

# **Climate-Related Disasters & Public Mental Health: Impacts, Risks, and Interventions to Protect Workers & Others**

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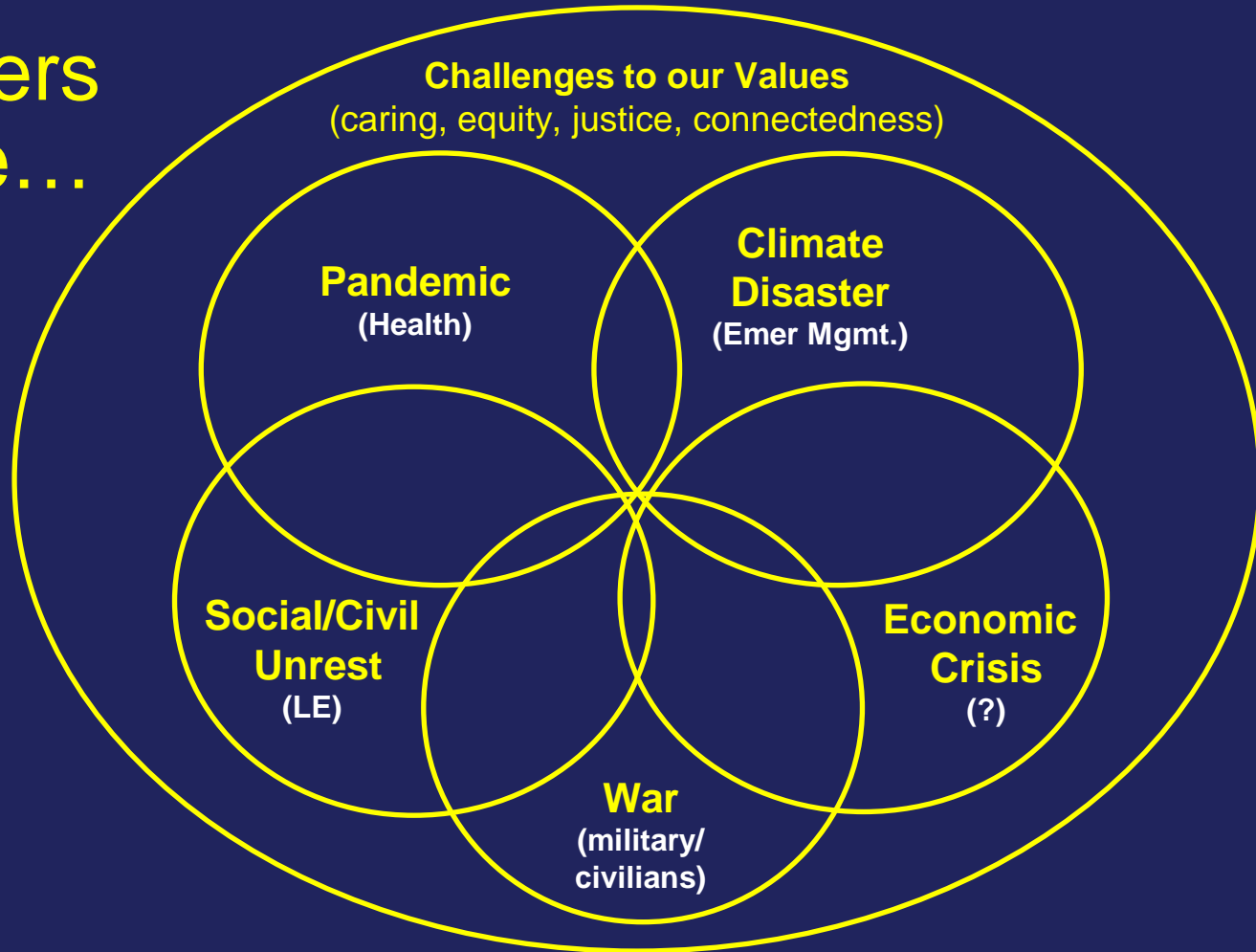
# Disclaimer

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# Objectives

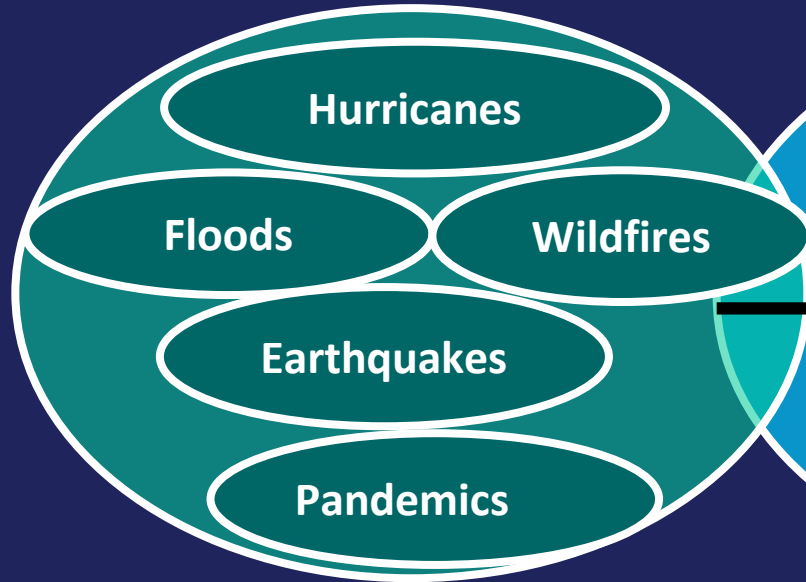
- List the psychological and behavioral effects of climate-related disasters
- Describe aspects of risk and protective factors across the disaster lifecycles
- Explain the framework and actionable interventions for protecting mental health of workers & others in disasters

