

The Impact of Climate Change on Mental Health

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The New England Consortium/Civil Service Employees Association

Preparing Workers for the Impacts of Climate Change through Training

NIEHS – Spring Workshop

May 18 - 19, 2022

Climate Change

Some Effects of Climate Change





Hello
my name is

Grief

Hello
my name is

Anxiety

Hello
my name is

Phobia

Hello
my name is

POST-TRAUMATIC
STRESS

Hello
my name is

STRESS

Hello
my name is








Shame

Hello
my name is

DEPRESSION

Hello
my name is

PANIC

	Climate Driver	Exposure	Health Outcome	Impact
 <p>Extreme Heat</p>	More frequent, severe, prolonged heat events	Elevated temperatures	Heat-related death and illness	Rising temperatures will lead to an increase in heat-related deaths and illnesses.
 <p>Outdoor Air Quality</p>	Increasing temperatures and changing precipitation patterns	Worsened air quality (ozone, particulate matter, and higher pollen counts)	Premature death, acute and chronic cardiovascular and respiratory illnesses	Rising temperatures and wildfires and decreasing precipitation will lead to increases in ozone and particulate matter, elevating the risks of cardiovascular and respiratory illnesses and death.
 <p>Flooding</p>	Rising sea level and more frequent or intense extreme precipitation, hurricanes, and storm surge events	Contaminated water, debris, and disruptions to essential infrastructure	Drowning, injuries, mental health consequences, gastrointestinal and other illness	Increased coastal and inland flooding exposes populations to a range of negative health impacts before, during, and after events.
 <p>Vector-Borne Infection (Lyme Disease)</p>	Changes in temperature extremes and seasonal weather patterns	Earlier and geographically expanded tick activity	Lyme disease	Ticks will show earlier seasonal activity and a generally northward range expansion, increasing risk of human exposure to Lyme disease-causing bacteria.
 <p>Water-Related Infection (<i>Vibrio vulnificus</i>)</p>	Rising sea surface temperature, changes in precipitation and runoff affecting coastal salinity	Recreational water or shellfish contaminated with <i>Vibrio vulnificus</i>	<i>Vibrio vulnificus</i> induced diarrhea & intestinal illness, wound and bloodstream infections, death	Increases in water temperatures will alter timing and location of <i>Vibrio vulnificus</i> growth, increasing exposure and risk of water-borne illness.
 <p>Food-Related Infection (<i>Salmonella</i>)</p>	Increases in temperature, humidity, and season length	Increased growth of pathogens, seasonal shifts in incidence of <i>Salmonella</i> exposure	<i>Salmonella</i> infection, gastrointestinal outbreaks	Rising temperatures increase <i>Salmonella</i> prevalence in food; longer seasons and warming winters increase risk of exposure and infection.
 <p>Mental Health and Well-Being</p>	Climate change impacts, especially extreme weather	Level of exposure to traumatic events, like disasters	Distress, grief, behavioral health disorders, social impacts, resilience	Changes in exposure to climate- or weather-related disasters cause or exacerbate stress and mental health consequences, with greater risk for certain populations.

How Does Climate Change Affect Mental Health?

- **Climate change may affect mental health directly by exposing people to trauma.**
- **It may also affect mental health indirectly, by affecting:**
 1. **Physical health (for example, extreme heat exposure causes heat exhaustion in vulnerable people, and associated mental health consequences)**
 2. **Community wellbeing – climate change erodes physical environments which, in turn, damages social environments**

Effects of Climate Change & Mental Health

- **The interactive and cumulative nature of climate change effects on health, mental health, and well-being are critical factors in understanding the overall consequences of climate change on human health.**
- **Mental health consequences of climate change range from minimal stress and distress symptoms to clinical disorders, such as anxiety, depression, post-traumatic stress, and suicide and other high-risk coping behavior such as increased alcohol use.**

Who is Affected by Climate Change?

