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Linking Climate to Health

A Call to Action

2024 Environmental Health Summit
Climate Change and Impacts on Environmental Health

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Outline

- Climate effects on chronic disease
- Effects of climate change on vaccination of children
- Summarize key take aways
- Reflect on opportunities for local action
- Outreach and educational resources



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“Health is the human face of climate change”

Dr. Ashish Jha



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Nearly 60% of adult Americans (129 million) have at least one major chronic disease

- 42% have 2 or more
- 12% have at least 5



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Chronic conditions like diabetes, cancer, and cardiovascular disease are the leading causes of death in the United States.



10 Most Prevalent and Costly Chronic Diseases in the US

1. obesity
2. hypertension
3. high cholesterol
4. coronary heart disease
5. chronic obstructive pulmonary disease
6. asthma
7. chronic kidney disease
8. diabetes
9. cancer (excluding skin cancer)
10. depression



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Prevalence of chronic disease varies geographically and socioeconomically. Residents of areas with the highest prevalence face social, economic, and environmental barriers that challenge prevention and management of the chronic disease.



Chronic Diseases

Increase a person's risk of hospitalization and death when facing climate change

- Exposure to heat
- Extreme weather events
- Poor air quality
- Water-related illnesses



Medication for Chronic Conditions

- Affect the body's response to heat
- Unavailability of medication or medical care often during and after an extreme weather event (transportation issues, power outages or health infrastructure damage)
- Less efficacious effects due to improper temperatures/humidity (insulin, Epi-Pen)



Compromised Immune Systems

Increase vulnerability to:

- Heat (>inflammation, lowers B cell response)
- Insect and tickborne disease (can be life threatening in "a warmer and sicker world")
- Water-related illnesses (CSOs, beach closures)



Mental Illness

Increases vulnerability to trauma from extreme weather events and experience disruption:

- Medication availability
- Mental health care
- Support networks
- Stress-related effects occur without pre-existing illness



Air Pollution

- Largest environmental risk factor for non-communicable diseases, accounting for 6.7 million deaths globally
- Significant risk factor for hospitalizations/ deaths in those with cardiovascular diseases and chronic respiratory diseases



Air Pollution (cont'd.)

- Intricately linked with climate change
- Emissions from burning fossil fuels, wildfires
- Contaminates surface bodies of water and soil
- Eutrophication
- Acid rain (ppt harmful amounts nitric and sulfuric acids)



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Public health efforts for preventing and managing chronic disease require combating poverty and socioeconomic inequality along with adaptation and mitigation of the effects of climate change.



Effects of Climate Change on Vaccination of Children

- Disruption
- Displacement
- Exposure to infectious diseases



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- Summarize key take aways
- Reflect on opportunities for local action
- Outreach and educational resources
- Questions?
- Thank you