Disaster Psychiatry Review and Updates: Terrorist Mass Killing, Climate Change, & Ebola

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HOUSEKEEPING ITEMS

- Course runs 1-5pm
- Brief breaks along the way
- Additional slides
- Q&A at the end of each section
- Interactive polling…

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COURSE OVERVIEW

- Disaster Mental Health Principles
- Climate-Related Disasters
- Pandemics (Exposure and Contamination)
- Mass Violence

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Disaster Mental Health Principles

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OBJECTIVES

- Review the type and frequency of disasters.
- Discuss the range of adverse psychological and behavioral reactions to disasters.
- Describe populations most vulnerable to adverse mental health effects of disasters.
- Understand important evidence-based early interventions to mitigate adverse mental health effects of disasters.

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WHAT IS DISASTER PSYCHIATRY?

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Definition of "Disaster" Varies by Context…

- Policy / Resourcing
  - Severe disruption, ecological and psychosocial, which greatly exceeds the coping capacity of the affected community*
- Clinical / Research
  - Natural and human-generated events that produce a similar range of adverse psychological and behavioral responses

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*World Health Organization, 2002

Disaster Psychiatry

- "The professional application of mental health knowledge and expertise to the unique setting of disasters."

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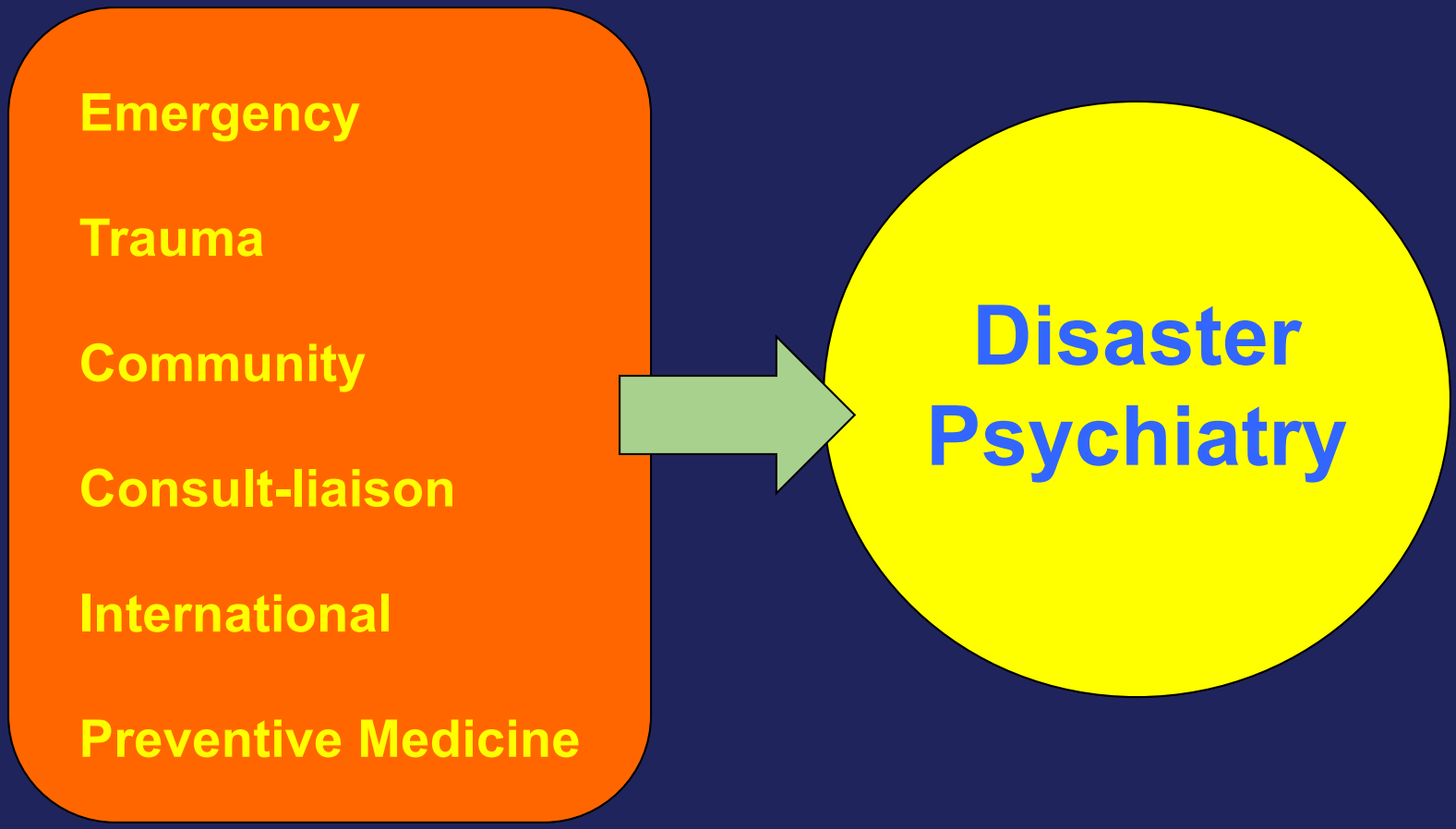
Garakani et al., 2004