- **These climate-sensitive health risks are disproportionately felt by the most vulnerable and disadvantaged, including:**
 - 1. Women, children, ethnic minorities, poor communities, migrants or displaced persons, older populations, and those with underlying health conditions**
 - 2. Vulnerable people and places, especially in low-income countries, will be particularly affected**

Climate Injustice vs. Invisible Injustice

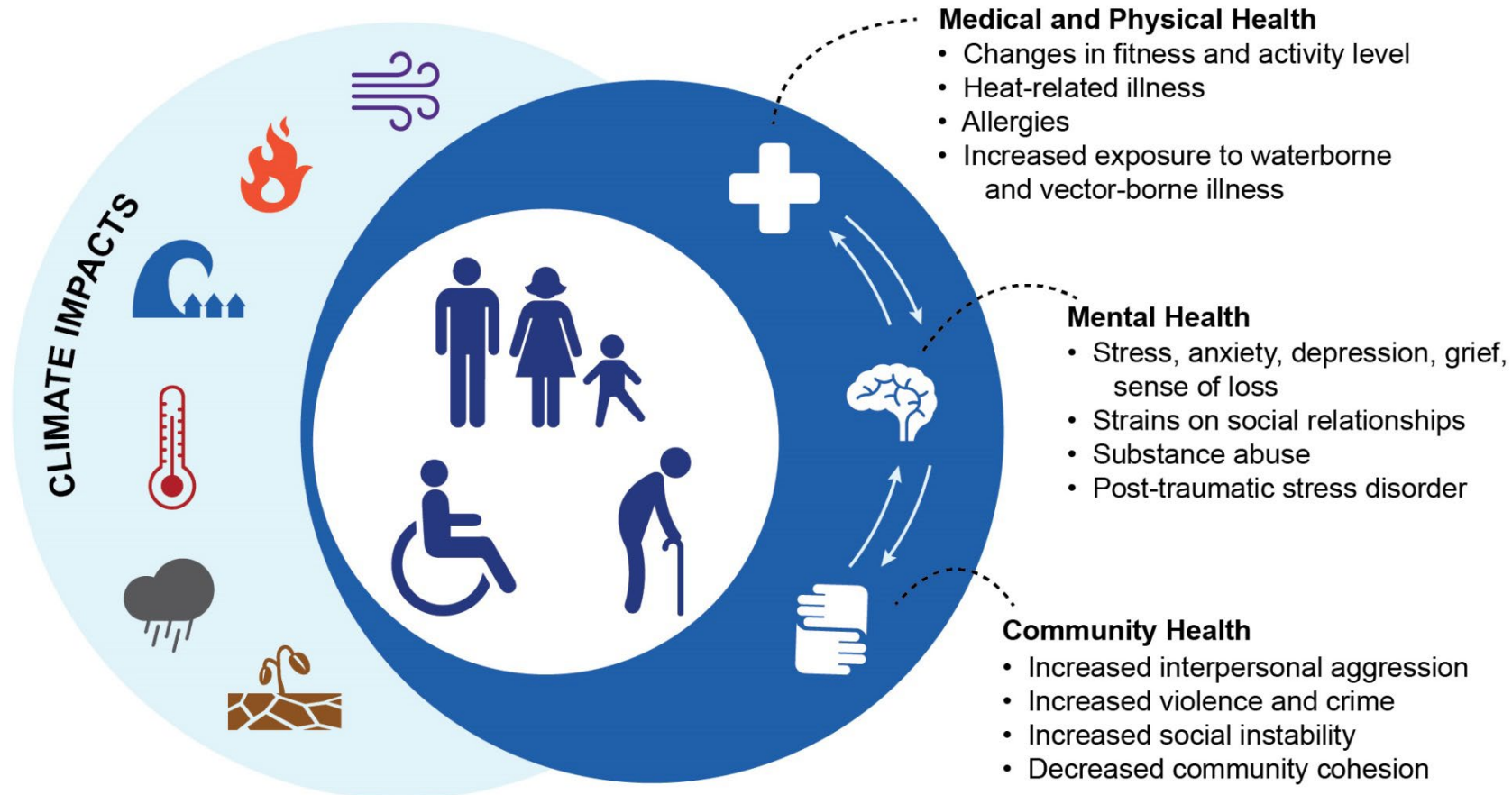
- **Climate justice** means finding solutions to the climate crisis that not only reduce emissions or protect the natural world, but that do so in a way which creates a fairer, more just and more equal world in the process.
- **Climate injustice** relates to how the impacts of climate change will be felt differently by different groups and how some people and places will be more vulnerable than others to these impacts.
- While progress has been made on recognizing the physical health impacts of climate change, the effects on mental health have been called **Invisible injustice**.