# Disasters Collide...

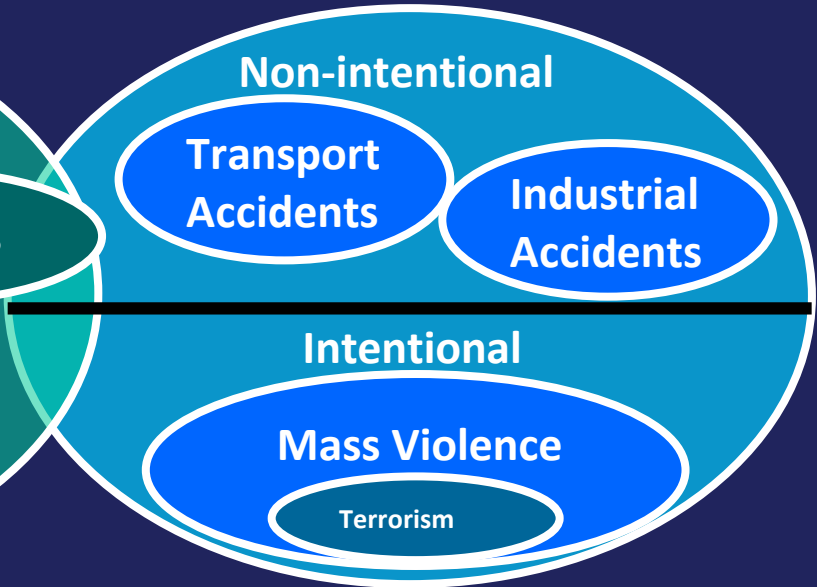


# Categories of Disasters

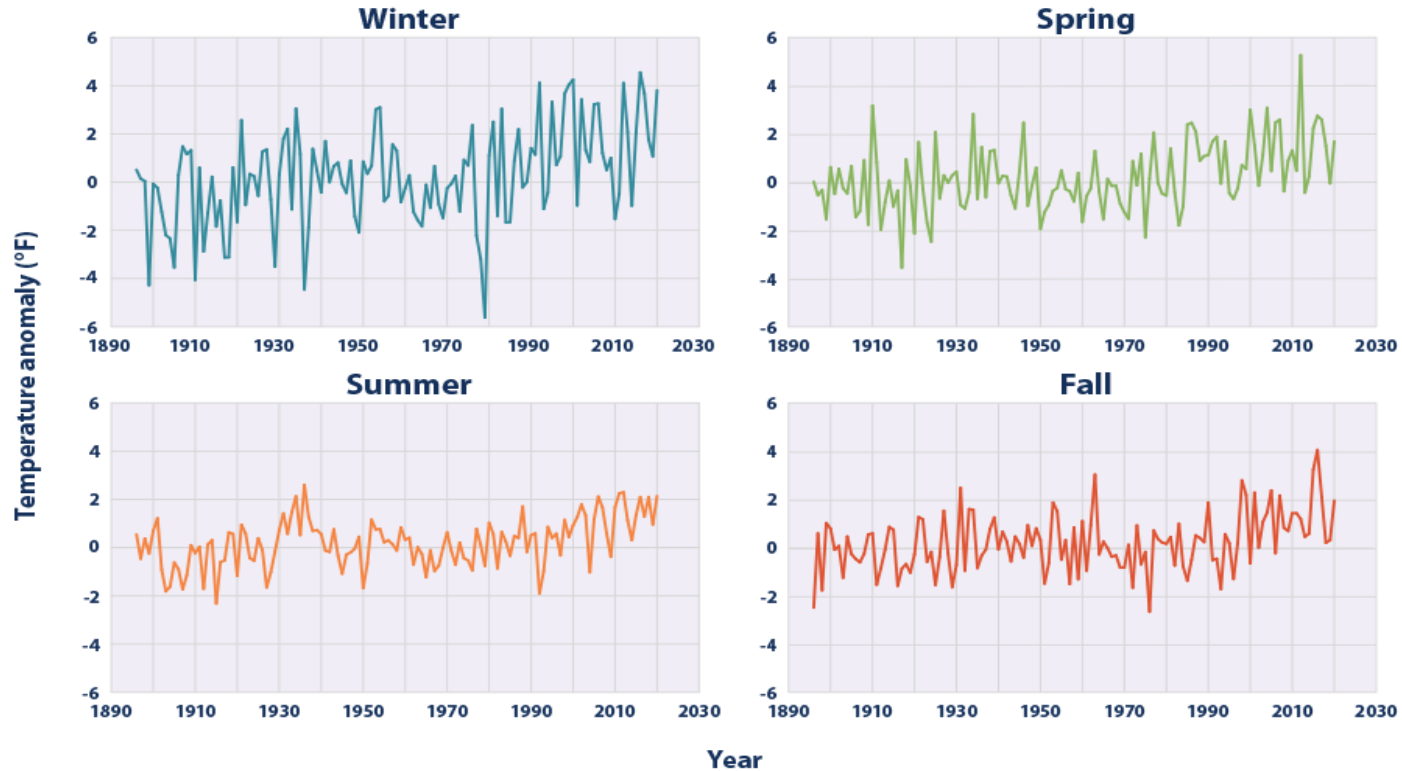
## *Climate-Related/Natural Disasters*



## *Human-Generated Disasters*



## Average Seasonal Temperatures in the Contiguous 48 States, 1896–2020



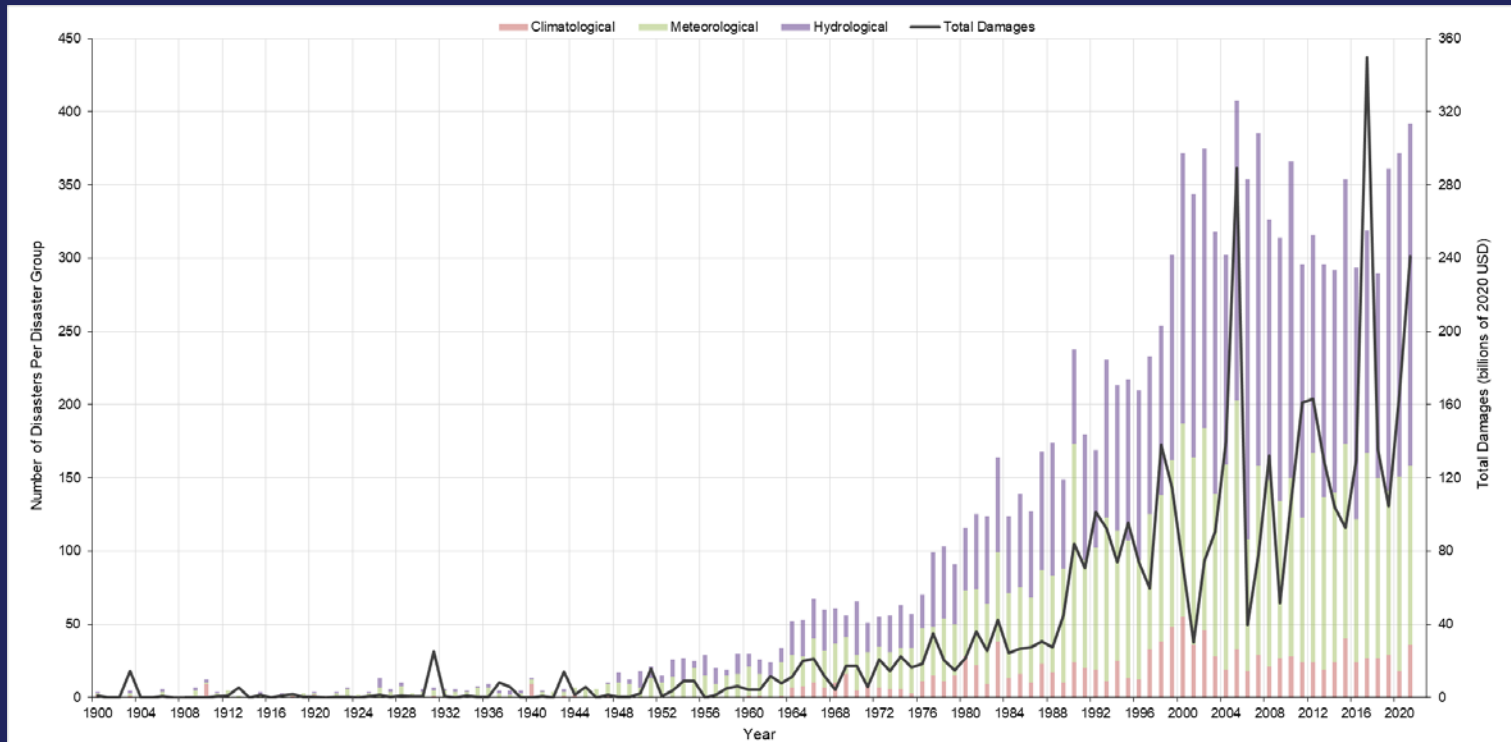
Data source: NOAA (National Oceanic and Atmospheric Administration), 2021. National Centers for Environmental Information. Accessed February 2021. [www.ncei.noaa.gov](http://www.ncei.noaa.gov).



Flooding in Paradise Valley, Mont., a northern corridor leading to Yellowstone National Park. By Daniel Anderson and Louise Johns

<https://www.nytimes.com/2022/06/15/us/yellowstone-photos.html?searchResultPosition=1>

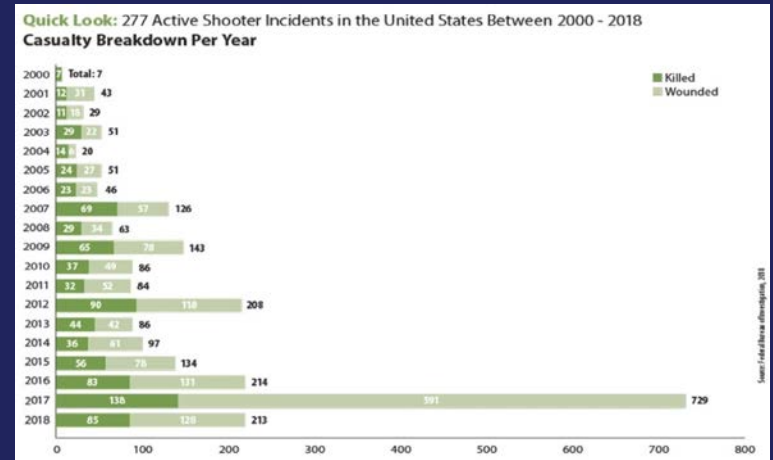
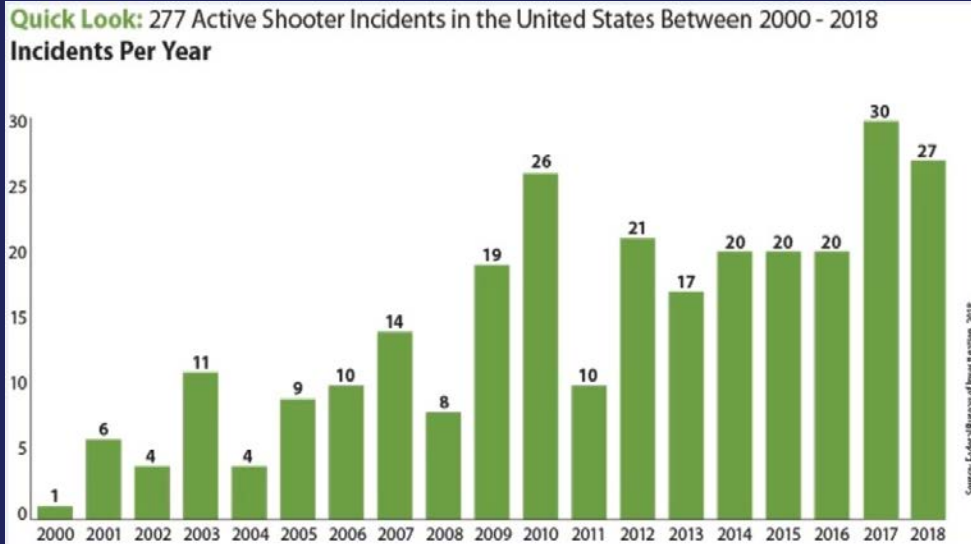
# Global Climate-Related Disaster Annual Incidence & Cost 1900-2021



SOURCE: EM-DAT: The Emergency Events Database—Université catholique de Louvain (UCL)—Cred. D. Guha-Sapir—[www.emdat.be](http://www.emdat.be). Brussels, Belgium



# U.S. Mass Shootings: Incidence & Fatalities



# Dimensions of Disasters

DIMENSION	HURRICANE	WAR	PANDEMIC
Altered sense of safety	++	++++	++++
Local & National fear	++	+++	+++
Prolonged stress	++	++++	++++
Consequences over time	+++	++++	++++
Community disruptions	++	+++	+++
Overwhelm health systems	++	++++	++++
National bereavement	+	++++	+++
Impact societal infrastructure	+++	++++	+
Intentional	-	++++	-
Unpredictable	+	++	+++
Institutional trust loss	-	-	++++

