The Dialogue is a quarterly technical assistance journal on disaster behavioral health which is produced by the Substance Abuse and Mental Health Services Administration (SAMHSA) Disaster Technical Assistance Center (DTAC). Through the pages of The Dialogue, disaster behavioral health professionals share information and resources while examining the disaster behavioral health preparedness and response issues that are important to the field. The Dialogue also provides a comprehensive look at the disaster training and technical assistance services SAMHSA DTAC provides to prepare states, territories, tribes, and local entities so they can deliver an effective disaster behavioral health response.

SAMHSA DTAC provides disaster technical assistance, training, consultation, resources, information exchange, and knowledge brokering to help disaster behavioral health professionals plan for and respond effectively to mental health and substance misuse needs following a disaster.

To learn more or receive The Dialogue, please call 1–800–308–3515, email dtac@samhsa.hhs.gov, or visit the SAMHSA DTAC website at https://www.samhsa.gov/dtac.
As our planet continues to grapple with the rising impacts of climate change, it becomes increasingly clear that its consequences extend far beyond the impacts on our physical health and environment. The connection between climate change and human health, particularly in terms of behavioral health, mental well-being, and substance use, is emerging as a critical area of concern.

Rising temperatures, extreme weather events, environmental degradation, and the increasing and varied consequences of climate change are exerting profound effects on individuals’ psychological and emotional states and influencing substance use behaviors and outcomes. From anxiety and depression stemming from eco-anxiety to the exacerbation of preexisting mental health conditions in the wake of frequent natural disasters, the psychological toll of climate change is multifaceted and complex.

In this issue of *The Dialogue*, we explore how climate change is impacting the field of disaster behavioral health and spotlight expert strategies to respond. By engaging disaster behavioral health community members who generously share their experiences, lessons learned, and best practices, we aim to equip responders, policymakers, and researchers with the knowledge and tools necessary to address these pressing challenges.

This issue features a forward-looking article by Steven Crimando, M.A., DRCC, of the New Jersey Department of Human Services, which details the behavioral health impacts of climate change and what disaster responders can expect to encounter in the field. Next, we share a conversation between the SAMHSA Disaster Technical Assistance Center (DTAC) and Susan Clayton, Ph.D., the Whitmore-Williams Professor of Psychology at the College of Wooster in Ohio, detailing the recently published report *Mental Health and Our Changing Climate: Children and Youth*, with a focus on pressing challenges and mitigation strategies. This issue also provides an infographic showing how climate change affects behavioral health, which we encourage you to share with your team.

If you have experience with climate change and its impacts on disaster behavioral health, other community members can learn from your efforts and experience. Please contact us to share your stories and lessons learned.

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Susan Clayton, Ph.D., is the Whitmore-Williams Professor and Chair of Psychology at the College of Wooster in Ohio. Dr. Clayton’s research examines people’s relationship with the natural environment, how it is socially constructed, and how a healthy relationship with nature can be promoted. She has written about the effects of climate change on mental health, and has developed a scale to assess climate anxiety. She is the author or editor of six books, including Identity and the Natural Environment, Conservation Psychology, and Psychology and Climate Change. She is currently the editor of the Cambridge Elements series in Applied Social Psychology and on the editorial board for journals such as the Journal of Environmental Psychology and Sustainability. A fellow of the American Psychological Association and the International Association of Applied Psychology, she was a lead author on the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.
Climate change is not a problem for some future generations; it is affecting us now. Climate change is already having far-reaching impacts on the economy, the environment, and the way we conduct our everyday lives. It has forced millions of people around the world to leave their homes to seek refuge from the rising seas, devastating droughts, and the other effects of global warming. According to the President’s Council of Advisors on Science and Technology, “The most immediate danger that Americans face from climate change is the worsening of extreme weather, including hurricanes, floods, droughts, heatwaves, and wildfires. Extreme weather disasters caused over $1 trillion in damages over the last seven years, and in 2022 alone, displaced an estimated 3.4 million Americans from their homes.” In 2023, the United States experienced a record 25 billion-dollar weather and climate disasters—three more than the previous record, set in 2020.

Much of the discussion about climate change has focused on physical changes and the resulting damage to the environment, infrastructure, and resources. While there has been some exploration of secondary effects such as displacement and migration, much less attention has been given to understanding how rapid climate change is affecting human behavior and behavioral health. Given the increase in the frequency, intensity, and duration of climate-fueled disasters, it is likely that many more individuals, families, and communities will experience both direct and indirect behavioral health effects of climate change. According to the American Psychological Association and the American Psychiatric Association, rising temperatures can lead to increases in psychiatric emergencies, suicide, alcohol use, and levels of interpersonal aggression and violence, as well as a range of behavioral health problems.