Climate Change and Mental Health – an Overlooked Issue

- **Mental illness – or the disabling effects of distress – already affects around a billion people globally, while the effects of climate change are increasingly apparent.**
- **Both issues are projected to increase and stand to affect many more people without sufficient action.**
- **Climate change has been recognized by governments, academics, advocacy groups and medical professions as a health emergency, though, to date, the focus has been largely on physical health.**
- **In contrast, mental illness, “the most neglected of all human health conditions,” and emotional wellbeing have been overlooked in their interplay with climate change.**

MENTAL HEALTH AND WELL-BEING

Impact of Climate Change on Physical, Mental, and Community Health



Mental Health and Well-Being

Exposure to Disasters Result in Mental Health Consequences

- Many people exposed to climate-related or weather-related disasters experience stress and serious mental health consequences.
- Depending on the type of the disaster, these consequences include post-traumatic stress disorder, depression, and general anxiety.
- Most affected people recover over time, although a significant proportion of exposed individuals develop chronic psychological dysfunction.

Mental Health and Well-Being

Specific Groups of People are at Higher Risk

- **These groups include children, the elderly, women (pregnant and post-partum), people with preexisting mental illness, the economically disadvantaged, the homeless, and first responders.**
- **Communities that rely on the natural environment for sustenance and livelihood, as well as populations living in areas most susceptible to specific climate change events, are at increased risk for adverse mental health outcomes.**

Mental Health and Well-Being

Climate Change Threats Results in Mental Health Consequences and Social Impacts

- Many people will experience adverse mental health outcomes and social impacts from the threat of climate change, the perceived direct experience of climate change, and changes to one's local environment.
- Media and popular culture representations of climate change influence stress responses and mental health and well-being.