**PSYCHOLOGICAL AND  
BEHAVIORAL EFFECTS ON  
INDIVIDUALS AND  
COMMUNITIES**



# THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES

A Scientific Assessment

U.S. Global Change Research Program

<https://health2016.globalchange.gov/mental-health-and-well-being>

## THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES A Scientific Assessment



# 8 MENTAL HEALTH AND WELL-BEING

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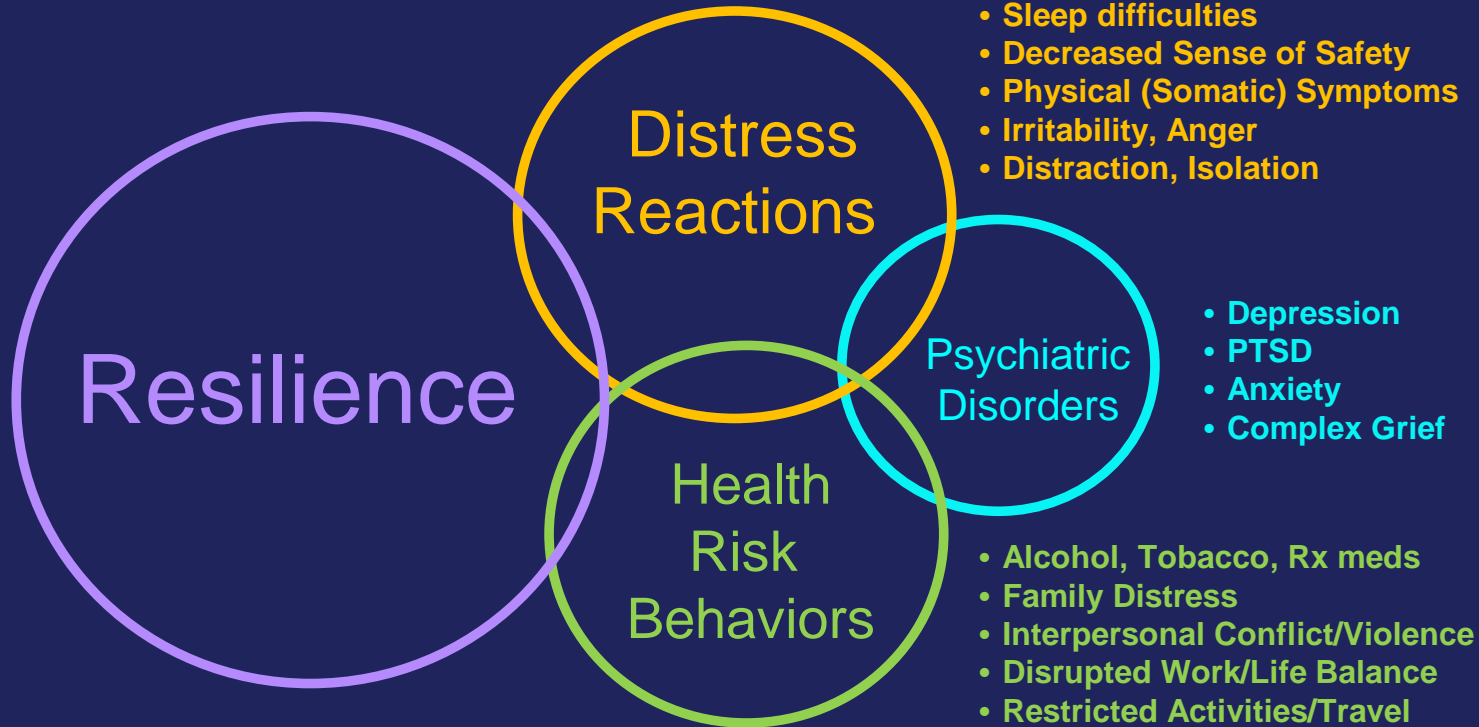
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On the web: [health2016.globalchange.gov](http://health2016.globalchange.gov)

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# Psychological & Behavioral Responses to Pandemics & Disasters



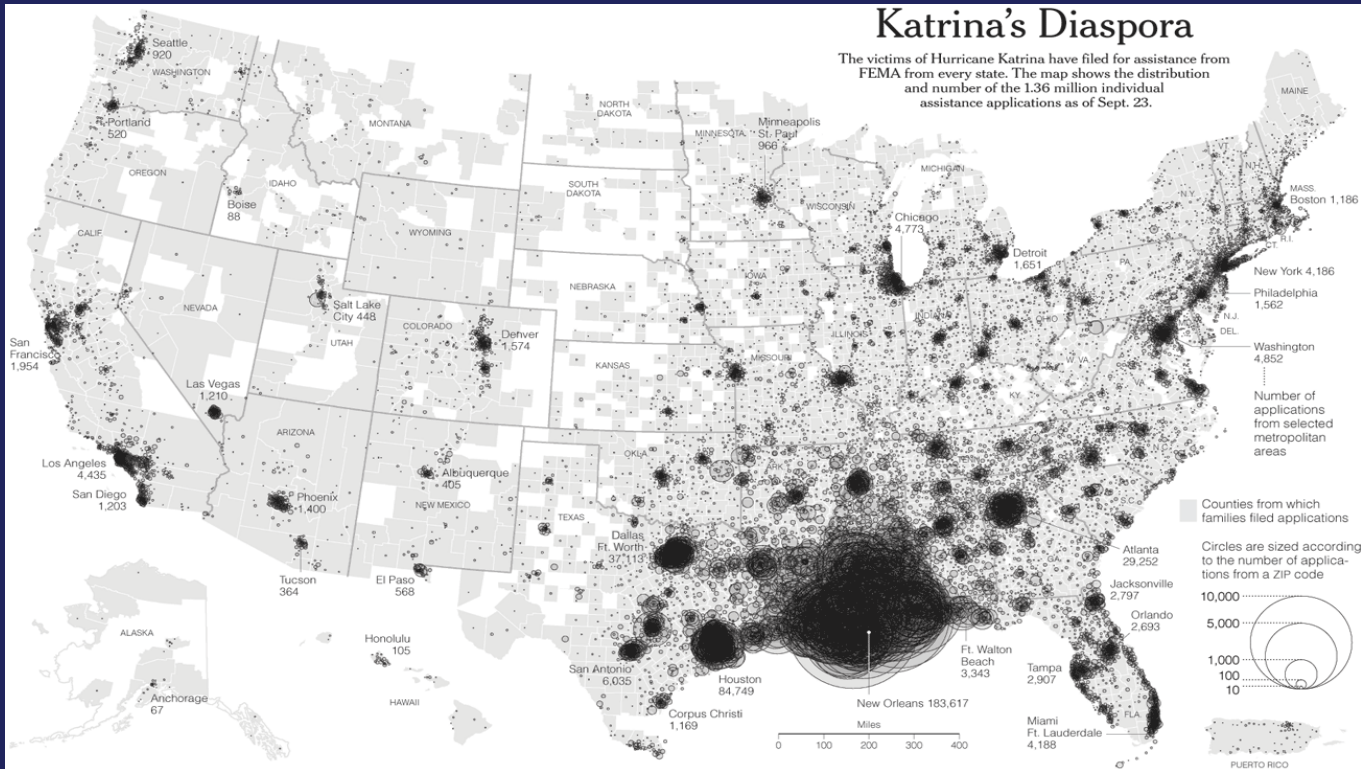
# Stress Continuum

READY	REACTING	INJURED	ILL
<p><b>DEFINITION</b></p> <ul style="list-style-type: none"> <li>• Adaptive coping</li> <li>• Effective functioning</li> <li>• Well-being</li> </ul> <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• In control</li> <li>• Calm and steady</li> <li>• Getting the job done</li> <li>• Playing</li> <li>• Sense of humor</li> <li>• Sleeping enough</li> <li>• Ethical and moral behavior</li> </ul>	<p><b>DEFINITION</b></p> <ul style="list-style-type: none"> <li>• Mild and transient distress or loss of function</li> </ul> <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Anxious</li> <li>• Irritable, angry</li> <li>• Worrying</li> <li>• Cutting corners</li> <li>• Poor sleep</li> <li>• Poor mental focus</li> <li>• Social isolation</li> <li>• Too loud and hyperactive</li> </ul>	<p><b>DEFINITION</b></p> <ul style="list-style-type: none"> <li>• More severe and persistent distress or loss of function</li> </ul> <p><b>TYPES</b></p> <ul style="list-style-type: none"> <li>• Trauma</li> <li>• Fatigue</li> <li>• Grief</li> <li>• Moral injury</li> </ul> <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Loss of control</li> <li>• Can't sleep</li> <li>• Panic or rage</li> <li>• Apathy</li> <li>• Shame or guilt</li> </ul>	<p><b>DEFINITION</b></p> <ul style="list-style-type: none"> <li>• Clinical mental disorders</li> <li>• Unhealed stress injuries</li> </ul> <p><b>TYPES</b></p> <ul style="list-style-type: none"> <li>• PTSD</li> <li>• Depression</li> <li>• Anxiety</li> <li>• Substance abuse</li> </ul> <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Symptoms persist &gt; 60 days after return from deployment</li> </ul>
<p><b>Self Help</b></p>	<p><b>Leadership/Organizational Support</b> <b>Peer Support</b></p>		<p><b>Screening/Referral</b></p>



# Katrina's Diaspora

The victims of Hurricane Katrina have filed for assistance from FEMA from every state. The map shows the distribution and number of the 1.36 million individual assistance applications as of Sept. 23.



They are scattered through all 50 states, the District of Columbia and Puerto Rico — 623 in Utah, 1,114 in Kansas, 101 way out in Alaska. They are clustered by the thousands in large Southern cities like Dallas, Atlanta and Memphis, and huddled in handfuls in unlikely hamlets like Shell Knob, Mo. (pop. 1,393) and Fountain Run, Ky. (pop. 239).

Evacuees fled Hurricane Katrina and the floods that followed in caravans of cars and fleets of buses, on helicopters and chartered planes, by boat and, a few, on foot. A month after the storm, a map

emerges of where they landed, based on ZIP codes from which applications for aid were submitted to the Federal Emergency Management Agency as of Sept. 23.

Of 1,356,704 applications, 86 percent came from Louisiana, Mississippi, Texas and Alabama. But 35,539 families were more than 1,000 miles from the Gulf — among the farthest: one in Nome, Alaska, 3,931 miles from the French Quarter and another in Lihue, Hawaii, 4,279 miles away.

Residents of New Orleans, a city that was two-thirds black, seem to have flocked to the nation's African-American population

centers. On average, the applicants came from counties where blacks were 28 percent of the population, more than twice the national average.

Baton Rouge, La., appears to be temporary home to 10 percent of evacuees, Houston 6.25 percent. But after the top 18 hubs, applicants are spread like the wind that whipped through their old neighborhoods: none of the other 900-plus metropolitan areas has even 1 percent of the total.

Some 4,000 ZIP codes — among them Pochantas, Miss., Promise City, Iowa; and Hope, Mich. — had just one applicant.