Synthesis of Many Fields



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"Disaster Psychiatry", 2011 (Stoddard)

Broad Focus

PSYCHIATRY	DISASTER PSYCHIATRY
Individual	Populations
Disease/Disorder	Wellness
Treatment	Prevention
Medical Consultation	Leadership Consultation
Interpersonal Comm	Health Risk/Crisis Comm
Fixed/known facilities	Whenever & wherever

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TYPES AND FREQUENCY OF DISASTERS

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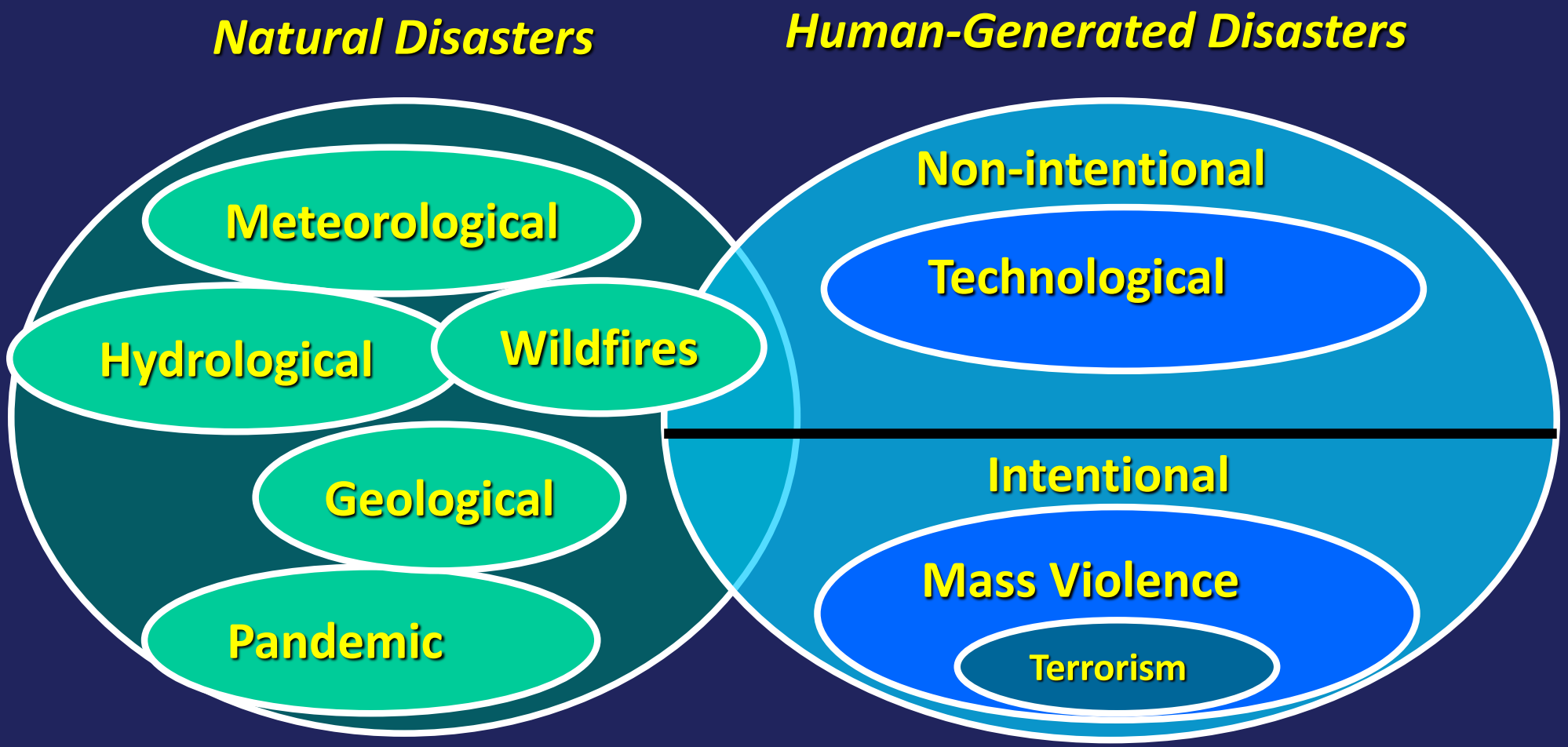
Categories of Disasters