While the topic of climate change and global warming can arouse strong reactions, including skepticism and outright denial, more than 99.9 percent of peer-reviewed scientific papers (n = 88,125) have concluded that climate change is real and human activity is the main cause of climate change. Advances in attribution science have also increased confidence in the role climate change is playing in intensifying extreme weather events,
and the belief that the extreme heat experienced across the United States and around the world bears the fingerprints of climate change. 2023 was the hottest year experienced in recorded history, and possibly in the past 120,000 years on Earth. Some scientists believe that climate change is also accelerating and having a greater impact much sooner than originally forecasted.

Disaster behavioral health (DBH) planners, policymakers, and responders must begin to anticipate the dynamics and demands of this rapidly evolving landscape. The concept of trauma-informed care, based on the ubiquity of trauma, has saturated the delivery of behavioral healthcare services. Similarly, climate change, with 96 percent of the global population already experiencing palpable effects, is prompting the need for the development of climate-informed behavioral health care, including DBH services.

**What Should a Climate-informed DBH Responder Know?**

To prepare for the challenges ahead, DBH responders can benefit from knowledge in:

- Climate literacy
- Effects on the planet
- Effects on medical and physical health
- Effects on behavioral health and community health

**Climate Literacy**

Climate change is a complex topic, with rapidly evolving science and the potential for controversy. It is important for DBH responders to understand the general concepts of climate change, including the difference between the climate and weather. This most basic principle is often misunderstood and used to deny the reality of climate change. For example, the idea that a recent cold snap is somehow proof that the planet is not really warming is often used to refute the whole notion of climate change. Discussion of climate change can be extremely politicized. Ultimately, it is not a question of attitudes or opinions but, rather, a matter of science.

It is helpful to understand the role of emissions, especially “greenhouse” gases, such as carbon dioxide and methane, and the mechanisms involved in warming. It is also important to be familiar with the climate milestones, such as the often mentioned 1.5° Celsius established in the Paris Climate Agreement in 2015. When this temperature is referenced, it is in relation to pre-industrial global average
temperatures; that is to say, from about the 1880s, when fossil fuels became the catalyst for modern manufacturing, transportation, and energy. A rise of 1.5°C is thought by scientists to move the planet closer to critical “tipping points” that can threaten survival. It is also helpful to keep in mind that these temperature changes are based on global averages, not what one region is experiencing at any given time, and that warming is caused by both naturally occurring and anthropogenic (human-induced) causes, alone and in combination with each other. A good resource for developing climate literacy is a guide developed by the National Oceanic and Atmospheric Administration, Climate Literacy: The Essential Principles of Climate Science. Becoming a climate-informed DBH responder starts with basic climate literacy.

The Effects on the Planet

One of the images most associated with climate change is that of a polar bear stranded on floating ice. While Arctic sea ice melting is one of the effects of climate change, the whole picture is much more complex.

As the global average temperature continues to increase, each of these events becomes more likely:

- Greenland ice sheet collapse
- West Antarctic ice sheet collapse
- Collapse of ocean circulation in the polar region of the North Atlantic
- Coral reef die-off in the low latitudes

If crossed, these tipping points could spark a significant change in the way the Earth’s systems operate, affecting oceans, weather, and chemical processes, which could be irreversible. Once a critical point is crossed, the system breakdown can become self-sustaining, so it will continue even if there is no further warming.

According to the National Aeronautics and Space Administration, climate change from a human-caused rise in greenhouse gases is increasing the frequency and intensity of extreme weather events. Changes to extreme weather are already happening, with greater impacts expected the more Earth warms. This will affect different regions at different times. Some populations will feel the effects first, but eventually, all populations will experience the direct and indirect effects of climate change.

The Effects on Medical and Physical Health

Climate change is now and will increasingly have profound effects on medical and physical, behavioral, and community health. Physical health can suffer due to changes in fitness and activity levels. For example, during the summer of 2023, Phoenix, Arizona, set a record with a 31-day streak of highs at or above 110° F (43.3° C). In such
extreme heat, people are likely to curtail walks, runs, hikes, and other outdoor activities. Heat-related illness, such as heat stress and heat stroke, are much more likely. In fact, it is important to note that heat deaths have outpaced hurricane deaths in the United States by more than 8 to 1 over the past decade, according to data tracked by the National Weather Service. A study of 2022 European heat waves found that they likely resulted in more than 70,000 deaths. Climate change is expected to increase exposure to dangerous heat index levels by up to 10 times across much of the globe.

Other health problems, such as allergies and respiratory illnesses, can be exacerbated. Food-, water-, and vector-borne illnesses are also likely to increase, especially those associated with mosquitos and ticks. Air pollution has significant impacts on mental functioning and can have direct impacts on the brain, worsening neurodegenerative disorders across the lifespan.

**The Effects on Behavioral Health and Community Health**

There are five different areas of behavioral health concern related to climate change. All have relevance to DBH responders with respect to the types of challenges that may be encountered in the field.