## Applications by state

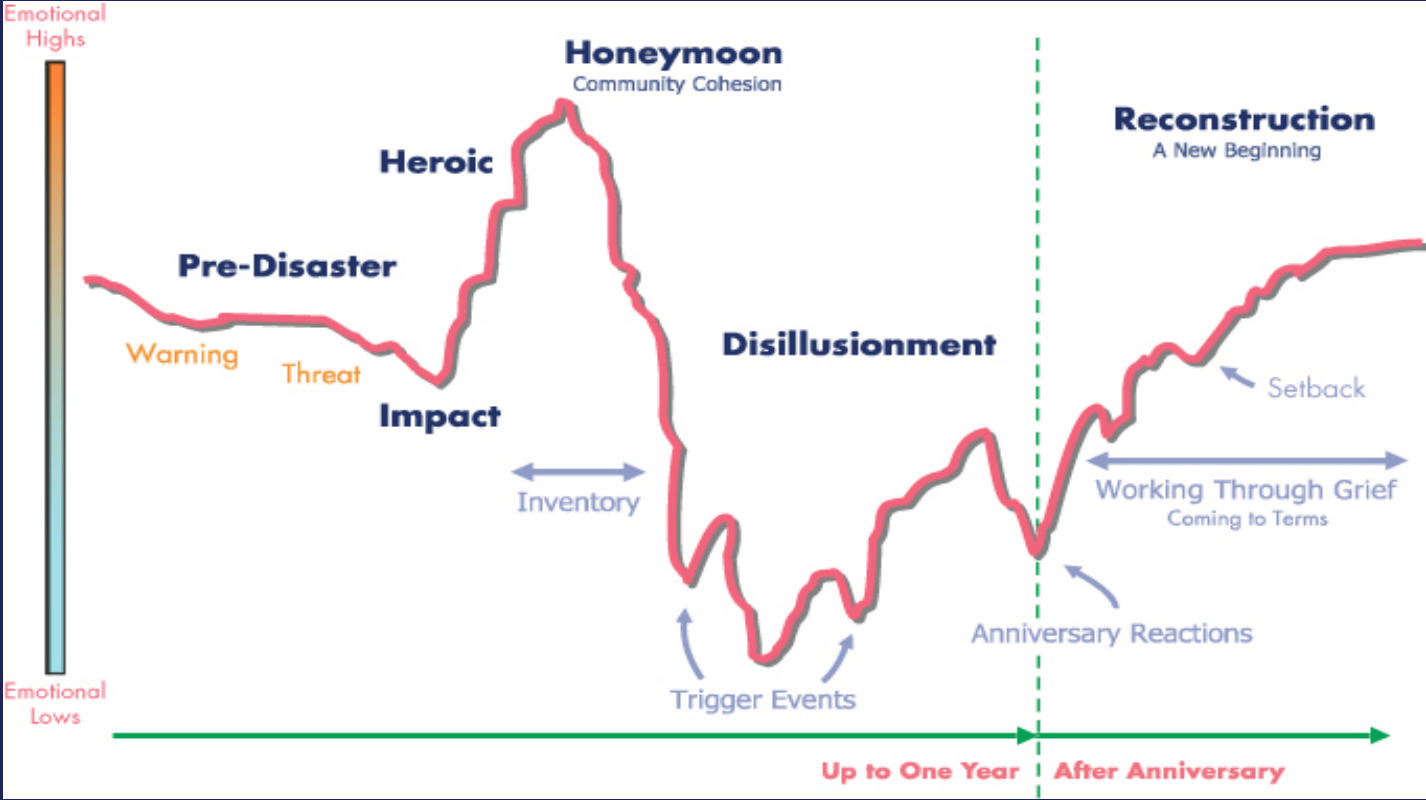
Louisiana	523,149	38.6%
Mississippi	383,840	28.3%
Texas	156,895	11.6%
Alabama	109,469	8.1%
Georgia	35,342	2.6%
Florida	31,005	2.3%
Tennessee	15,529	1.1%
Arkansas	11,027	0.8%
California	10,953	0.8%
Illinois	6,430	0.5%
Others	73,065	5.4%

## Applications by distance from New Orleans

MILES	APPLICANTS	PCT.
0-100	626,232	46.2%
100-200	338,080	24.9%
200-400	184,169	13.6%
400-800	143,497	10.6%
800-1,600	45,371	3.3%
1,600-3,200	13,403	1.0%
3,200+	232	0.0%

Sources: FEMA, Census Bureau, Queens College Sociology Department, Matthew Erickson, Archie Tie and Jodi Wilgoren/The New York Times

# Community Phases





# RISK AND VULNERABILITY IN DISASTERS

# Resilience... not static or generic, but is context and time dependent

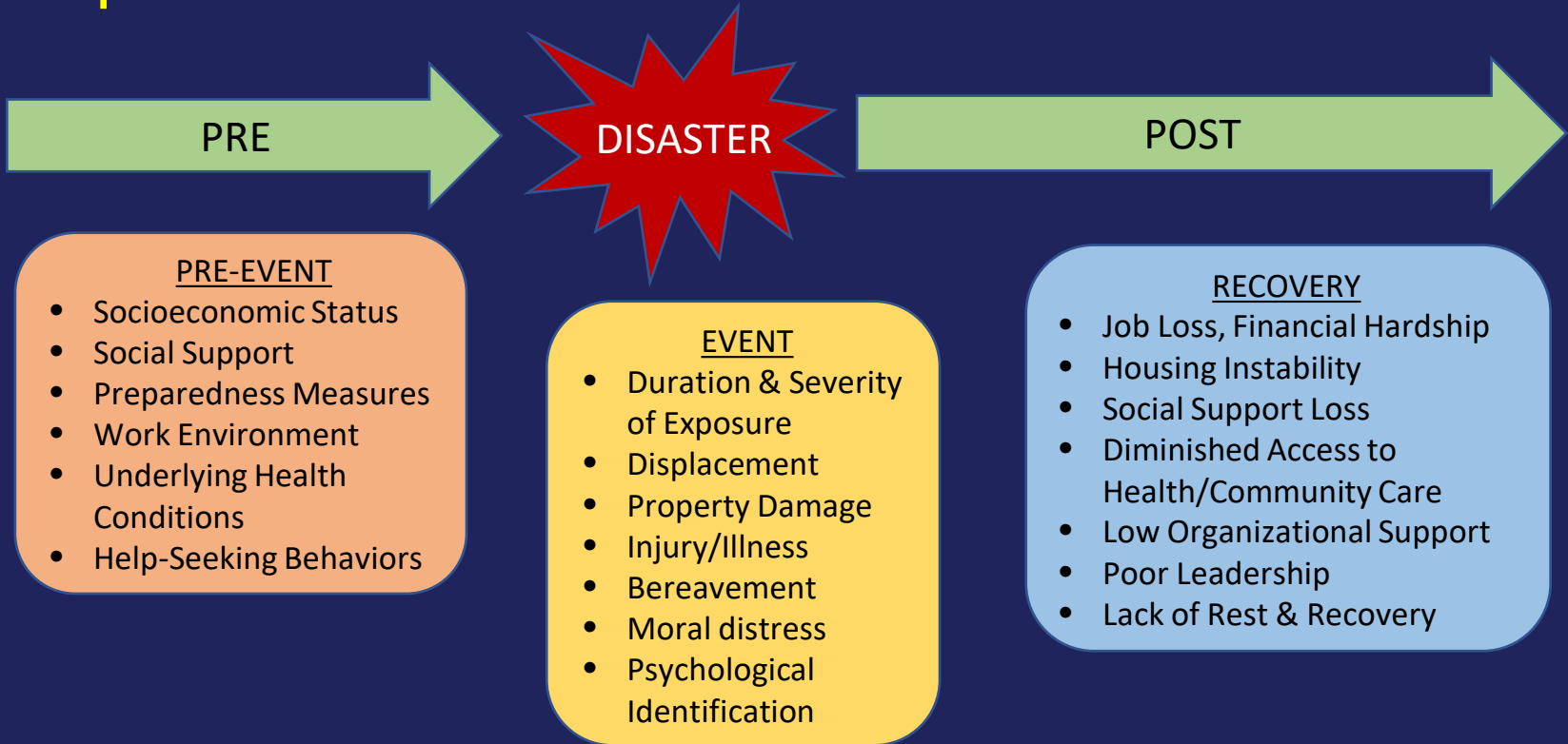
- For Whom?
- From What?
- When?
- Where?

The better each is defined the more we can enhance resilience (e.g know the “how” of building, fostering and sustaining resilience)

# Psychological/Behav Intervention Matrix

	HOST	AGENT/ VECTOR	PHYSICAL ENVIR	SOCIAL ENVIR
PRE- EVENT	<ul style="list-style-type: none"> <li>-Risk Assessment</li> <li>-Risk Communication</li> <li>-Surveillance</li> <li>-Primary Prevention</li> <li>-Training</li> </ul>	<ul style="list-style-type: none"> <li>-Fear</li> <li>-Uncertainty</li> <li>-Misinformation</li> </ul>	<ul style="list-style-type: none"> <li>-Existing care services</li> <li>-Proximity to exposures</li> </ul>	<ul style="list-style-type: none"> <li>-Culture of readiness</li> <li>-Knowledge of roles</li> <li>-Baseline trust</li> <li>-Culturally based risk perceptions</li> </ul>
EVENT	<ul style="list-style-type: none"> <li>-Crisis &amp; Risk Communication</li> <li>-Prophylaxis</li> </ul>	<ul style="list-style-type: none"> <li>-Exposure to illness, death</li> <li>-Isolation</li> <li>-Loss</li> <li>-Stress</li> </ul>	<ul style="list-style-type: none"> <li>-Identification of risk indicators</li> <li>-Knowledge of care services (where/how)</li> <li>-Barriers to care</li> </ul>	<ul style="list-style-type: none"> <li>-Comm/Org response to communication</li> <li>-Grief leadership</li> <li>-Access to crisis resources</li> </ul>
POST- EVENT	<ul style="list-style-type: none"> <li>-Lessons learned</li> <li>-Surveillance</li> <li>-Mitigation/Care</li> </ul>	<ul style="list-style-type: none"> <li>-Decreased access to care</li> <li>-Loneliness</li> </ul>	<ul style="list-style-type: none"> <li>-Availability of resources</li> <li>-Application of lessons learned</li> </ul>	<ul style="list-style-type: none"> <li>-Help-seeking</li> <li>-Comm/Org trust in health/other</li> </ul>

# Aspects of Risk in Disasters



Morganstein, J. C., West, J. C., & Ursano, R. J. (2019). Work-Associated Trauma. In M. B. Riba, S. V. Parikh, & J. F. Greden (Eds.), *Mental Health in the Workplace* (pp. 161–180). Springer International Publishing.

Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981-2001. *Psychiatry*, 65(3), 207–239.

Somasundaram and van de Put (2006). Management of Trauma in Special Populations after a Disaster. *J Clin Psychiatry*;67(suppl 2):64-73

# Populations Benefitting from Special Considerations

Dependence  
on Systems  
of Care

Cognitive &  
Mobility  
Impaired

Structurally  
Disadvantaged;  
Homelessness

Migrants &  
Refugees

Communities  
of Color

Disaster  
Workers &  
Responders

Children &  
Adolescents

# Impact of Repeated Disasters: Protecting Responders

## BEFORE THE DISASTER EVENT



- Issue: **Difficulty recovering from previous disaster**
- Action: Identify those who have not fully recovered to address needs prior to repeated exposure



- Issue: **Lower levels of social support**
- Actions: Encourage social support from significant others, friends, and/or family; Provide opportunities to bolstering relationships and engagement away from work



- Issue: **Decreased productivity following disaster exposure**
- Action: Provide opportunities for engagement in work peer support groups, leadership-led stress management trainings/education

## DURING THE DISASTER EVENT



- Issue: **Greater initial emotional response** (e.g., fear, anxiety, hopelessness, helplessness, horror)
- Action: Offer acute disaster care (e.g., Psychological First Aid) and targeted follow-up support

## AFTER THE DISASTER EVENT



- Issue: **Personal disaster-related injury or property damage**
- Action: Provide informal and formal support resources; Offer flexibility with leave to manage disaster-related consequences.

**INTERVENTIONS  
FOLLOWING DISASTERS  
TO PROTECT WORKERS**

# Psychological First Aid (PFA)

## Five Essential Elements:

Safety

Calming

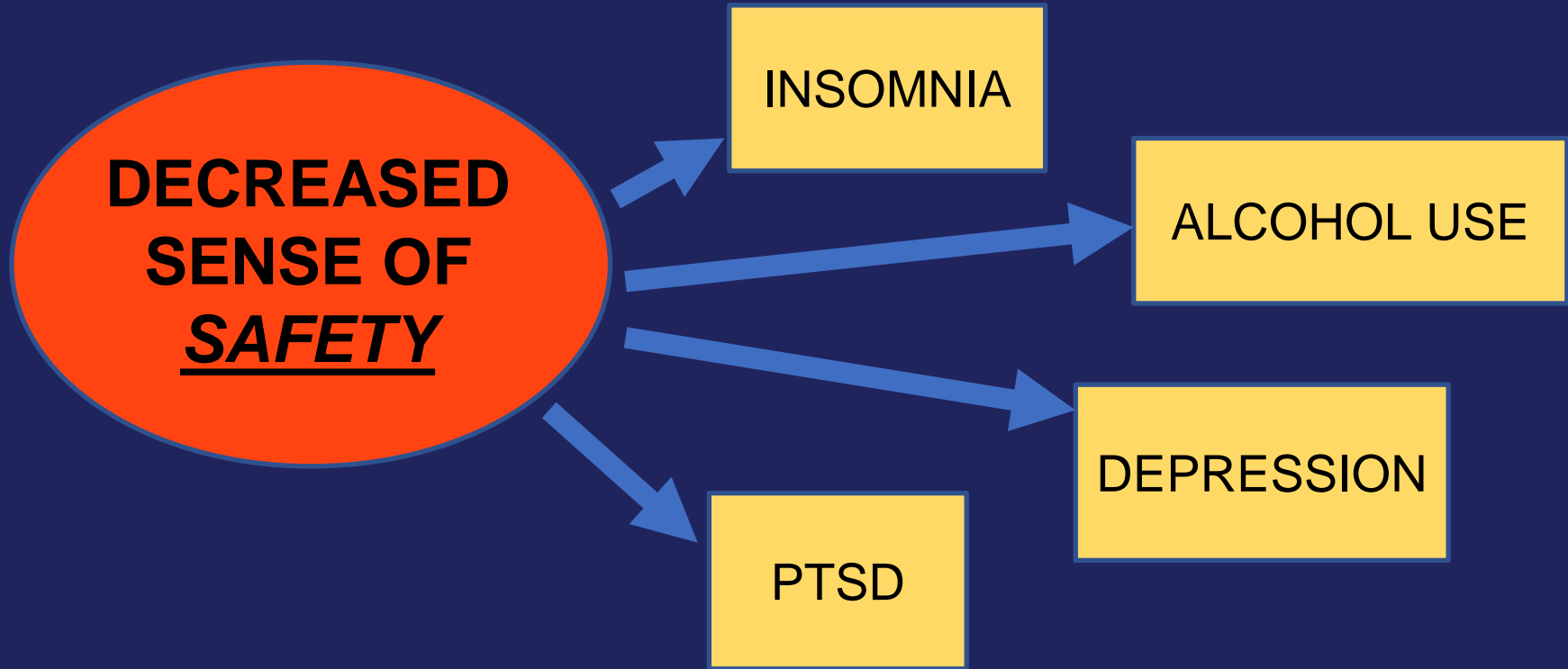
Self/Community Efficacy

Connectedness

Hope/Optimism

- Analogous to “First Aid”
- Population-based “framework”
- “Do no harm” approach
- Resilience-focused
- NOT a cure/tx for illness
- MAY mitigate illness/dz

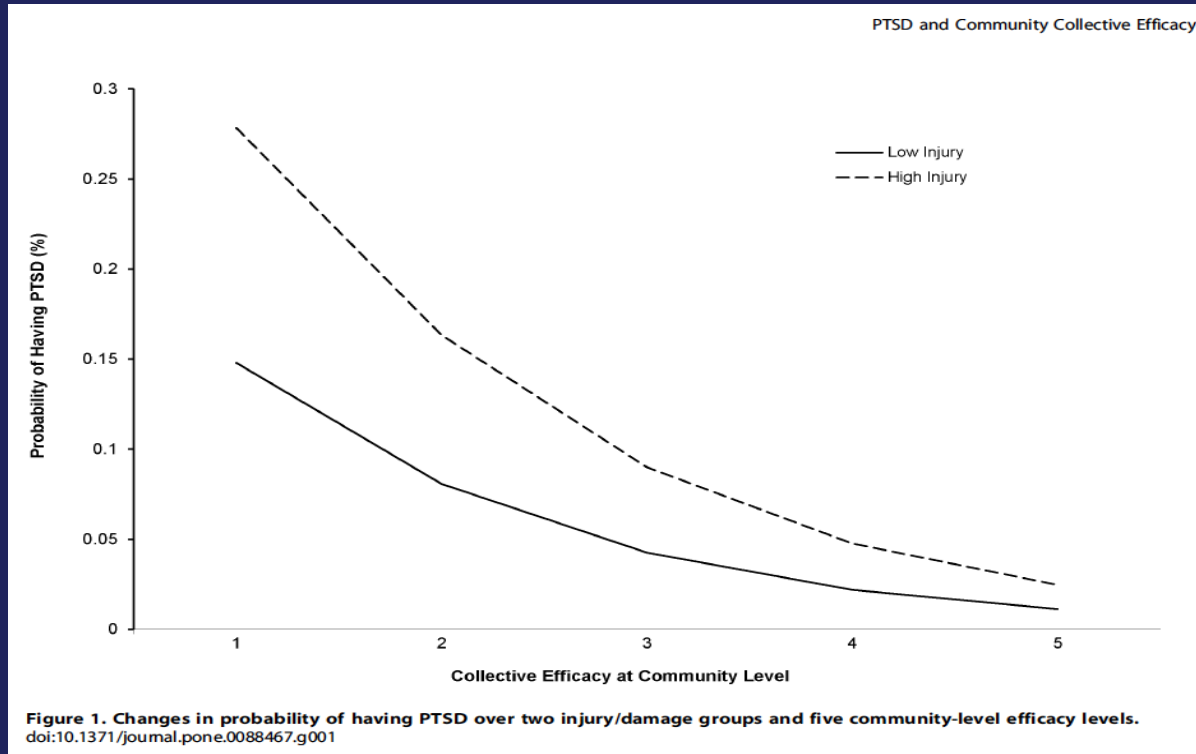




Fullerton, C. S., Herberman Mash, H. B., Benevides, K. N., Morganstein, J. C., & Ursano, R. J. (2015). Distress of Routine Activities and Perceived Safety Associated with Post-Traumatic Stress, Depression, and Alcohol Use: 2002 Washington, DC, Sniper Attacks. *Disaster Medicine and Public Health Preparedness*, 9(5), 509–515.

Abramson, D., Stehling-Ariza, T., Garfield, R., & Redlener, I. (2008). Prevalence and predictors of mental health distress post-Katrina: findings from the Gulf Coast Child and Family Health Study. *Disaster Medicine and Public Health Preparedness*, 2(2), 77–86.

# Self & Community Efficacy



Ursano, R. J., McKibben, J., Reissman, D. B., & Liu, X. (2014). Posttraumatic stress disorder and community collective efficacy following the 2004 Florida hurricanes. *PLoS ONE*.