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Adapted from James M. Shultz, Ph.D., DEEP PREP training

Global Climate-Related Disaster Incidence & Cost (1950-2012)

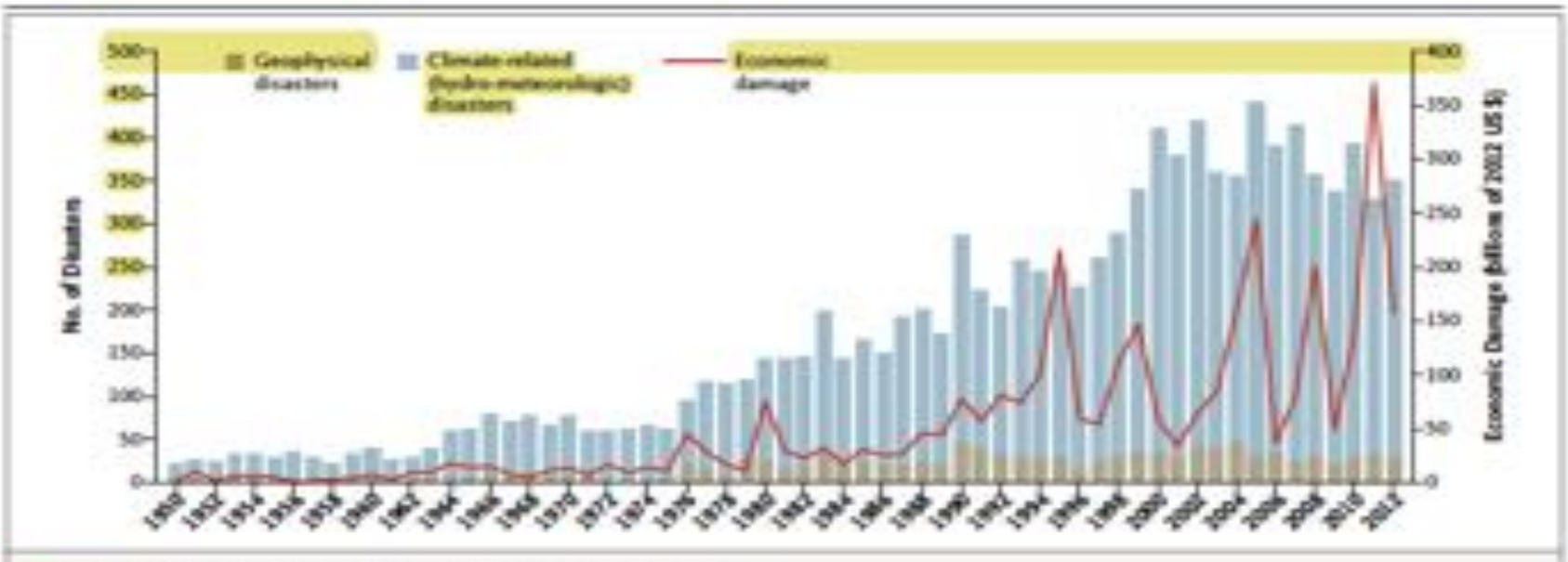

Figure 1. Numbers and Types of Natural Disasters, 1950–2012.

The effect of a disaster on the local economy usually consists of direct consequences (e.g., damage to infrastructure, crops, and housing) and indirect consequences (e.g., loss of revenues, unemployment, and market destabilization). The estimated economic damage is for the year in which the disasters occurred and is given in billions of 2012 U.S. dollars. Data are from the EM-DAT International Disaster Database, Center for Research on the Epidemiology of Disasters, University of Louvain (www.emdat.be/). Although this database tracks biologic events, such events are not shown here because they require very specific analytic approaches and are often not directly connected to geophysical and climate-related disasters.