**Eco-anxiety**

Behavioral healthcare professionals are increasingly reporting patients complaining of climate-related anxiety and stress. These emotional experiences and stress reactions range from anxiety, depression, and a sense of being overwhelmed to the point of denial, disavowal, and avoidance—each influencing how people make decisions and behave. New emotion terms have evolved—such as climate anxiety, climate distress, environmental melancholia, ecological grief, climate denial, pre-traumatic stress, and solastalgia—to describe these unique, nonpathological responses. These responses are most prevalent in younger people. Some 45 percent of teens and young adults said that climate anxiety was affecting their daily lives and ability to function, while 56 percent said they thought that “humanity is doomed.” The average 6-year-old today will likely live through about three times as many climate-enhanced disasters—such as fires, crop failures, droughts, floods—as someone born in 1960, according to another recent study.

**Disaster-related Stressors**

Exposure to an increased number of disasters, as well as the increased intensity and duration of those events, means that more people are likely to experience adverse behavioral health consequences. Many people exposed to climate- or weather-related disasters experience stress and serious mental health consequences. Depending on the type of disaster, these consequences include posttraumatic stress disorder (PTSD), depression, and general anxiety, which often occur at the...
same time. While most affected people recover over time, a significant proportion of exposed individuals may develop chronic psychological dysfunction. These DBH impacts can be the result of exposure to the direct impact of acute climate disasters, such as PTSD after a flood, wildfire, or superstorm, or the indirect, secondary effects of climate, such as the long-term consequences of drought, sea level rise, migration, or displacement.

Exacerbation of Preexisting Behavioral Health Conditions

Specific groups of people are at higher risk for poor physical and behavioral health outcomes due to extreme heat. Some psychotropic medications can interfere with a person’s ability to regulate heat and their awareness that their body temperature is rising, which is associated with injury and death. People taking certain psychotropic medications may experience more side effects than usual when temperatures increase. In addition, medications can be altered by extreme heat and even moisture, causing them to become less effective, and possibly increasing the symptoms of mental illness.

People with mental illness are at higher risk for poor physical and behavioral health outcomes due to extreme heat. Some psychotropic medications can interfere with a person’s ability to regulate heat and their awareness that their body temperature is rising, which is associated with injury and death. People taking certain psychotropic medications may experience more side effects than usual when temperatures increase. In addition, medications can be altered by extreme heat and even moisture, causing them to become less effective, and possibly increasing the symptoms of mental illness.

Heat waves can have a significant impact on the health of people with preexisting mental illness, the economically disadvantaged, the unhoused, and first responders.

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Psychiatric Emergencies

In a study published in JAMA in February 2022, researchers at Boston University found that days of extreme heat were associated with higher rates of behavioral health-related emergency department visits. The number of behavioral health emergencies was highest on the day of extreme heat events, and there was some evidence that the rates remained high for 2 to 4 days after. The types of emergencies that increased during heat emergencies included anxiety; stress-related disorders; somatoform disorders; mood disorders; schizophrenia, schizotypal, and delusional disorders; and substance use disorders and self-harm.

Vulnerable Populations

The effects of climate change disproportionately fall on underserved communities who are least able to prepare for, and recover from, heat waves, poor air quality, flooding, and other impacts.
Certain populations, such as people with low incomes; Black people, Indigenous people, and other people of color; people who are unhoused; pregnant people; those with refugee status; and women; as well as those with co-occurring medical conditions, including individuals with mental illnesses, older adults, and people living in poverty, are more vulnerable to the effects of climate change. Communities that rely on the natural environment for sustenance and livelihood, as well as populations living in the areas most susceptible to specific climate change events, are at increased risk for adverse behavioral health outcomes.

**Substance Use Disorders**

People with substance use disorders are at a higher risk of heat-related illnesses or death from extreme temperatures. The use of alcohol and other substances can place people at more risk of harm. During periods of prolonged, extreme heat, sleep loss may be a contributing stressor for mental health and substance use conditions. Psychosocial stress arising from the destabilization of social, environmental, economic, and geopolitical support systems, among others, can increase substance-use vulnerability.

**Aggression and Violence Risk**

There is a demonstrated causal relationship between heat and interpersonal aggression—as the temperature goes up, people’s behavior becomes more aggressive toward others. Heat also has a negative effect on cognitive functioning, which may reduce the ability to resolve a conflict without violence. The effects of heat can impair attention span and memory, as well as the ability to process new information. As the ability to perceive situational information degrades, the potential for reactive/impulsive decision making increases, which is associated with aggression and violence. In hot weather, people are more likely to misread neutral signals as signs of hostility and less likely to avoid or condemn violence.

Extreme weather events resulting from climate change can increase gender-based violence. A study published in *JAMA Psychiatry* found a 1°C increase in average annual temperature was connected to a rise of more than 6.3 percent in incidents of physical and sexual domestic violence across three South Asian countries. Heat can also increase group violence. Research suggests that a single standard deviation increase in drought intensity can raise the chances of intergroup conflict by 62 percent.

Displacement and migration resulting from environmental, economic, and/or political instability caused by climate-fueled disasters can spur violence. Climate change can drive extremism, terrorism, civil unrest, and war.

