The *Lancet* Countdown Brief: Emergency Medicine Leadership Perspectives on Climate Change & Health

SAEM Annual Meeting - May 17, 2019 - Las Vegas, NV

**Brief**

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**Emergency Medicine Leadership Panelists**

Andra Blomkalns, MD, MBA
*Stanford University School of Medicine*

Katherine Heilpern, MD
*NY Presbyterian Weill Cornell Medical Center*

James McCarthy, MD
*Memorial Hermann Health System*

Jeremiah Schuur, MD, MHS
*Brown University, Alpert Medical School*
Climate Change is Affecting Us Now

Superstorm Sandy

Hurricane Harvey

Camp Fire
Our Goals for Today

Highlight EM’s Role in the *Lancet* Countdown and US Country Brief

Showcase EM Leadership Perspectives on Engagement

**HOW CAN EXTREME HEAT IMPACT HEALTH?**

- **Brain**
  - Contributes to mental health problems
  - Increased aggression and violence
  - Increases cardiovascular illness (e.g., stroke)

- **Heart**
  - Increases cardiovascular disease, such as heart attacks

- **Lungs**
  - Increases respiratory disease, such as asthma

- **Kidneys**
  - Increases renal dysfunction, such as kidney failure

- **Pregnancy**
  - Increases preterm births
  - Adverse birth outcomes such as low birthweight and infant death

- Leads to heat exhaustion and heat stroke
- Increases emergency department visits and hospitalizations
- Leads to death

**CLIMATE CHANGE IS A HEALTH CRISIS**
Lancet Countdown – Five Foci

Impacts, Exposures, & Vulnerabilities

Public & Political Engagement

The Lancet Countdown on Health and Climate Change

Adaptation Planning & Resilience

Mitigation Actions & Health Co-Benefits

Finance and Economics
The 2018 report of the Lancet Countdown on health and climate change: shaping the health of nations for centuries to come

Climate change has the “potential to disrupt core public health infrastructure and overwhelm health services.”

Hospital in Beira, Mozambique
Lancet Countdown – Country Briefs

- Australia
- Brazil
- Canada
- China
- Netherlands
- European Union

- India
- Spain
- Sweden
- United Kingdom
- United States
- Médecins Sans Frontières

Policy Resources

Briefing for the global health community, developed in partnership with Médecins Sans Frontières

Briefing for EU policymakers, developed in partnership with the Standing Committee of European Doctors (CPME)

Briefing for US Policy Makers, developed in partnership with the American Public Health Association
Renee N. Salas, MD, MPH, MS
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Author, U.S. Brief
Climate Nexus
Study Warns of Cascading Health Risks From the Changing Climate

Extreme heat from climate change a 'medical emergency,' sickening tens of millions worldwide

How Climate Change Is Challenging American Health Care

Experts say mounting environmental pressures will make people sicker, and that the health-care system will play a major role in averting disaster.

Climate change is already here, and heat waves are having the biggest effect, report says

By SETH BORENSTEIN
November 29, 2018

By Nina Avramova, CNN
Updated 11:36 PM ET, Wed November 28, 2018
Message #1
Climate Change Threatens American’s Health Now

Federal & State: Improved Preparation

U.S.-based Research & Education Funding
Climate Change and Health

Increased Anthropogenic Greenhouse Gas Emissions

Climate Pressures
- Increasing temperatures
- More extreme weather
- Rising sea levels
- Extremes of precipitation

Exposure Pathways
- Extreme heat & heatwaves
- Air pollution (PM2.5 & O3)
- Water contamination
- Changes in vector ecology
- Increasing allergens
- Food supply and quality
- Population displacement

Health Outcomes
- Heat stress & heat stroke
- Respiratory disease
- Cardiovascular disease
- Gastrointestinal illness
- Vector-borne diseases (Lyme, West Nile, Zika)
- Mental health illness/worsening mental health
- Adverse birth outcomes
- Physical trauma and death
Climate Change Driving Increased Extreme Weather
Air Pollution Increasing in Western U.S. from Wildfires

A Look Back: PM2.5 in 2017

Number of Days Reaching Unhealthy for Sensitive Groups or Above on the Air Quality Index (for PM2.5 Only)

- 10 Year Average (2008-2017)
- 2016
- 2017

Source: U.S. Environmental Protection Agency

Note: This map shows preliminary air quality data as reported to EPA’s Air Quality System and AirNow.gov
Vector-borne Diseases Tripled in U.S. between 2004 and 2016

Disease cases from infected mosquitoes, ticks, and fleas have tripled in 13 years.
Message #2
Prevention of Further Dangerous Climate Change: Transitioning to Renewable Clean Energy

Policies to Curb GHGs
Advocate for State Laws
Healthcare Organizations Reduce Own GHGs
Healthcare organizations compose less than 1% of divestment globally.
Message #3
Adaptation to Climate Change: Public Health Department Preparation and Climate Change Adaptation Spending on Health

Increase Funding for Health Sector Resilience
Public Health Departments Protecting Americans from Climate Change
Headline Finding: Spending on Adaptation for Health and Health-Related Activities in the U.S. (Indicator 2.7)

For the 2016-2017 financial year, the U.S. spent $67.2 billion on Adaptation and Resilience to Climate Change (A&RCC), which was a 5% increase from 2015-2016. Of this total spending, the U.S. spent:

- 5% ($3.5 billion) on climate change health adaptation, which was an 8% increase from 2015-2016. Health adaptation is defined as adaptation occurring within the formal healthcare sector only.
- 14% ($9.4 billion) on climate change health-related adaptation for climate change, which was a 5% increase from 2015-2016. Health-related adaptation is defined as within

5% of all U.S. climate change adaptation in 2016-2017 was spent on health sector.
**Message #4**

Training the Next Generation and Educating the Public on the Health Impacts of Climate Change

**U.S. Health Professional Education**

Unify and Elevated Health Sector Voice
Health Professionals Need to Deliver The Message

![Bar chart showing trust levels]

- Primary Care Doctor: 49% Strongly/Moderately Trust, 8% Strongly/Moderately Distrust
- Family and Friends: 41% Strongly/Moderately Trust, 10% Strongly/Moderately Distrust
- Centers for Disease Control and Prevention (CDC): 41% Strongly/Moderately Trust, 19% Strongly/Moderately Distrust
- Climate Scientists: 40% Strongly/Moderately Trust, 17% Strongly/Moderately Distrust
- World Health Organization (WHO): 37% Strongly/Moderately Trust, 19% Strongly/Moderately Distrust
- Environmental Protection Agency (EPA): 34% Strongly/Moderately Trust, 24% Strongly/Moderately Distrust
- Other (Non-climate) Scientists: 33% Strongly/Moderately Trust, 15% Strongly/Moderately Distrust
- Local Public Health Department: 33% Strongly/Moderately Trust, 17% Strongly/Moderately Distrust
- Environmental Organizations: 31% Strongly/Moderately Trust, 24% Strongly/Moderately Distrust
- Religious Leaders: 24% Strongly/Moderately Trust, 29% Strongly/Moderately Distrust
- U.S. Military Leaders: 22% Strongly/Moderately Trust, 25% Strongly/Moderately Distrust
- Television Weather Reporters: 25% Strongly/Moderately Trust, 23% Strongly/Moderately Distrust

*(N = 1,275)*
Emergency Medicine Leadership Perspectives on Climate Change

Moderated Panel Discussion

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Jeremiah Schuur, MD, MHS
Brown University, Alpert Medical School
Interest Group Meeting
9:00 AM – 9:50 AM
Barbados A

Medical Student & Resident Meeting
10:00 AM – 10:50 AM