# Combat & Operational Stress Control Model

Proximity  
Immediacy  
Expectancy  
Simplicity

READY	REACTING	INJURED	ILL
<p><b>DEFINITION</b></p> <ul style="list-style-type: none"><li>• Adaptive coping</li><li>• Effective functioning</li><li>• Well-being</li></ul> <p><b>FEATURES</b></p> <ul style="list-style-type: none"><li>• In control</li><li>• Calm and steady</li><li>• Getting the job done</li><li>• Playing</li><li>• Sense of humor</li><li>• Sleeping enough</li><li>• Ethical and moral behavior</li></ul>	<p><b>DEFINITION</b></p> <ul style="list-style-type: none"><li>• Mild and transient distress or loss of function</li></ul> <p><b>FEATURES</b></p> <ul style="list-style-type: none"><li>• Anxious</li><li>• Irritable, angry</li><li>• Worrying</li><li>• Cutting corners</li><li>• Poor sleep</li><li>• Poor mental focus</li><li>• Social isolation</li><li>• Too loud and hyperactive</li></ul>	<p><b>DEFINITION</b></p> <ul style="list-style-type: none"><li>• More severe and persistent distress or loss of function</li></ul> <p><b>TYPES</b></p> <ul style="list-style-type: none"><li>• Trauma</li><li>• Fatigue</li><li>• Grief</li><li>• Moral injury</li></ul> <p><b>FEATURES</b></p> <ul style="list-style-type: none"><li>• Loss of control</li><li>• Can't sleep</li><li>• Panic or rage</li><li>• Apathy</li><li>• Shame or guilt</li></ul>	<p><b>DEFINITION</b></p> <ul style="list-style-type: none"><li>• Clinical mental disorders</li><li>• Unhealed stress injuries</li></ul> <p><b>TYPES</b></p> <ul style="list-style-type: none"><li>• PTSD</li><li>• Depression</li><li>• Anxiety</li><li>• Substance abuse</li></ul> <p><b>FEATURES</b></p> <ul style="list-style-type: none"><li>• Symptoms persist &gt; 60 days after return from deployment</li></ul>
Self Help	Leadership/Organizational Support Peer Support		Screening/Referral

# Organizational Sustainment in Disasters

## ORGANIZATIONS

### INDIVIDUALS

Self-care  
Take Breaks  
Peer Buddies  
Stay Connected  
Self Check-ins  
Honor Service  
Speak Up

**Training**  
**Equipment**  
**Education**  
**Policies**  
**Procedures**  
**Resources**

### LEADERS

Presence  
Communication  
Encouragement  
Be an example  
Normalizing  
Hope/optimism  
Grief

Birkeland, M. S., Nielsen, M. B., Knardahl, S., & Heir, T. (2015). Time-lagged relationships between leadership behaviors and psychological distress after a workplace terrorist attack. *International Archives of Occupational and Environmental Health*.

Wood, M. D., Walker, T., Adler, A. B., Science, C. C. O. H., & Jahangiri, K. (2020). Post-Traumatic Growth Leadership: Mitigating Stress in a High-Risk Occupation. *Occupational Health Science*.

Morganstein, J. C., & Flynn, B. W. (2021). Enhancing Psychological Sustainment & Promoting Resilience in Healthcare Workers During COVID-19 & Beyond: Adapting Crisis Interventions From High-Risk Occupations. *J Occup Environ Med*, 63(6), 482-489.

CME AVAILABLE FOR THIS ARTICLE AT ACOEM.ORG

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## Enhancing Psychological Sustainment & Promoting Resilience in Healthcare Workers During COVID-19 & Beyond Adapting Crisis Interventions From High-Risk Occupations

Joshua C. Morganstein, MD and Brian W. Flynn, PhD

COVID-19 is a unique disaster which has placed extreme stress on health care workers (HCWs) and the system in which they work. Evaluating the pandemic requires assessment of the healthcare workforce through various risk impact areas, personal attributes, and enhance performance. A major barrier is the lack of organizational practices and procedures designed to sustain HCWs during prolonged crisis events such as COVID-19. Adapting existing best practices from other high-risk occupations allows for a more rapid, efficient response to enhance workforce well-being and promote healthcare organizational functioning. This paper discusses current and emerging literature on the unique impact of COVID-19 on HCWs and provides actionable, evidence-informed recommendations for individuals, teams, and leaders to enhance resilience of HCWs that is critical to the preservation of national and global health security.

**Keywords:** COVID-19, healthcare workers, intervention, mental health, resilience

Human generated and natural disaster events are increasing in frequency and severity,<sup>1</sup> causing extreme disruption, injury, suffering, and death. Pandemics, such as COVID-19, have origins in nature but are propagated by human systems and behavior. They result in adverse mental health effects that are similar to many other disaster events, but also unique responses including altered risk perception, stigma and blaming, fear of reinfection, shortages, and prolonged uncertainty that broadly impact a society.<sup>2</sup> Adverse psychological and behavioral effects begin early during a disaster and can last for months or years,<sup>3,4</sup> resulting in chronic occupational dysfunction.<sup>5</sup> For those involved in disaster response and recovery, in addition to the mental stresses affecting all of society, Healthcare Workers (HCWs) have experienced unique occupational challenges related to the pandemic. COVID-19 has had a broad impact on a wide range of healthcare personnel and managing the

### Learning Objectives

- Summarize the unique aspects of the COVID-19 pandemic and the extreme stresses it has placed on healthcare workers (HCWs).
- Discuss the importance of sustaining HCWs through the pandemic by actions to reduce stress, promote resilience, and enhance performance.
- Identify existing best practices from other high-risk occupations to optimize HCW well-being and promote the functioning of healthcare organizations.

pandemic requires a "whole of healthcare" approach. For these reasons, it is important to think of HCWs as inclusive of those delivering care as well as logistics, cleaning, food services, maintenance, administrative staff, and other personnel supporting the operations of health systems.

Sustainment of HCWs is critical to ensure public health and safety during surges of infections, illness, and death, a need that will continue well after the epidemiological curves begin to flatten. Identifying HCWs at risk for a range of adverse mental health outcomes, including the unique aspects of risk brought by COVID-19, allows for more efficient and targeted occupational interventions. Throughout COVID-19 and other disasters, the most effective way to optimize functioning is with interventions that enhance the "five essential elements," including sense of safety, cohesive social connectedness, self- and community-efficacy, and hope in the future.<sup>6</sup> Literature on previous disasters offers a partial roadmap for integration of these "essential elements" to mitigate risk and enhance sustainment in HCWs. However, the scope, magnitude, and duration of this event necessitate that we borrow best practices from other high-risk professions that work with limited resources for prolonged periods of time under extremes of stress. Instituting interventions to enhance sustainment, which targets those at highest risk, is critical to optimize sustainment of function and enhance the trajectory of recovery for HCWs.

### UNIQUE ASPECTS OF COVID-19

COVID-19 differs from other disasters by the very nature of the threat, as well as its scope, magnitude, and duration. The unprecedented level of ongoing uncertainty has made it difficult to plan, challenging our ability to maintain a sense of hope in the future. Many HCWs are experienced in dealing with various medical aspects of natural and climate-related disasters, such as injuries from tornadoes, earthquakes, infectious diseases (Zoonoses), and pandemic waves. But, COVID-19 is different. HCWs are dealing with a novel virus that has been less predictable, caused significant illness and sequelae for many, resulted in a relatively high mortality rate, and presented a significant risk of contagion to themselves and their families. Further, there is no cure, a limited understanding of treatment, and a vaccine that has just recently become available under emergency use authorization.

From the Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD. No financial interest was declared by either author. Morganstein and Flynn have no relationships or conflicts of interest that present potential conflicts of interest. The JGIM editorial board and journal have no financial interest related to this research. The views expressed are those of the authors and do not necessarily reflect the views of the Department of Defense, the Uniformed Services University of the Health Sciences, or the United States Public Health Service. Clinical significance: Healthcare workers' (HCWs) occupational stress has increased during COVID-19. Identifying and addressing stress requires efforts by individuals, teams, and leaders. Interventions to sustain HCWs during prolonged stress are not just of immediate concern. Borrowing existing practices from high-risk occupations allows for timely, actionable, evidence-informed recommendations to enhance workforce well-being. Address correspondence to Joshua C. Morganstein, MD, 4720B Rockledge Dr, Ste 200, Bethesda, MD 20814. (jcmorgan@usumhs.edu). Writing was prepared by employees of the Federal Government as part of their official duties under the U.S. Copyright Act. Works of the United States Government are not eligible for copyright protection under Title 17 of the United States Code in any jurisdiction. All such copyright here are vested in the contribution of employees of the Federal Government. DOI: 10.1093/occmed/kqab001

# Media Exposure

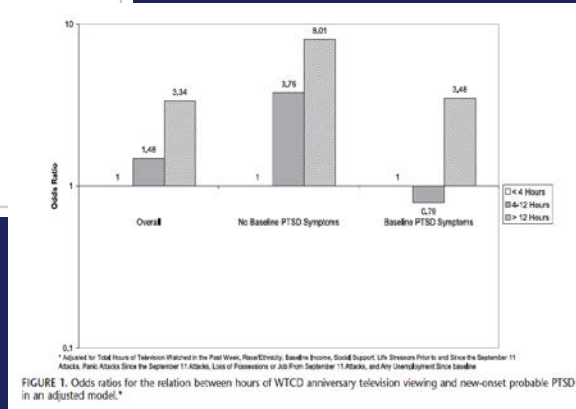
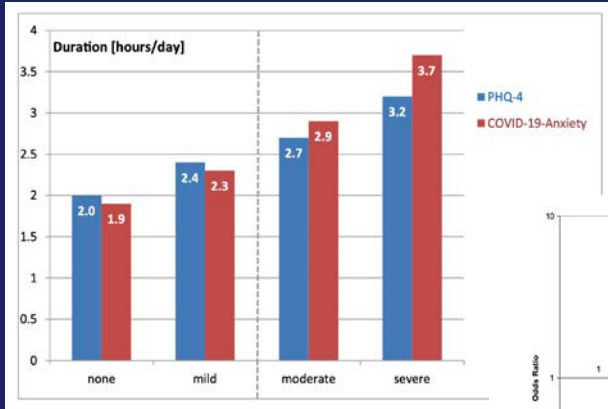


IMAGE: <https://www.quoteinspector.com/images/texting-while-driving/put-your-phone-down-sign/>

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# Buddy Systems... Helping the Helpers

- Formal (vs ad hoc) peer support
- Battle Buddies, Swim Buddies
- Safety, social support, efficacy
- Daily check-ins:
  - Self-care
  - Emotional health
  - Camaraderie
- Buddy assignments
  - Military vs Healthcare

Albott, C. S., Wozniak, J. R., McGlinch, B. P., Wall, M. H., Gold, B. S., & Vinogradov, S. (2020). Battle Buddies: Rapid Deployment of a Psychological Resilience Intervention for Health Care Workers During the COVID-19 Pandemic. *Anesthesia and analgesia*, 131(1), 43-54.