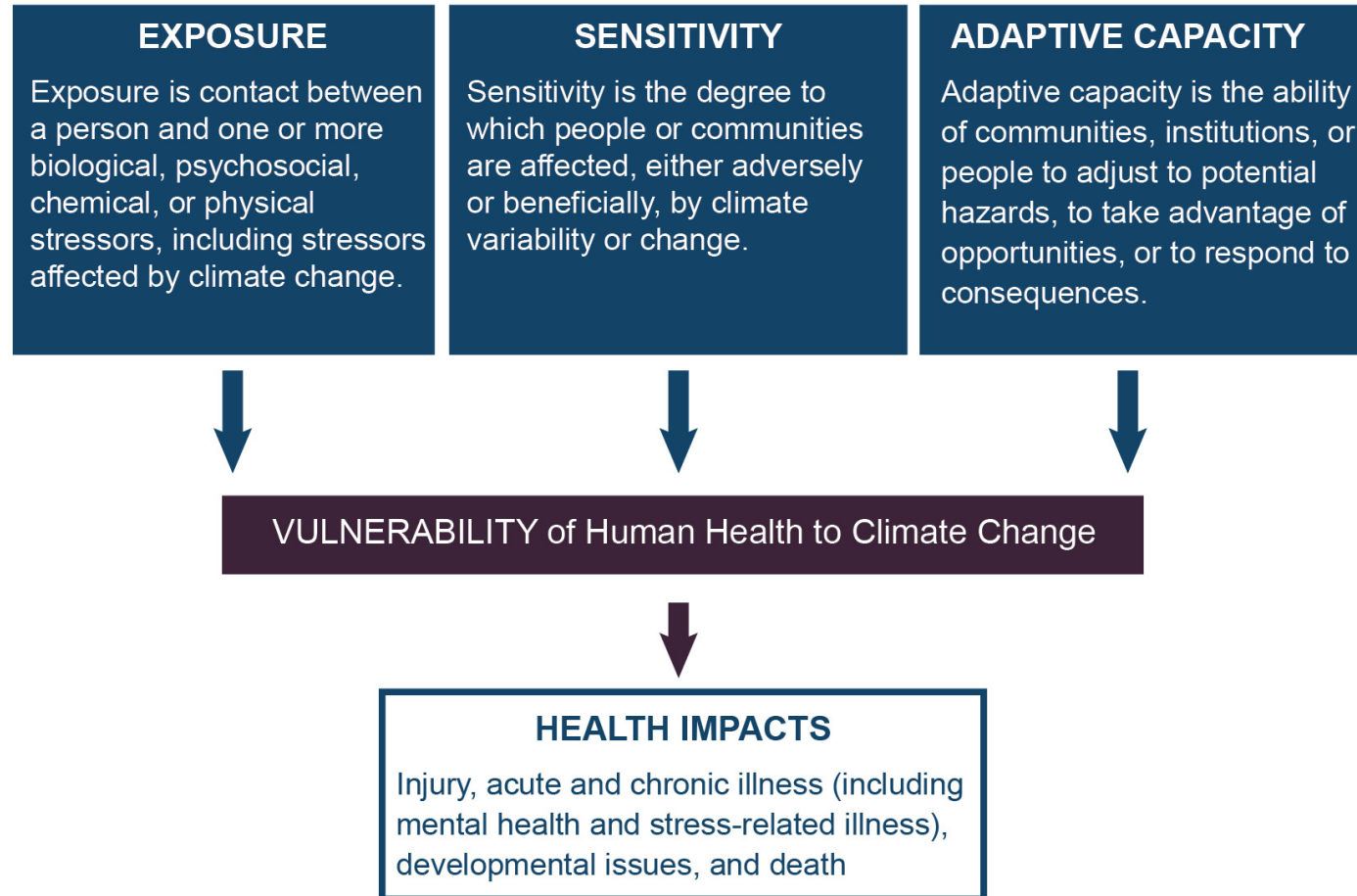
Mental Health and Well-Being

Extreme Heat Increases Risks for People with Mental Illness

- **People with mental illness are at higher risk for poor physical and mental health due to extreme heat.**
- **Increases in extreme heat will increase the risk of disease and death for people with mental illness, including elderly populations and those taking prescription medications that impair the body's ability to regulate temperature.**

Populations of Concern

Determinants of Vulnerability



Populations of Concern

Vulnerability Varies Over Time and is Place-Specific

- **Across the United States, people and communities differ in their exposure, their inherent sensitivity, and their adaptive capacity to respond to and cope with climate change related health threats,**
- **Vulnerability to climate change varies across time and location, across communities, and among individuals within communities.**

Populations of Concern

Health Impacts Vary with Age and Life Stage

- **People experience different inherent sensitivities to the impacts of climate change at different ages and life stages**
- **For example, the very young and the very old are particularly sensitive to climate-related health impacts.**

Populations of Concern

Social Determinants of Health Interact with Climate Factors to Affect Health Risk

- **Climate change threatens the health of people and communities by affecting exposure, sensitivity, and adaptive capacity.**
- **Social determinants of health, such as those related to socioeconomic factors and health disparities, may amplify, moderate, or otherwise influence climate-related health effects, particularly when these factors occur simultaneously or close in time or space.**

Populations of Concern

Mapping Tools and Vulnerability Identify Climate Health Risks

- The use of geographic data and tools allows for more sophisticated mapping of risk factors and social vulnerabilities to identify and protect specific locations and groups of people.