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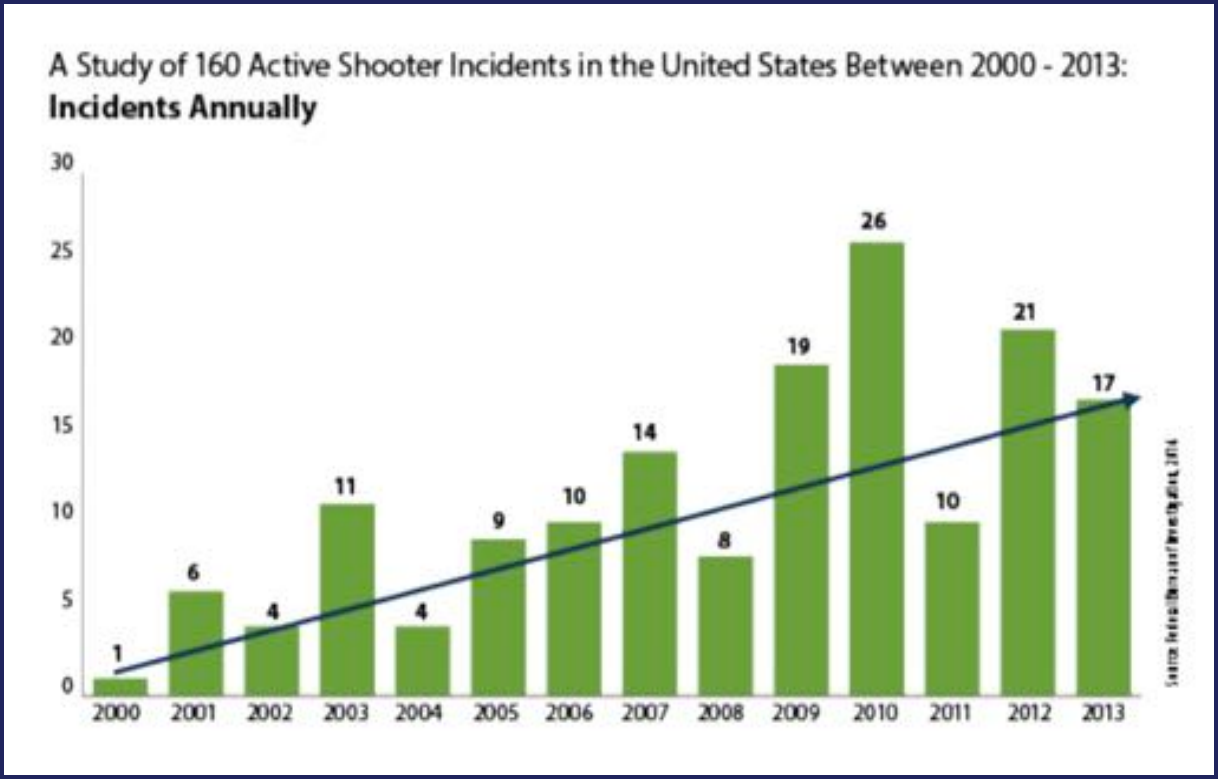
Leaning, J., & Guha-Sapir, D. (2013). Natural disasters, armed conflict, and public health. *The New England Journal of Medicine*, *369*(19), 1836–1842.

Active Shooter Incidence



"an individual(s) actively engaged in killing or attempting to kill people in a populated area."

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"A Study of Active Shooter Incidents in the United States Between 2000 and 2013". DOJ and FBI, 2014.

Disaster Cycle / All Hazards Planning

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https://aretehs.com/images/Emergency-management-diagramCOLOR.png

ADVERSE PSYCHOLOGICAL AND BEHAVIORAL RESPONSE TO DISASTERS

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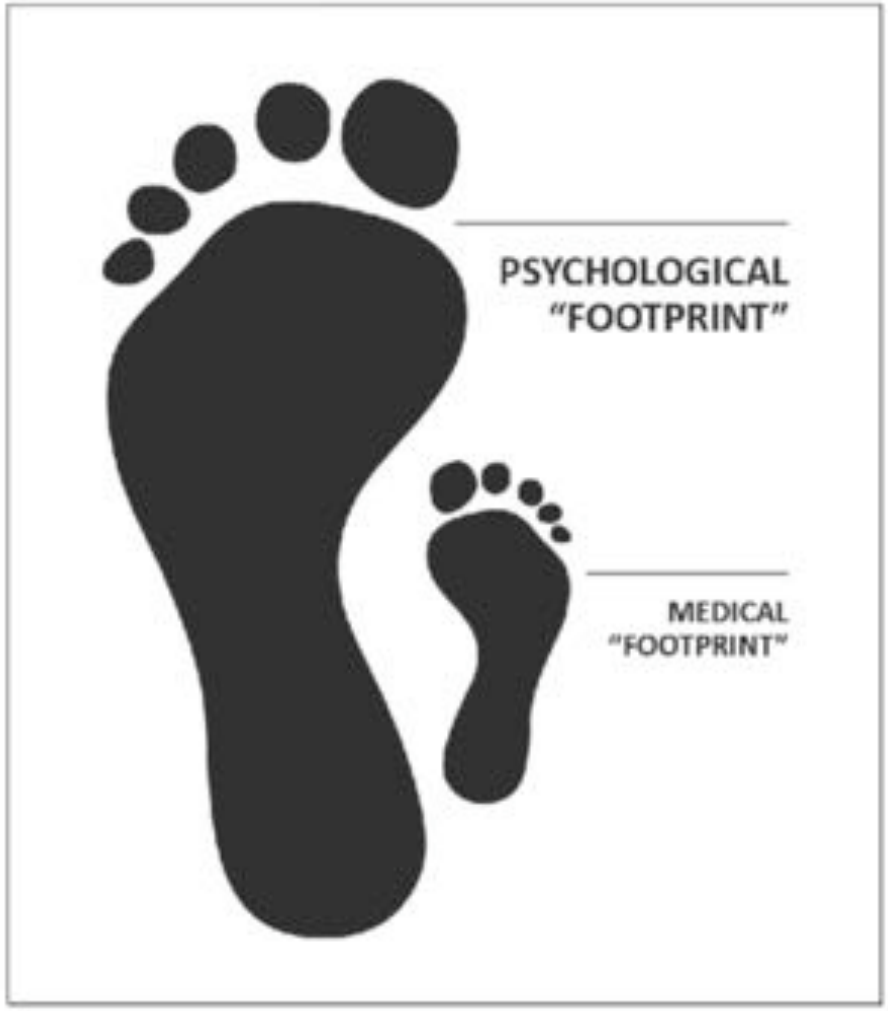
In a disaster, the size of the psychological "footprint" greatly exceeds the size of the medical "footprint."