**HEALTH SERVICES** COVID 19 Battle Buddy Support Program

**BATTLE BUDDY CHECK-IN**  
15-20 MINUTES

**Background:** COVID-19 is a pandemic that threatens not only our patients but ourselves and our sense of safety and control. Like soldiers on a battlefield, our front line staff are coping with ongoing uncertainties about the scope of the threat, concerns about adequate PPE, and worry about the complex decisions that will be required of them. Many of us are experiencing unusual levels of "combat." This often triggers reactions, both emotional and physical, that can be overwhelming. The first tool is to breathe. The second tool is to connect. The third tool is to act.

**Stress Inoculation**  
Working with Your Battle Buddy to Anticipate and Plan for Specific Stressors

In our Psychological Resilience Intervention, after the Battle Buddy program is initiated, a mental health consultant works with small groups of providers in each unit to engage in stress inoculation. They Anticipate and Plan for the specific stressors they are likely to encounter. The mental health consultant is also available to help better more acute mental health problems, by assisting with individuals who experience escalating or cumulative stressors and whose coping responses are getting overwhelmed.

If you do not have a mental health consultant available to you, and if your Battle Buddy relationship is strong, you can work with your BS to help each other engage in the Anticipate and Plan phases of stress inoculation on your own, in your BS conversations, support one another to do the following:

<b>Anticipate</b>	• Anticipate and identify the specific stressors you are likely to encounter. • Describe your coping responses to these stressors.
<b>Plan</b>	• Identify the stressors and responses that will be most difficult for you. • Describe your personal resilience plan. How will you cope with these difficult stressors? What resources are available to you? What strengths and resilience factors will you rely on as well?
<b>Deter</b>	• If you or your Battle Buddy are experiencing escalating or cumulative stressors and coping responses are getting overwhelmed, it is your goal to be a team. Please reach out to the other person by asking for emotional health support, pastoral counseling, or consultation with a chaplain.

Here is a list of potential stressors and resilience factors to help initiate your conversations:

<b>Stressors</b>	<b>Resilience Factors</b>
<ul style="list-style-type: none"> <li>• Experiencing working conditions that are hazardous or have insufficient supplies</li> <li>• Worring about the safety of your loved ones and/or being unable to return home</li> <li>• Being worried about contracting COVID-19</li> <li>• Witnessing COVID-19 in coworkers</li> <li>• Being asked to perform duties outside of normal skills</li> <li>• Being unable to meet patient needs and/or being responsible for making difficult decisions</li> <li>• Being forced to abandon patients</li> <li>• Witnessing an unusually high number of deaths</li> <li>• Witnessing the death of a child, adolescent or young adult</li> <li>• Having direct contact with grieving family members</li> </ul>	<ul style="list-style-type: none"> <li>• Finding your work was meaningful and contributed to the greater good</li> <li>• Having emotionally connected to or supported by someone (family member, friend, coworker, Battle Buddy)</li> <li>• Connecting with your Battle Buddy and trusting resilience for your reactions</li> <li>• Getting enough sleep, staying hydrated, having access to food and time to eat</li> <li>• Getting at least 15 minutes of exercise each day</li> <li>• Having your positive emotions, expressing gratitude, being compassionate for self and others, sharing your story, listening to music, spending time in nature, laughing</li> <li>• Spending time with your religious, faith-based, or spiritual practices</li> </ul>

For more detail, see Albott, McGlinch, Wozniak, Wall, Gold, Vinogradov: *Battle Buddies: Rapid Deployment of a Psychological Resilience Intervention for Healthcare Staff*. Anesthesia and Analgesia, 2020.

aim to contact your battle buddy once a day during the work week.  
Contact can be a quick text or check-in, a short call to debrief, a zoom meeting to hash something out.  
Listen, validate, and provide feedback; identify any issues that need more support or attention.  
Identify any operational issues that need escalation.

**Sample questions for your check-in:**

- What is hardest right now?
- What worried you today?
- How are things at home?
- What challenges are you facing with (patients, resources, health protection)?

If you and your Battle Buddy are ready to support one another in anticipating and planning for specific stressors you may encounter, please see the back of the card.

get with challenges to encounter. Daily BS need to be addressed leadership.

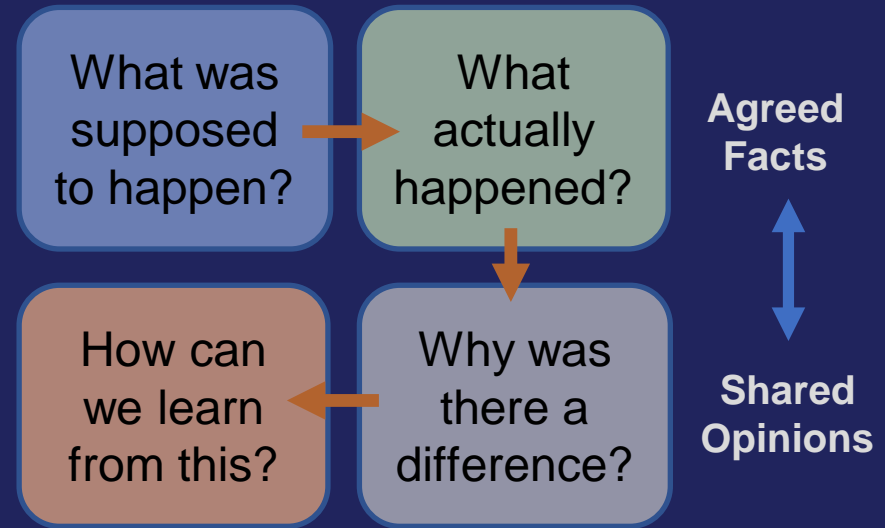
appreciated and validated. No one is left out. You and recovery. You.

check in Multi-Depth Events, Lessons from the 2014-2015 Flu

Ramsberger, P. F., Mills, L., & Legree, P. (2002). *Evaluation of the Buddy Team Assignment Program* (p. 60). United States Army Research Institute for the Behavioral and Social Sciences.

# Post-Shift Huddles / After Action Reviews

- Culture of learning
- Organizational improvement
- Strengthen the team
- Enhance morale
- Correct distorted thoughts
- Informal “check in”
- Make “meaning” of event



Tannenbaum, S. I., & Cerasoli, C. P. (2013). Do team and individual debriefs enhance performance? A meta-analysis. *Human Factors*, 55(1), 231–245.

Stoto, M. A., Nelson, C., Piltch-Loeb, R., Mayigane, L. N., Copper, F., & Chungong, S. (2019). Getting the most from after action reviews to improve global health security. *Globalization and Health*, 15(1), 58.

# Reintegration... Challenges of returning from “War”

- Transition from prolonged high stress back to “normal life”
- Loss of meaning and purpose
- Tight knit teams dissolve
- Lack of a shared experience
- Others don’t understand
- Usual “problems” seem trivial
- Family expectations collide



IMAGE: <https://www.newagebd.net/print/article/164281>

**CSTS** Center for the Study of Traumatic Stress  
Department of Psychiatry (Informed Services Institute) | CSTS, 1600 Bridge Road, Bethesda, MD 20814-4701 | [www.CSTSonline.org](http://www.CSTSonline.org)

## RECOVERY AND REINTEGRATION FOR HEALTHCARE WORKERS FOLLOWING COVID-19 SURGES

COVID-19 surges have required crisis healthcare delivery to address the needs of acutely ill individuals in acute hospital systems, responding to COVID-19 surges has required reintegration of individuals and teams. Healthcare workers must adjust to periods of high-demand, high-intensity work followed by adjustment and reintegration as they return to routine operations.

**Understanding work-related and home-related stressors associated with reintegration helps highlight areas that individuals and organizations can take to promote healthy reintegration.**

**Working alongside those who did not participate in the COVID-19 response.** Co-workers who did not participate in surge care may also experience stress. Differences in experiences may cause stress on work relationships following the surge.

**Returning to the community after isolation.** During COVID-19 service, many workers choose to isolate themselves. Upon return, some may continue to feel social isolation due to prolonged absence, missed activities, and feeling like an outsider within their community.

**Job uncertainty.** In organizations experiencing financial instability, workers may have worries about job security.

**Work-Related Stressors**

- **Processing stressful, traumatic, and morally injurious events.** Healthcare workers are likely to have witnessed severe suffering and death of patients, which may be complicated by a sense of helplessness related to insufficient resources or knowledge of how to most effectively care for patients during a pandemic.
- **Change in sense of safety and uncertainty about health status and risks.** Workers may experience discomfort transitioning from a high-risk environment with specific protective measures to workplaces that do not require the same vigilance and precautions.
- **Mourning and isolation.** Workers may need to adjust to regular duties after being regarded as a hero during their COVID-19 related work. This may be particularly difficult for workers who do not typically perform crisis healthcare and they may feel less support and connection both at work and in their community.
- **Adjustment to less demanding, less urgent, and less intense work.** Transition to less intense, more routine pace of work can take weeks and even months.