As the climate crisis causes more extreme and frequent droughts, wildfires, floods, and hurricanes, people around the world will be at higher risk of hunger and malnutrition, economic instability, and poverty. This can drive mass migrations to areas with greater resources (e.g., better grazing land, cities with more jobs), which can lead to real or perceived competition over resources. Food and water insecurity, energy insecurity, displacement, supply chain disruption, and many of the other cascading consequences of climate change may result in civil unrest, collective violence, and potentially terrorism and military conflicts. Anger at governments, corporations,
and affluent countries that seem self-protective and/or less collaborative can fuel social and political tensions, further compounding the behavioral health impact.

What Should DBH Responders Expect?

The effects of climate change, especially heat, have significant medical and behavioral health consequences that must be factored into DBH response operations. As our climate changes, U.S. communities will experience warmer or wetter winters, more frequent and severe storms, and hotter and drier summers. For DBH leaders and responders, this translates into:

- More frequent responses and greater costs associated with weather-related incidents
- Longer wildfire seasons (potentially year-round)
- More emergency declarations and longer recovery phases
- Increasing concerns for residents related to safety and health, including behavioral health
- Challenges sustaining the workforce
- Challenges to infrastructure
- Potential influx of eco-migrants (displaced within a nation or across national borders)
- Changes in behavior related to aggression and violence

The increasing number of disasters is likely to strain DBH response capabilities. Responders are likely to experience many of the same impacts as the communities around them. The increased pace of deployment, with shorter periods of downtime and recovery, can increase the potential for burnout and secondary traumatic stress. It will be necessary to recalibrate approaches to safety and security in field settings. As climate-related adaptation and mitigation efforts advance, DBH response entities and individual responders must keep pace. While crossing into these uncharted waters, it will be important to stay informed about the behavioral health challenges associated with climate change and to be agile and responsive to the evolving DBH landscape.

The infographic on page 12 of this edition of The Dialogue offers information and ideas to help communities and individuals prepare for and respond to variations in climate and build resilience. It highlights key ways your colleagues, clients, patients, and other members of your community can protect their health. Please share it with your network.

History of Collective Action for the Environment

"The history of environmental activism illustrates that much is owed to Indigenous peoples, especially women, for paving the way to eco-protests of recent times. An early record of conservationism is from 1730, when 363 women of the Bishnoi community in India sacrificed their lives in defence of trees in their village earmarked for felling for the construction of the local king’s palace (Estrada, 2018). Their courage resulted in the tree cutting being permanently banned by the king. Two hundred years later, the Bishnoi inspired tribal women in northern India to adopt similar tactics—tree hugging and refusing to move—to combat the threat of deforestation. Now popularised under the title of the Chipko movement (meaning to hug or embrace in Hindi), this strategy has attracted international attention, shaped protests against environmental exploitation worldwide (Philp, 2018), and publicised the interdependence between humans and the natural world to a global audience" (Powell & Rao, 2023).
Some medications can increase health risks in extreme heat.

- Some medications can make it harder for your body to regulate heat, which may raise your risk for symptoms such as muscle cramps, weakness, and headache and heat-related illnesses including heat cramps, heat exhaustion, and heat stroke. Heat-related illnesses can be serious and life-threatening. It is important to take precautions, even when temperatures have not yet reached “extreme heat” warnings.
- If you take medication, talk to your doctor, pharmacist, or other healthcare professional about staying safe in extreme heat. Check your local health department for resources to stay cool indoors and outdoors, including resources to cover energy costs for cooling your indoor environment.
- Use substances when the weather is hot can also increase risks for heat-related illnesses. Whenever possible, engage with cooling centers and other health supports, and learn more about how to preserve your health during extreme temperatures.
- Learn more from SAMHSA’s Tips for People Who Take Medication: Coping With Hot Weather and the Centers for Disease Control and Prevention’s Heat and Medications Guidance for Clinicians.

Visit SAMHSA DTAC for more information on extreme climate and disaster behavioral health.
As we explore the short- and long-term impacts of our warming planet, it is vital to take a closer look at its effects on younger generations. The Dialogue recently spoke with Dr. Susan Clayton, Professor of Psychology at the College of Wooster and a primary author of the American Psychological Association and ecoAmerica’s 2023 report Mental Health and Our Changing Climate: Children and Youth. Building on their 2021 report Mental Health and Our Changing Climate, Dr. Clayton and other authors explored both temporary and lasting impacts of climate change on children and young people to provide solutions for mitigation and inspiration for change.

In the report, you and other authors note that there has been an increase in research about the impact of climate change on children and youth. What is the main takeaway from this research?

The children are vulnerable. The research has increasingly identified some of the neurological and physiological pathways that can affect children and youth, especially the prenatal impacts of some things associated with the changing climate, like higher temperatures and air pollution, and the ways in which those have the potential to also affect cognitive abilities in some cases. Climate change is not just hurricanes and wildfires, although those are bad enough. We’re going to have increasing heat waves and higher temperatures, lower air quality, and more changes that affect your brain.