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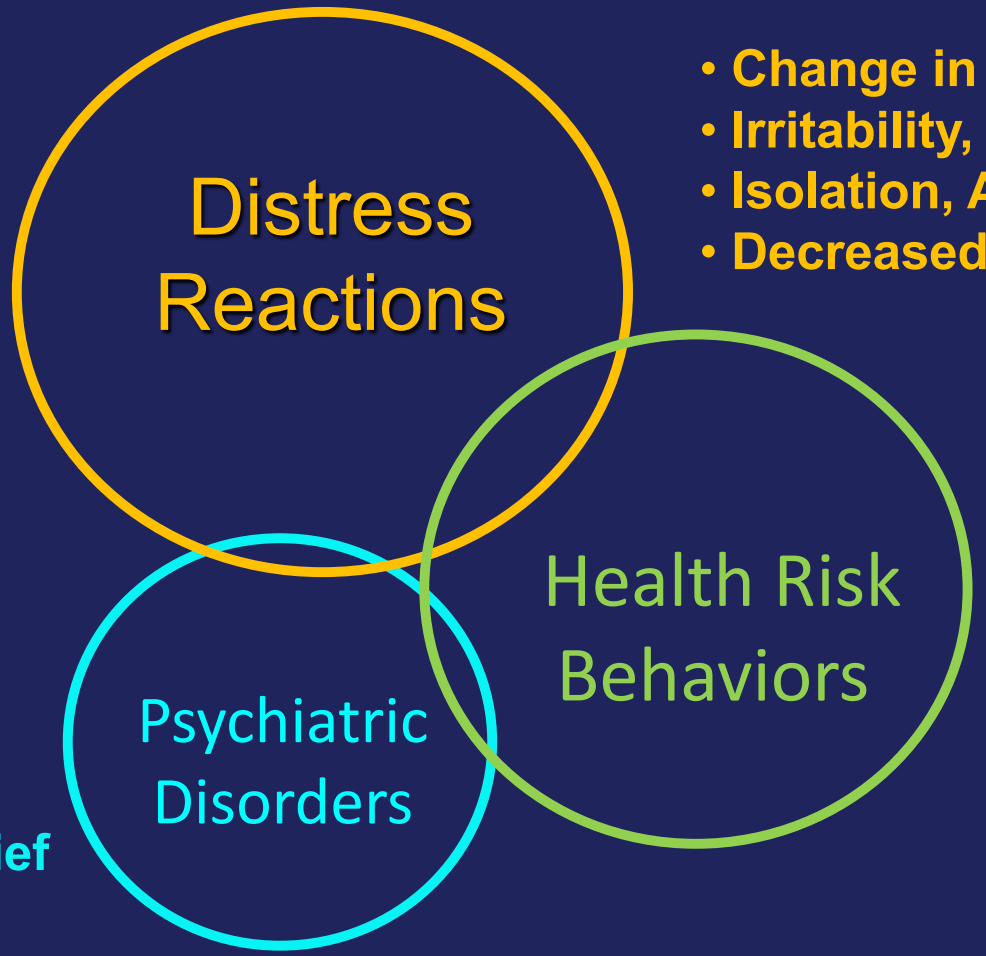
Shultz, J. M., Espinola, M., Rechkemmer, A., & Cohen, M. A. (2016). Prevention of Disaster Impact and Outcome Cascades. In *The Cambridge Handbook of International Prevention Science* (pp. 492–519).

