learning network for EO 14057
- Updating resilience and mitigation tools (ASPR/AHRQ)
- CMS RFIs and potential tech assistance
- Exploring supply chain actions (FDA/CMS)

# The OCCHE “Hub”: Setting Strategy, Coordinating Action





## Thoughts on partnerships with OCCHE

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### **OCCHE might:**

- Support development and delivery of training on CCHE
- Help identify and connect clinicians to resources to address climate resilience and SDOH
- Connect NHSC staff and members to learning networks

### **NHSC and members might:**

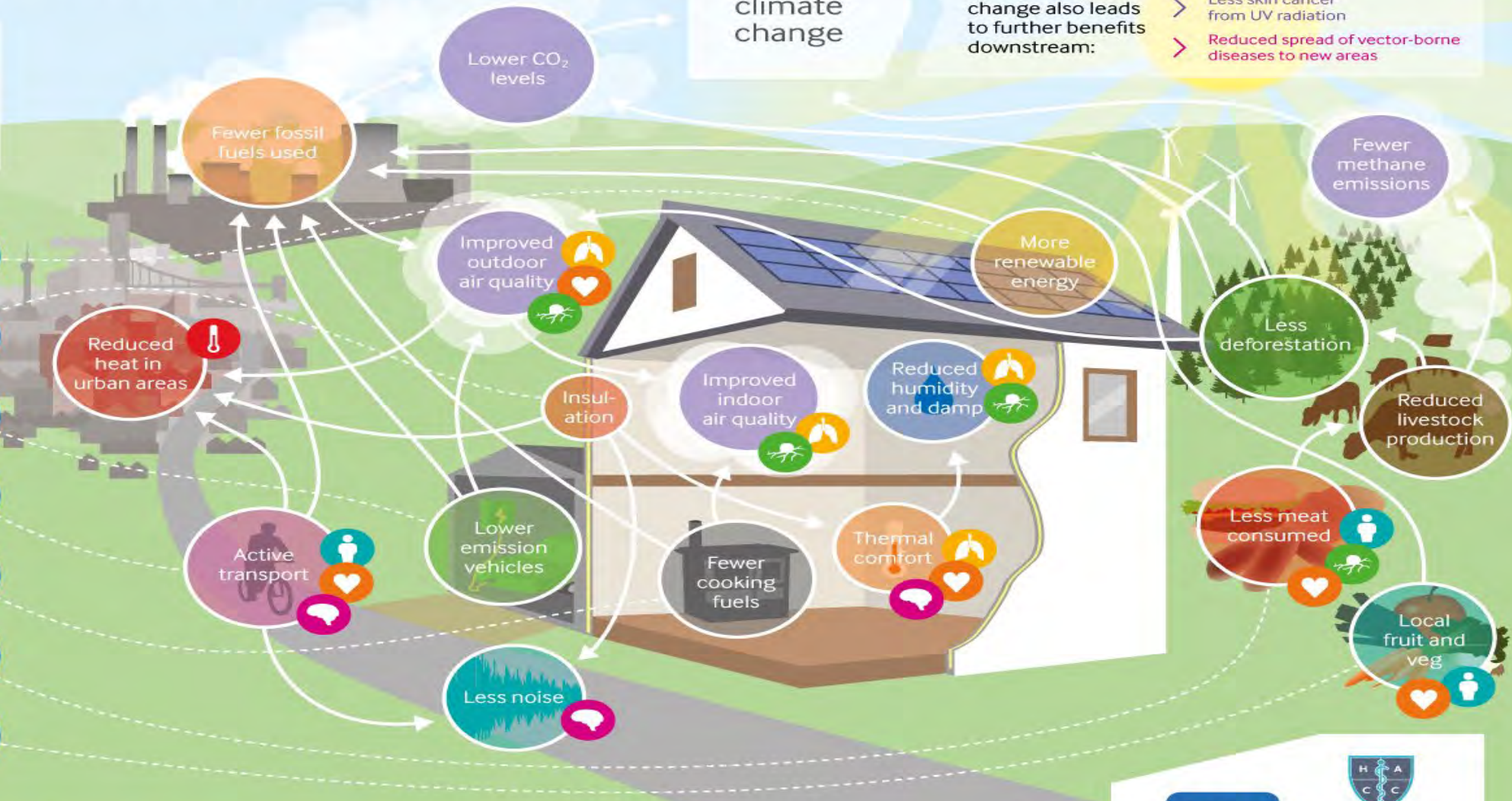
- Help identify “adaptation gaps”
- Help connect OCCHE to communities and build health resilience narratives
- Conduct pilot interventions be early testers of tools and supports
- Conduct community-based research, esp. implementation research

# Health and climate: co-benefits

## Example interventions

These interventions have benefits both for health and for reducing climate change (also known as *mitigation*)

- Produce more renewable energy
- Improve insulation in homes
- Encourage use of lower emission vehicles
- Promote active transport
- Reduce solid fuels used for cooking
- Less food from animal sources
- Encourage locally produced fruit and veg



Reduced climate change

**Indirect benefits**  
 Reducing climate change also leads to further benefits downstream:  
 > Fewer deaths and injuries from extreme weather events  
 > Less skin cancer from UV radiation  
 > Reduced spread of vector-borne diseases to new areas