**Home-Related Stressors**

- **Processing stressful, traumatic, and morally injurious events.** Healthcare workers are likely to have witnessed severe suffering and death of patients, which may be complicated by a sense of helplessness related to insufficient resources or knowledge of how to most effectively care for patients during a pandemic.
- **Change in sense of safety and uncertainty about health status and risks.** Workers may experience discomfort transitioning from a high-risk environment with specific protective measures to workplaces that do not require the same vigilance and precautions.
- **Mourning and isolation.** Workers may need to adjust to regular duties after being regarded as a hero during their COVID-19 related work. This may be particularly difficult for workers who do not typically perform crisis healthcare and they may feel less support and connection both at work and in their community.
- **Adjustment to less demanding, less urgent, and less intense work.** Transition to less intense, more routine pace of work can take weeks and even months.

**Strategies for Reintegration**

Individuals, peer groups, leaders, and organizations have distinct and interdependent roles in supporting healthcare workers during reintegration.

*Continued*

Creech, S. K., Hadley, W., & Borsari, B. (2014). The Impact of Military Deployment and Reintegration on Children and Parenting: A Systematic Review. *Professional Psychology: Research and Practice*, 45(6), 452–464.

Danish, S. J., & Antonides, B. J. (2013). The challenges of reintegration for service members and their families. *American Journal of Orthopsychiatry*, 83(4), 550–558.

[https://www.cstsonline.org/assets/media/documents/CSTS\\_FS\\_Recovery\\_and\\_Reintegration\\_for\\_Healthcare\\_Workers\\_Following\\_COVID\\_19\\_Surges.pdf](https://www.cstsonline.org/assets/media/documents/CSTS_FS_Recovery_and_Reintegration_for_Healthcare_Workers_Following_COVID_19_Surges.pdf)



# How do I know if someone is “okay” during times of high stress?

- **Controllability of Emotions**
  - Controlling them or they control you?
- **Preserved Task Performance**
  - Able to do what is needed at home/work?
- **Capacity for Rewarding Interactions**
  - Still able to feel and connect?
- **Maintain Self Value**
  - Know who you are and what you stand for?

**CRISIS LEADERSHIP  
ACTIONS TO PROTECT  
MENTAL HEALTH IN  
DISASTERS**

# Crisis Leadership Behaviors

- Communicate Effectively
- Model Self-Care
- Enhance Cohesion
- Support Emotion Regulation
- Foster Purpose
- Facilitate Help-Seeking
- Encourage Growth
- Promote Reintegration
- Address Grief
- Sustain Morale

Harms, P. D., Credé, M., Tynan, M., Leon, M., & Jeung, W. (2017). Leadership and stress: A meta-analytic review. *The leadership quarterly*, 28(1), 178-194.

Birkeland, M. S., Nielsen, M. B., Knardahl, S., & Heir, T. (2016). Time-lagged relationships between leadership behaviors and psychological distress after a workplace terrorist attack. *International Archives of Occupational and Environmental Health*, 89(4), 689–697.

Wood, M. D., Walker, T., Adler, A. B., Science, C. O. H., & Jahangiri, K. (2020). Post-Traumatic Growth Leadership: Mitigating Stress in a High-Risk Occupation. *Occupational Health Science*.

# Leadership Through Walking Around

- Walk around, be present, listen to concerns
- Engage in protective leadership behaviors
- Make time for “face-to-face” activities
- Enhance communication and connection
- Facilitate team building activities
- Pandemic/other factors caused leaders to “hunker down” ... creates challenges

# Foster Purpose

- Fosters meaning & understanding of individual/shared sacrifices
- Connect the present to the future
- New York National Guard (4k) following COVID-19 missions
  - Leaders reminding people of the purpose of their work a/w:
    - **Better health**
    - **Better mental health**
    - **Greater unit cohesion**

PRE-ACTIVATION	
<b>S</b> ELLECT Be alert to those who may “carry in” additional stress to the activation: <ul style="list-style-type: none"><li>■ COVID history (self/family sick, someone close died)</li><li>■ Concerns about civilian job</li><li>■ Financial difficulties</li><li>■ New unit members</li></ul>	<b>T</b> RAIN <ul style="list-style-type: none"><li>■ Provide info on activation tasks and duration</li><li>■ Remind about strategies to reduce stress (e.g., regular sleep, hydration, exercise)</li><li>■ Prepare for working in PPE</li><li>■ Make time to integrate non-intact unit members</li></ul>
DURING ACTIVATION	
<b>A</b> SSIST <ul style="list-style-type: none"><li>■ Walk around and talk with team members</li><li>■ Be alert to high stress assignments</li><li>■ Remind people their good work is valuable</li><li>■ Encourage team members to support each other</li><li>■ Facilitate exercise to reduce stress</li></ul>	<ul style="list-style-type: none"><li>■ Help new unit members feel connected</li></ul> <b>P</b> OST-ACTIVATION
	<b>R</b> ESET <ul style="list-style-type: none"><li>■ Discuss and share accomplishments</li><li>■ Make time for team support</li><li>■ Complete the PDHA &amp; PDHRA</li><li>■ Help people reconnect with family</li></ul>

<https://www.cstsonline.org/education-and-training/health-campaigns/leader-support-for-service-members-working-during-covid-19>

# Support Emotion Regulation

- Anger is common - adaptive vs problematic
- Sadness, boredom, shame, grief
- Contagion and impact on morale / cohesion
- Breathing, grounding for intense emotions
- Focus & regulate to enhance performance
  - Acceptance – what can you control?
  - Perspective – will it matter 1 wk / mon / yr?
  - Compartmentalize – “Put it away”

*“Confident and positive state of mind and persistent motivation to engage in the shared purpose of the group, especially during challenging conditions.”*

# Sustain Morale

## POSITIVE Impact

- Cohesion
- Team connection
- Leadership
- Shared purpose/goal
- Resilience
- Preparedness & training
- Discipline
- Supportive work conditions

## NEGATIVE Impact

- Poor communication, rumors
- Mission uncertainty / confusion
- Inadequate supplies
- Disrespect / harassment / racism
- Unresolved interpersonal conflict
- Substance abuse
- Boredom / lack of purpose
- Perceived failure

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Van't Wout, M. C., & Van Dyk, G. A. J. (2015). Managing morale on the battlefield: A psychological perspective. *Scientia Militaria: South African Journal of Military Studies*, 43(1), 127-148.

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# Grief Leadership

- Communicate effectively and openly
- Being visible and present
- Provide accurate and timely info
- Encourage working together
- Promote cohesion
- Anticipate and acknowledge grief
- Honor losses; make meaning
- Look to the future
- Encourage growth and a “new normal”



Scene at Dover Air Force Base, Delaware, after military plane crash at Gander, Newfoundland

IMAGE: <https://history.amedd.army.mil/booksdocs/historyofusarmymisc/page374.jpg>

CSTS  
Center for the Study of Traumatic Stress

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### GRIEF LEADERSHIP DURING COVID-19

The coronavirus (COVID-19) pandemic has put in perspective the need for leaders to prepare for disruptions of work routines, anxiety within their communities and organizations, and even death of community members, friends, and team members. Understanding people's reactions to the losses associated with tragic events allows the leader that leaders can play to support of recovery. In the aftermath of traumatic events, many people want to be guided from their community or organization leaders. During pandemics, leaders must attend to more organizations, including effective communication to those in their communities who have questions, seek reassurance, want to take action, or just want to know they are not alone in their grief.

**Understanding people's reactions to the losses associated with tragic events allows the leader that leaders can play to support of recovery.**

**As diverse and anxiety prone to assume and recovering, leaders are responsible for identifying when communication is ready for the next step forward. Leaders have been to speak the language of each community to help individuals, families, and care providers.**

**Communicate Effectively and Openly**  
Communicating effectively in crisis situations requires an understanding of very special concepts, principles, and practices. Leaders are encouraged to learn these approaches or have access to crisis communication specialists. Where and delivery can spread within communities affected by trauma, or adding in rumors and distortion of the event. Messages may not employ these effects. Formal and informal leaders can be role models in sharing grief, communicating hope, managing rumors, and providing support to others.

**Immediate Response Be visible — Make public announcements and appearances**  
Typical methods to promote visibility may not apply during pandemics. Novel and creative ways to use electronic and social media will be required. By providing useful and accurate information, leaders can re-establish a sense of safety and enhance the community's trust in leadership.

**Provide accurate, timely information on what is known, what is not known, and what more information will be communicated**  
Press briefings, use of social media, and other vehicles can reach individuals, families, and communities, and they dispel rumors. Be a credible source of information, direct people to other credible sources, and inform them when new information and resources become available.

**Understand that people process information differently in high stress situations**  
When stressed, people have difficulty recalling more than a few main points and tend to focus on negative information. So keep messages simple, repeat frequently, and emphasize positive messaging.

**Use multiple channels of communication**  
People seek information from multiple sources depending on age, culture, education, geography, community composition, and history. TV, newspapers, radio, religious leaders, teachers, and firefighters provide diverse channels for communication. Remember that no person channels will be sharply curtailed during a pandemic, so ensure communication remains on critical.

**Speak softly and encourage working together**  
Leaders promote calmness, empathy, optimism, a can-do attitude, and mutual support. By modeling the desired behavior and tone, leaders help others learn.

**Communicate the status of existing and possible resources**  
Monitor emerging needs, support fellow community leaders, and communicate resource availability and requirements. During and following a pandemic, available resources will change frequently and will require frequent updates. Guiding people to resources can instill confidence and stability.

Continued

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# Support/Caring/Helping...

## How do we Foster Hope/Optimism?

- There is an end ahead
- Most people - including you/your family - will be ok
- Do a “random act of kindness”- altruism gives hope to you and to someone else
- You give hope by always holding in mind the picture of what a person, a child, a colleague “can be”... not just who they are in this moment
- Hope is an action, not just a wish – don’t wait to find it, go build it!

## Stockdale Paradox

“You must never confuse faith that you will prevail in the end – which you can never afford to lose – with the discipline to confront the most brutal facts of your current reality, whatever they might be.”

**“We will meet again...”**