Psychological & Behavioral Responses to Disasters



- **Change in Sleep**
- **Irritability, Distraction**
- **Isolation, Avoidance**
- **Decreased Sense of Safety**

- **Smoking**
- **Alcohol**
- **Over dedication**
- **Change in Travel**
- **Separation Anxiety**

- **Anxiety**
- **PTSD**
- **Depression**
- **Complex Grief**

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Ursano, R.J., Fullerton, C.S., Weisaeth, L., Raphael, B. (Eds.). (2017). Textbook of Disaster Psychiatry, 2ED. London, UK: Cambridge University Press

Severity of Psychosocial Consequences by Type of Disaster

Mass Violence > **Technological Disasters** > **Natural Disasters**

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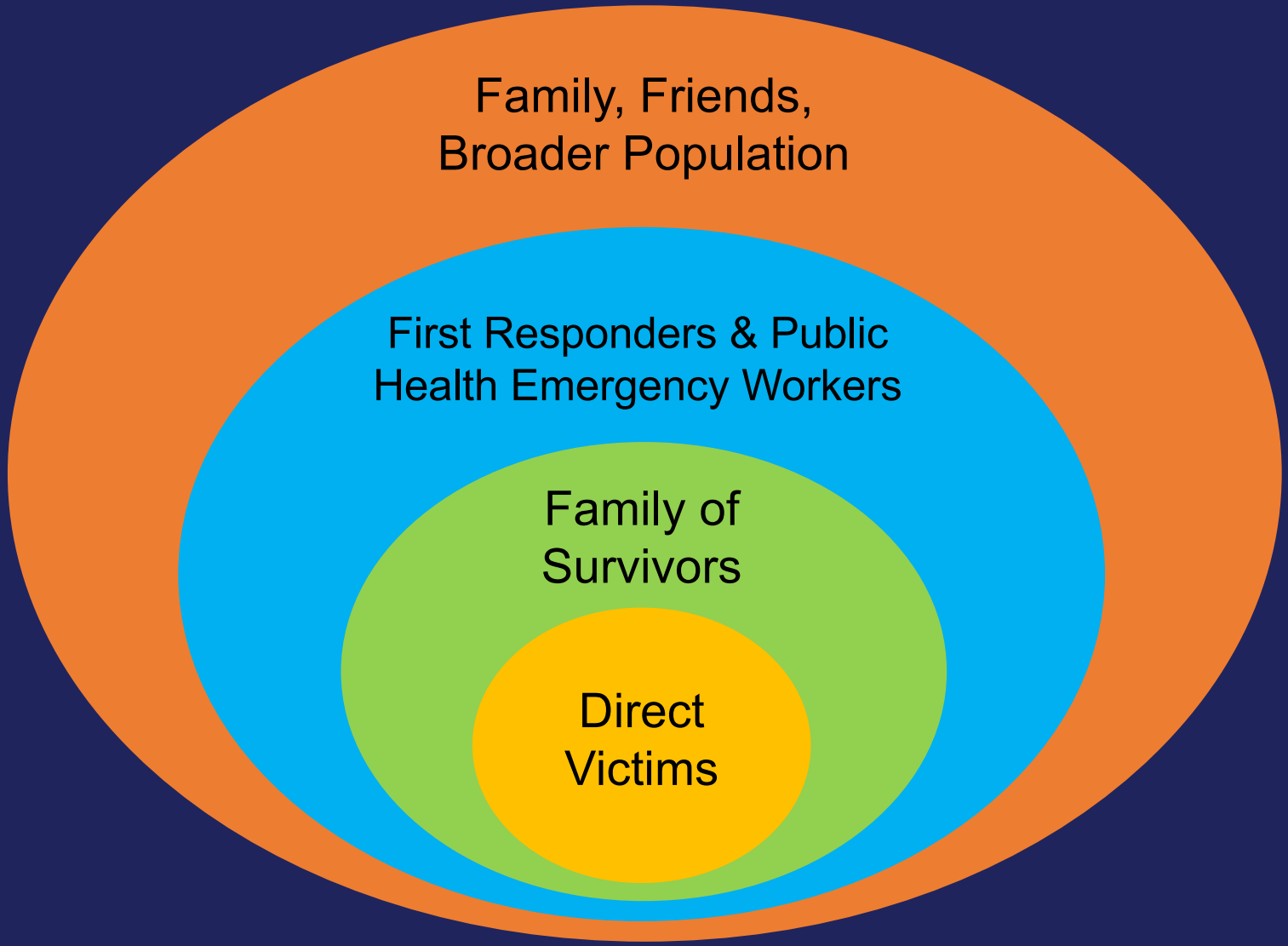
Norris, F. H. et al. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981-2001. *Psychiatry*, *65*(3), 207–239.