Children and youth are remarkably resilient, and they can cope
with a lot. People can suffer a lot of things and go on to live happy and functional lives. But I would highlight the possibility of permanent impacts during critical periods for children—definitely in terms of neurological and physiological development, but also in terms of attitudes and psychological coping abilities. And these impacts on IQ or coping skills can impact a whole generation, who will then be adults in their 30s and 40s with slightly lower IQs on average and fewer coping skills facing increased stressors. Climate change is likely to increase conflict. So here you have new generations with fewer stress management skills experiencing more stressful conditions. There will be more conflict, higher rates of suicide, and potential wars. Not to get too apocalyptic, but there is a potential for climate change to change the kind of society we live in.

What were your findings when it came to children and young people’s climate attitudes and concerns?

There is less research on attitudes of younger children, although I was recently involved in a study with teachers that found that, even in an early developmental stage, children are spontaneously bringing up these issues in the classroom. It’s not like the youngest children aren’t aware, they are just less aware of broader trends in the world compared to preadolescent children. The youngest may barely be able to conceptualize this issue, certainly not in a concrete way. They are not going to be as worried as the adolescents and the young adults. But that doesn’t mean that they’re not worried at all.

Climate change is affecting older teenagers and young adults in particular. They’re experiencing anxiety, anger, and grief as they anticipate a different future where so much is uncertain. The research is still in fairly early stages, but we have enough to know that some of them are questioning decisions about childbearing, finances, and their professions. Some of them are questioning whether or not to save money or whether it’s even worth it to plan out a traditional career trajectory when they expect so many things to change. And these decisions are so subtle, but they have the potential to have a really significant long-term impact as these 20-year-olds become 40- and 50-year-olds. Adolescents are beginning to think more about their own place in the world and what the world will look like. There is that sense among younger people that they are going to be more strongly affected. Climate activists talk about their anger, but there is also potential for an energized kind of response that can be empowering.

The report notes that climate change impacts children and youth not only in a direct manner, but also through the effects it has on other factors that impact their mental health (such as child development, parental health, poverty, access to medical care, and social media). Can you elaborate on how these factors impact mental and physical health for children and youth?

Certainly there are some cases in which climate change has a direct impact on children and youth. But
a lot of these indirect things, just like disasters and extreme weather events, are becoming both more likely and more serious because of climate change. Access barriers to the fundamentals of life, like food, water, and shelter; food insecurity or involuntary migration; limited to no access to medical care; increased disease risk because of contaminated water and vector-borne diseases; disruptions to the educational system—all of these factors have associated mental and physical health impacts. In many cases, those impacts are stronger for children. Developing systems are easier to disrupt.

Children are also strongly affected by their parents, both in direct ways, such as in prenatal impacts, or indirectly, by parents experiencing significant amounts of stress. Children are developing their psychological skills and tendencies, and it is so important for them to develop a sense of security. If they’re not feeling secure, it’s hard for them to learn anything else, and it may be harder for them to move past a developmental milestone.

_The report breaks down the impacts of our changing climate on young people in different stages of development, including prenatal stages, infancy and childhood, and adolescence and young adulthood. Could you identify the differences in impacts for each group and how they inform the proposed solutions to support each group?_

These distinctions between different life stages are not black and white, but the ways in which climate change can have an impact are certainly different at different life stages.

Prenatally, obviously, the fetus is not perceiving climate change. They’re not exposed to social influences. Impacts on fetuses are going to be fundamentally physiological, either because of high temperatures, air quality, or maternal stress. All of these things can lead to preterm birth, which tends to be negatively associated with cognitive abilities and mental health.

Infants are also not fully physiologically developed. Parental stress can also impair their sense of security.

Toddlers and younger children start attending preschool or school, and a disruption in schooling can have an impact, as well as displacement or involuntary migrations. Those early experiences of fear and trauma, those disrupted connections that can happen at a physiological and psychological level, may be associated with extreme weather events.

Adolescents are much more developed than younger children, so the physiological impacts are not likely to be as strong. But we have to remember that adolescents are beginning to develop their sense of who they are and their life trajectory. Adolescents are making choices that younger children aren’t, and those choices are being affected by their perceptions of climate change. It can affect their trust in society, their sense that things work and that the world is, more or less, fair.

We include young adults because essentially they are super adolescents, in some ways. They’re making more of those decisions, but they may still feel like they’re not in charge. They, like adolescents,
may feel that they’re let down by the inaction of others.

The report breaks down solutions by enactor level, including the systems, community, school, healthcare systems, and parental levels. Could you identify the differences in solutions that each enactor could pursue and how these solutions may differ in impact for children and youth?

We know what people can do as individuals, and that’s important, but we need systems-level changes. Mitigation, reducing the extent of climate change, is part of a solution. There is need for infrastructure changes to promote the ability to withstand disasters and reduce impacts. These changes might include stormwater management, cooling spaces, and more green spaces in cities. We also need better support for mental health care, because every country is inadequate in their attention to mental health, and we know that mental health needs are increasing for so many reasons, climate change being only one of them.