**Health benefits**

- Better mental health
- Fewer deaths from extreme heat
- Less cardiovascular disease
- Less respiratory disease
- Lower rates of cancer
- Lower rates of obesity

thebmj

UK HEALTH ALLIANCE ON CLIMATE CHANGE

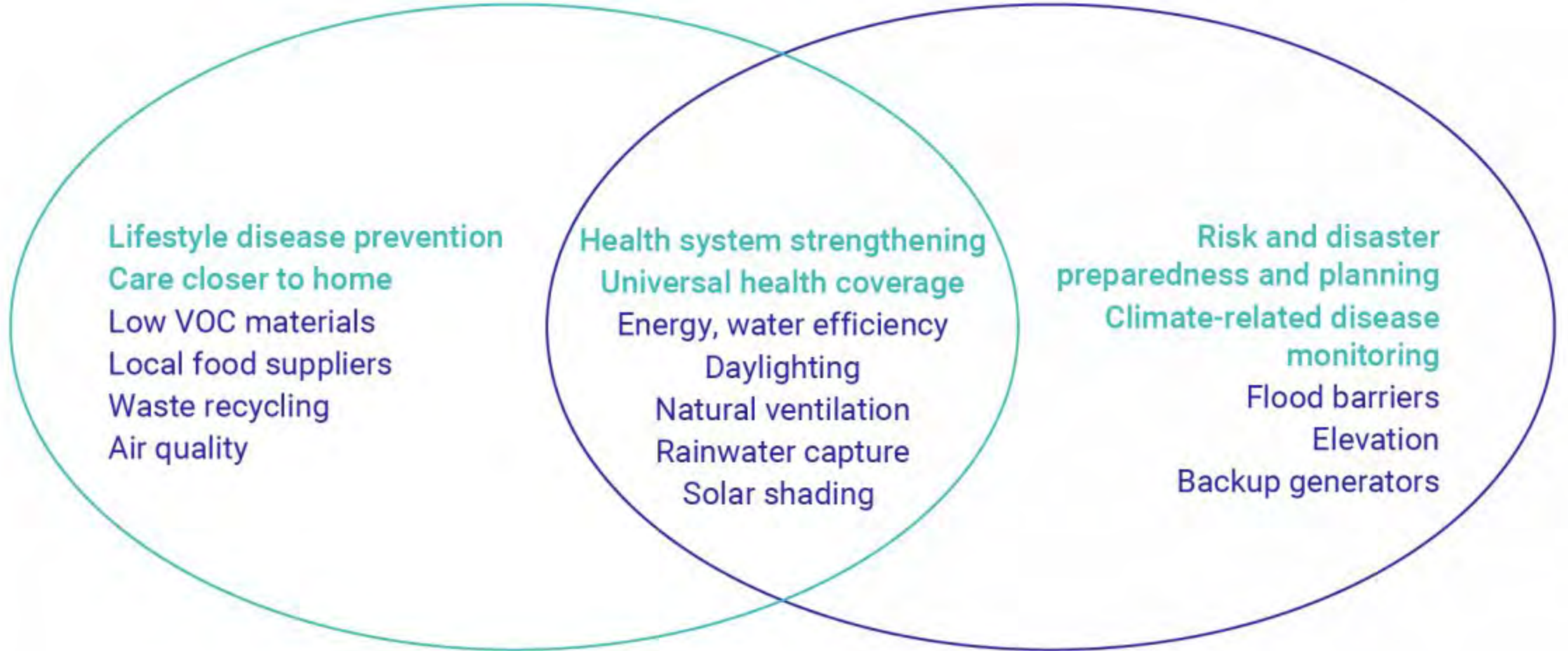
Designed by: Will Stahl-Timmins  
 Content: Nick Watts  
 Thanks to: Soledad Cuevas  
 Duncan Jarvies  
 John Waring



## Sustainability

## Sustainability and resilience

## Resilience



## Scheme for Climate- informed Primary Care

Screening protocols include structural determinants of health and climate risks

Ex: Food security, water source, housing security and safety, energy security, depression and anxiety

Health promotion includes health and planetary benefits

Ex: Diet, active transportation and outdoor play, civic engagement

Care for all children considers and anticipates climate risks

Ex: Children with complex medical conditions and disasters, those participating in sports and extreme heat, children with asthma and allergies and poor air quality and pollen

Anticipatory guidance is informed by climate change

Ex: Never leaving children unattended in vehicles, heat and sun safety, street safety, accessing public health alerts, prevention of vector-borne diseases and emerging harms

Community resource network and referral plans are in place and center patient concerns

Pediatricians can support climate and public health preparedness and adaptation that centers the needs of children, equity and child health.

**Fig.** Aspects of climate-informed primary care pediatrics.





## **In Closing**

- Climate change is compounding existing stressors and health disparities
- Populations served by NHSC are among those at greatest risk
- NHSC has a critical role to play in building health resilience to climate change at the community level



**OASH**

Office of  
Climate Change  
and Health Equity

Thank you!

**OCCHE@hhs.gov**

*Visit us online at [www.hhs.gov/ocche](http://www.hhs.gov/ocche)*