Population Exposure to Event



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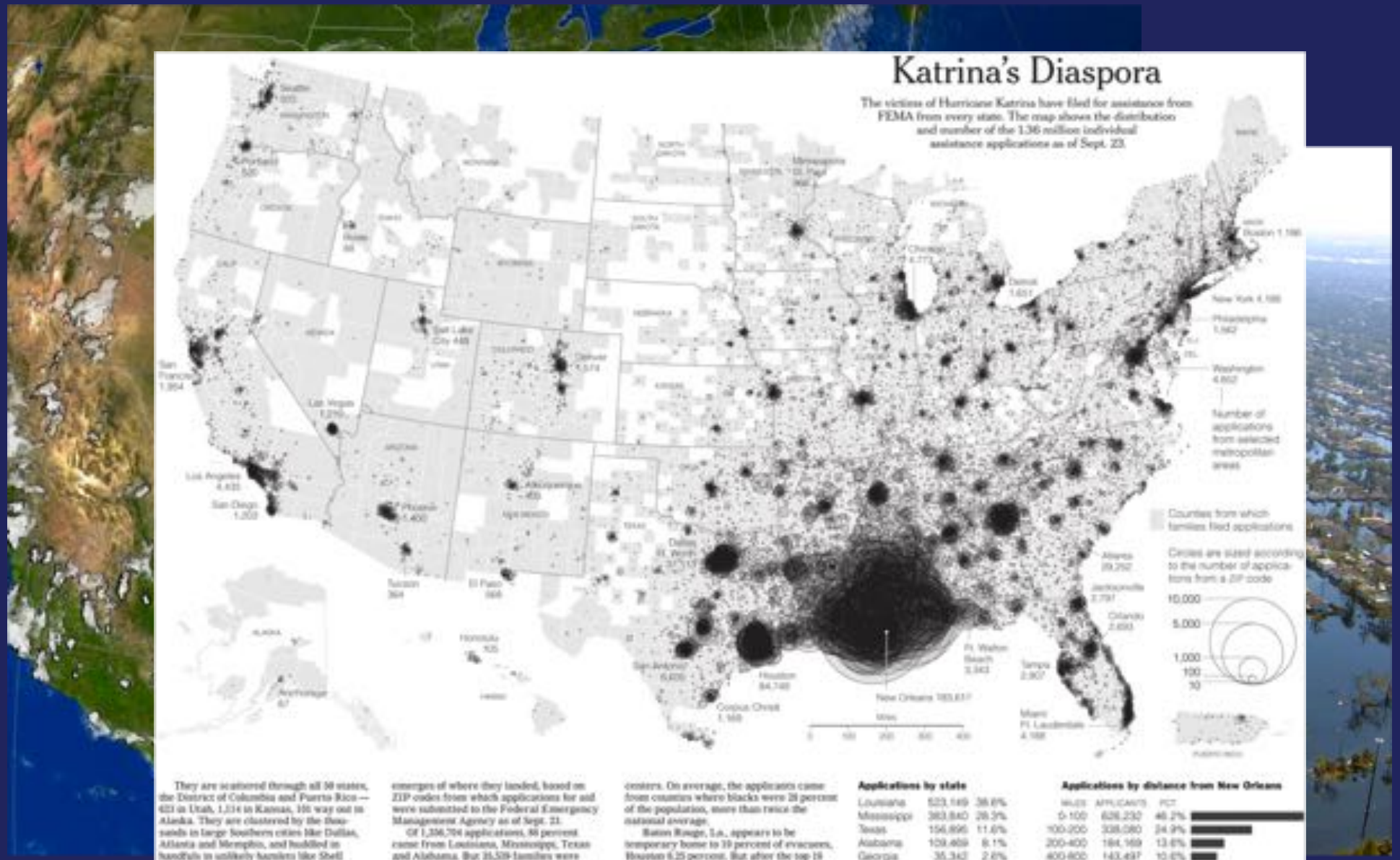

Katrina's Diaspora

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 — 621 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. 1,202) and Fountain Run, Ky. (pop. 358).