Communities can create opportunities for people to come together and share their concerns. Better mental health care can come not just from mental healthcare professionals, but also from communities, such as through the school system. Social connections

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Emotional and Behavioral Health Impacts on Young People

In a 2019 American Psychological Association (APA) survey, **47 percent** of 18- to 34-year-olds said that stress about climate change affects their daily lives (APA, 2020).

In a survey of **10,000 16- to 25-year-olds in countries around the world, 45 percent** of respondents said their feelings about climate change affected their day-to-day functioning, and more than half said they feel sad, anxious, angry, guilty, and helpless about climate change (Hickman et al., 2021).

“By the end of the century, it is predicted that one billion youth . . . (i.e., nearly half of all children and adolescents worldwide) will be at ‘extremely high risk’ of climate change-related health effects, particularly in communities of color and low-income settings. Children and adolescents are also more susceptible to the mental health consequences of climate change. . . . Anxiety, depression, post-traumatic stress disorder, and substance use disorders have all been linked to climate change-related traumas. Distressing feelings about climate change are not a form of mental illness, but like any form of stress and worry can be difficult for young people to cope with” (American Academy of Child and Adolescent Psychiatry, 2023).
are really important for mental health. Finding ways for people to take collective action helps people feel less isolated and more like they have agency. This can also be a space to emphasize the need for an equitable, social justice-focused response to climate change, or to recognize that not everybody is equally exposed and has the same resources to respond.

Schools are often the most effective way to provide education to the population. Teachers should inform themselves about the relevance of climate change and not be afraid to address it in the classroom. That education should include not just factual information, but training in emotional coping skills and opportunities for creating change.

Health professionals have growing awareness, but they still have so much room to become more aware of the potential impacts of climate change. Including assessments in routine health care to determine if a person is experiencing anxiety associated with climate change or if they are being affected by higher temperatures or lower air quality can inspire some needed change.

I know a lot of parents don’t want to frighten their children, so they think they shouldn’t bring up this topic. But the children watch the news, and they hear people talk. They know something is going on. The most important thing for parents to do is provide support. Be honest with your children, and be there to answer their questions. You determine what language and how much information works best for your child depending on their age and what you believe they can handle. You’re not going to tell your 2-year-old, “Yes, there’s a 50-50 chance that we’ll trigger catastrophic climate change within the next 10 years.” What you can say is, “Yes, we are worried about how our planet is changing.” And try not to just share information. Sharing optimism is a really important role of parents to model a way of dealing with scary information without losing it. Let them know it’s okay to talk about this problem, and that doesn’t mean we need to panic, because there are things we can do about it. Model how to manage your own emotions and engage in your community.

**What are some solutions and recommendations to protect parents’ and other caregivers’ mental health with respect to climate change and its impacts on children and youth?**

If you’re really stressed all the time, beginning to have trouble sleeping, your emotions seem out of control, or you’re having obsessive thoughts about climate change, then it’s time to step back. Stop checking the news, stop paying attention for a while, and do some self-care. The important thing is to monitor your own mental health and consider it a priority. You can’t help anybody until you are in a stable place.

Being optimistic doesn’t mean everything is going to be fine. But we’re not doomed. We can be better. Not only can we manage not to be doomed, but some of the things we’ve learned to do so far will actually improve our quality of life. Including more green infrastructure in cities, encouraging people to walk more, using public transportation—those changes have improved and will continue to improve our health totally independent of climate change. We can have a society where people feel more engaged and connected with their neighbors, and where they have more potential for influencing policy decisions and positive changes. ■
**Disaster Behavioral Health in an Era of Climate Change**

This edition of *The Dialogue* from the SAMHSA Disaster Technical Assistance Center (DTAC) features articles on how to cope with climate change and its potential effects on behavioral health, as well as supporting individuals and communities in coping and building resilience. Articles are from leaders and experts in the fields of disaster behavioral health and disaster response.


**Climate and Health**

This web page from the Association of State and Territorial Health Officials (ASTHO) features the Climate and Health Capacity Survey report and an infographic describing key takeaways, an interactive map that showcases state climate adaptation plans and resources, and an extreme weather and climate readiness toolkit. State and territorial health agencies can use these resources to develop plans to respond to the health effects of climate change.


**Who Is Most At Risk To Extreme Heat?**

This web page from the National Integrated Heat Health Information System explains how high temperatures can disproportionately affect different groups of people, including children, athletes, older adults, emergency responders, and people with disabilities. Knowing these factors ahead of time can allow for better planning, assistance, and recovery.


**Wellbeing and Climate Change**

The Minnesota Department of Health web page explains how people may react to climate change differently based on their previous experiences with disasters, their occupation, and where they live, among other factors. It explains what climate anxiety is, describes the losses that can result from climate change, and identifies at-risk populations. Resources are available at the bottom of the page for public health and healthcare professionals, parents/caregivers, and educators.


**Mental Health and Our Changing Climate: Children and Youth Report 2023 Webinar**

The American Psychological Association and ecoAmerica released the *Mental Health and Our Changing Climate: Children and Youth Report* in 2023. The webinar and full report provide an overview of how climate change can impact the mental health of children and youth and detail key steps professionals, advocates, teachers, and the public can take to address this concern.