What is Known?

- **There is limited and incomplete evidence on the links between climate change and mental health.**
- **The evidence that does exist clearly suggests that all the major threats to physical health linked to climate change also have negative effects on mental health.**
- **Experiencing the effects of climate change first-hand is psychologically traumatic, and this shows up as a direct and severe impact on mental health outcome figures, including for rates of suicide, PTSD, depression, and extreme distress.**

What is Known?

- **Climate change is negatively affecting the mental health and emotional wellbeing of people.**
- **There is evidence for severe distress following extreme weather events.**
- **People who meet criteria for mental illness are more vulnerable to the effects of climate change on physical as well as mental health.**
- **The climate crisis threatens to disrupt the provisions of care for people with a mental illness diagnosis.**
- **Climate change exacerbates mental distress, particularly among young people, even for individuals who are not directly affected.**

What is Known?

- **The effects of climate change on mental health are a driver of health and social inequality**
- **There is a hidden and unquantified economic cost associated with the impacts of climate change on mental health**
- **There are co-benefits for improving mental health associated with acting on climate change.**

CLIMATE CHANGE IMPACTS



Gradual changes in average climatic conditions
(e.g. temperature, sea level)



Acute extreme weather events
(e.g. floods, fires)



Chronic extreme climate events
(e.g. droughts)

Communities **directly** affected by climate impacts

Communities **indirectly** affected by climate impacts

Loss and damage of homes and property

Crop and livestock damage

Loss of habitats

Community breakdown

Witnessing changes to homelands

Witnessing or learning about climate and ecological impacts

Experiencing extreme high temperatures

Forced migration

Changes to livelihoods

Health systems disrupted

MENTAL HEALTH IMPACTS



New cases of mental illness



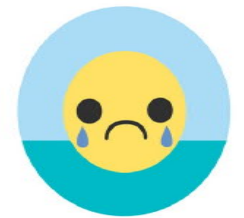
Increased symptoms of diagnosable mental illness



Increased susceptibility to physical ill-health or death for those with diagnosable mental illness



Worsened population mental health



Mental and emotional distress

Recommendations - Activity

Divide the participants to establish recommendations based on their level of interest:

- 1. Health system leaders and healthcare practitioners**
- 2. Policymakers**
- 3. Researcher, research funders and innovators**
- 4. Community organizations**

Healthcare System Interventions

- 1. Advocate for climate mitigation and adaptation**
- 2. Train healthcare workers to identify, manage and speak out about the impacts of climate change on mental health**
- 3. Build resilience into the mental healthcare system**

Policy Interventions

- 1. Prioritize climate mitigation and adaption policies**
- 2. Direct proactive adaption interventions to communities that are most vulnerable**

Research Interventions

- 1. Raise awareness of the evidence of the impact of climate change on mental health to support the case for climate mitigation and adaptation**
- 2. Learn from individuals and communities who are already responding to climate-related impacts on mental health**
- 3. Develop, identify, evaluate and support the scaleup of effective programs and interventions**

Third Sectors Interventions

- 1. Stimulate, support and amplify the efforts of health systems, policymakers and researchers to mitigate and adapt to climate change**
- 2. Climate change and disaster relief organizations should incorporate mental health as a key pillar of emergency responses**

Summary

- **Climate change poses an under-appreciated threat to mental health and emotional wellbeing. The evidence presented here highlights the multiple pathways by which climate change can affect mental health, and the interrelationships between these two pressing global challenges.**
- **Climate change exacerbates inequalities such that individuals with diagnosable mental illnesses are more vulnerable.**
- **The impacts of climate change on mental health have been largely ignored when accounting for the costs and benefits of climate action and planning climate mitigation and adaptation responses.**

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