Recent Technical Assistance Requests

Following are responses that SAMHSA Disaster Technical Assistance Center (DTAC) staff have provided to recent technical assistance requests. Send your questions and comments to dtac@samhsa.hhs.gov.

Request: SAMHSA DTAC received an email from a mental health aide in New York seeking training opportunities in disaster mental health. The individual also noted their interest in gaining more experience to advance their career in the disaster mental health field.

Response: SAMHSA DTAC shared the following online training courses that offer education in disaster mental health, along with additional sources of information. A sample of the training resources shared is included below:

- **Creating Safe Scenes**—This SAMHSA online training is designed to help responders work effectively and ensure maximum safety on calls with people in mental illness or substance use-related crises. The training explains de-escalation strategies, community network development, and the improvement of safety for both responders and individuals in crisis.

- **Service to Self**—This online training offers guidance on managing the increased risk of mental illness and substance misuse within the first response field, specifically for fire and emergency medical services personnel. The training covers the common stressors brought on by response work, stress management, healthy coping, and the ways responders can foster the mental health of their teams.

- **Psychological First Aid (PFA)**—This free online training from the National Child Traumatic Stress Network focuses on PFA, an evidence-informed, modular approach people can use to assist those affected by natural and human-caused disasters. PFA is intended for use in the first days or weeks after a disaster.

- **Skills for Psychological Recovery (SPR)**—Provided by the National Center for PTSD, this online training prepares disaster behavioral health professionals to educate disaster survivors and veterans about core skills to help activate resilience in the weeks and months after a disaster or adverse event. The training covers both the basic elements of SPR and also how to provide SPR effectively.
  [https://www.ptsd.va.gov/professional/continuing_ed/skills_psychological_recovery.asp](https://www.ptsd.va.gov/professional/continuing_ed/skills_psychological_recovery.asp)
  [https://www.ptsd.va.gov/professional/treat/type/skills_psych_recovery_manual.asp](https://www.ptsd.va.gov/professional/treat/type/skills_psych_recovery_manual.asp)

Request: A representative from the Colorado Office of Sexually Transmitted Infections, HIV, and Viral Hepatitis reached out to SAMHSA DTAC to explore options for a training partnership in which SAMHSA would provide tailored resilience training for the state office’s team.

Response: While informing the state office representative that SAMHSA DTAC would not be the appropriate entity for the sought-after partnership, SAMHSA DTAC provided a list of several other SAMHSA-led divisions, centers, and initiatives as partnership options for the State of Colorado. The following SAMHSA entities were shared with the representative:

- **Mental Health Technology Transfer Center (MHTTC) Network**—The MHTTC Network has regional centers offering training and resources on a
variety of mental health topics. While there are for-
cost training options available from a wide variety of
sources, the MHTTC Network may be able to identify
options that are low- or no-cost.
https://mhttcnetwork.org

- **Prevention Technology Transfer Center (PTTC) Network**—The purpose of the PTTC Network is to
improve the implementation and delivery of effective
substance use prevention interventions and provide
training and TA to the substance misuse prevention
field. The PTTC Network develops and disseminates
tools and strategies to improve substance misuse
prevention efforts; provides intensive TA and learning
resources to improve prevention professionals’
understanding of prevention science, epidemiological
data, and implementation of evidence-based
and promising practices; and develops tools and
resources to engage the next generation of prevention
professionals.
https://pttcnetwork.org

- **Strategic Prevention Technical Assistance Center (SPTAC)**—The SAMHSA SPTAC is a national
training and TA center that works to advance the
application of culturally responsive, evidence-based
substance misuse prevention efforts.
https://www.samhsa.gov/sptac

- **National Harm Reduction Technical Assistance Center (NHRTAC)**—NHRTAC provides free
help to individuals and programs providing (or
planning to provide) harm reduction services to their
community. NHRTAC aims to build the capacity and
performance of harm reduction programs throughout
the United States by ensuring access to high-quality,
comprehensive TA. The Centers for Disease Control
and Prevention (CDC) established and expanded
NHRTAC in collaboration with SAMHSA to
support integration of harm reduction across diverse
community settings and within a treatment framework.
https://harmreductionhelp.cdc.gov/

**Request**: SAMHSA DTAC received a voicemail from
an Illinois resident seeking training resources developed
by DTAC related to mental health awareness.

**Response**: SAMHSA DTAC returned the individual’s
phone call to determine which trainings and resource
materials would be most pertinent to their interests.
In addition to providing links to SAMHSA DTAC’s
Service to Self and Creating Safe Scenes training
courses, SAMHSA DTAC shared supplemental
resources on mental health awareness, substance use,
and faith-based organizations, including the following:

- **Serious Mental Illness (SMI)**—This part of the
SAMHSA Disaster Behavioral Health Information

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**Help Improve SAMHSA’s Disaster Services and Products**

As a subscriber to this newsletter, you are invited to participate in a
short, web-based survey to provide the SAMHSA Disaster Technical
Assistance Center (DTAC) with feedback about your experiences
with our products and services. The survey should take no more
than 15 minutes. Complete the survey by going to the survey web
page, or copy and paste the URL https://iqsolutions.qualtrics.com/
ife/form/SV_bjYCSJDUQAGi1h3 into your web browser.
Series (DBHIS) resource collection includes materials focused on SMI. It provides links to external mental health organizations, resources designed to enhance understanding of SMIs, and information about meeting the needs of people with SMI during and after disasters.

https://www.samhsa.gov/resource-search/dbhis?rc%5B0%5D=issues_conditions_disorders%3A20312


- **TIP 57: Trauma-Informed Care in Behavioral Health Services—**This guide aids behavioral health professionals in understanding trauma and how lived experience of trauma may affect individuals. It also describes screening and assessment, clinical issues, and models of trauma treatment and provides information about the implementation of trauma-informed care in behavioral healthcare programs. https://store.samhsa.gov/product/tip-57-trauma-informed-care-behavioral-health-services/sma14-4816

- **People With Substance Use Disorders (SUD) and Disasters—**Several subsections within the SAMHSA DBHIS collection feature resources on including and supporting people with SUD through phases of disaster planning, response, and recovery. These collections include tip sheets, guides, and other resources that can assist with disaster preparedness, response, and recovery for people with SUD, people in recovery, and people at risk of SUD. The following sections of the SAMHSA DBHIS include resources relevant to people with SUD:
  - People with SUD: https://www.samhsa.gov/resource-search/dbhis?rc%5B0%5D=issues_conditions_disorders%3A20317
  - People with alcohol use disorder: https://www.samhsa.gov/resource-search/dbhis?rc%5B0%5D=issues_conditions_disorders%3A20278
  - People with opioid use disorder: https://www.samhsa.gov/resource-search/dbhis?rc%5B0%5D=issues_conditions_disorders%3A20303

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**Are you looking for disaster behavioral health resources?**

Check out the new and updated SAMHSA DTAC Disaster Behavioral Health Information Series (DBHIS) installments.

https://www.samhsa.gov/resource-search/dbhis
- People with co-occurring disorders (one of which may be a SUD): [https://www.samhsa.gov/resource-search/dbhis?rc%5B0%5D=issues_conditions_disorders%3A20285](https://www.samhsa.gov/resource-search/dbhis?rc%5B0%5D=issues_conditions_disorders%3A20285)

- **Recovery Is Possible for Everyone: Understanding Treatment of Substance Use Disorders**—This CDC web page offers useful information on SUD and available treatment and recovery options, including medication, outpatient counseling, and behavioral health care. The web page highlights the significance of reducing the stigma that comes with SUD by promoting treatment.
  [https://www.cdc.gov/drugoverdose/featured-topics/recovery-SUD.html](https://www.cdc.gov/drugoverdose/featured-topics/recovery-SUD.html)

- **Reducing Stigma: Understanding Addiction and Supporting Recovery**—This CDC fact sheet highlights how common addiction is, how drug use affects the brain, and options for treatment and recovery. It emphasizes that people can and do recover from addiction and the importance of supporting individuals in their recovery journey.

- **Faith Communities & Disaster Mental Health**—This tip sheet from the National Disaster Interfaiths Network provides information for religious leaders regarding the common stress reactions people have after a disaster and strategies to help them cope. The sheet also provides information on referring people for mental health services.


- **Mental Health: A Guide for Faith Leaders**—Provided by the American Psychiatric Association Foundation, this guide offers recommendations to assist faith leaders in supporting members of their congregations and their families dealing with mental illness.
REFERENCES


The views, opinions, and content expressed in this publication do not necessarily reflect the views, opinions, or policies of the Center for Mental Health Services (CMHS), the Substance Abuse and Mental Health Services Administration (SAMHSA), or the U.S. Department of Health and Human Services (HHS).
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*The Dialogue* is a publication for professionals in the disaster behavioral health field to share information, resources, trends, solutions to problems, and accomplishments. Contact SAMHSA DTAC to be added to *The Dialogue* subscription list.

SHARE INFORMATION

Readers are invited to contribute to *The Dialogue*. To author an article for an upcoming issue, please contact SAMHSA DTAC at dtac@samhsa.hhs.gov.

ACCESS ADDITIONAL SAMHSA DTAC RESOURCES

The *SAMHSA DTAC Bulletin* is a monthly e-communication used to share updates in the field, post upcoming activities, and highlight new resources. Contact SAMHSA DTAC to be added to the *SAMHSA DTAC Bulletin* subscription list.

The SAMHSA Disaster Behavioral Health Information Series contains resource collections and toolkits pertinent to disaster behavioral health. Installments focus on specific populations, specific types of disasters, and other topics related to all-hazards disaster behavioral health preparedness and response. Visit the SAMHSA DTAC website at https://www.samhsa.gov/resource-search/dbhis to access these materials.

CONTACT US

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