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 1,336,704 applications, 86 percent came from Louisiana, Mississippi, Texas and Alabama. But 10,539 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, 4,278 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 10 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: Pocahontas, 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	31,008	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%
400-600	143,497	10.6%
600-1,600	45,371	3.3%
1,600-3,200	13,403	1.0%
3,200+	232	0.0%

Distances could not be calculated for 2.4 percent of applications

Sources: FEMA, Census Bureau, Queens College Sociology Department

Matthew Ericson, Amitai Etzioni and Jack Kilgore/The New York Times

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Community Phases

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Phases

- Variation in warnings
- Failure to heed
- Power & control beliefs

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Phases

- Pace and scope
- Range of reactions
- Survival & well-being

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Phases

- Survival, rescue, altruism
- Disorientation
- Evacuation & relocation

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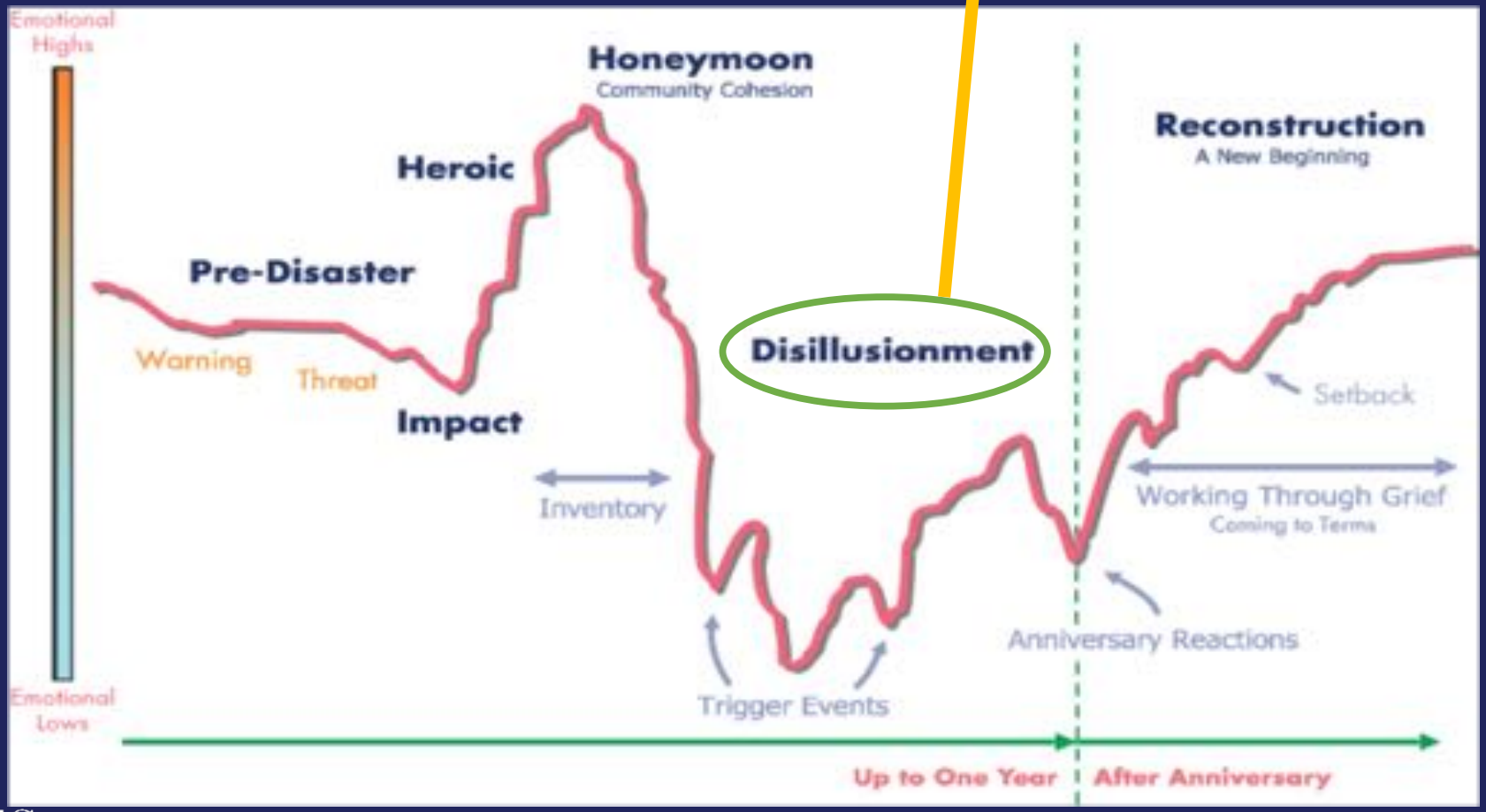
Phases

- Bonding; shared event
- Optimism for wholeness
- Disaster BH most welcome

Phases

- Reality; discouragement
- Chronic varied stressors
- Business as usual



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Phases

- Predictable
- Should be acknowledged
- Cohesion / healing

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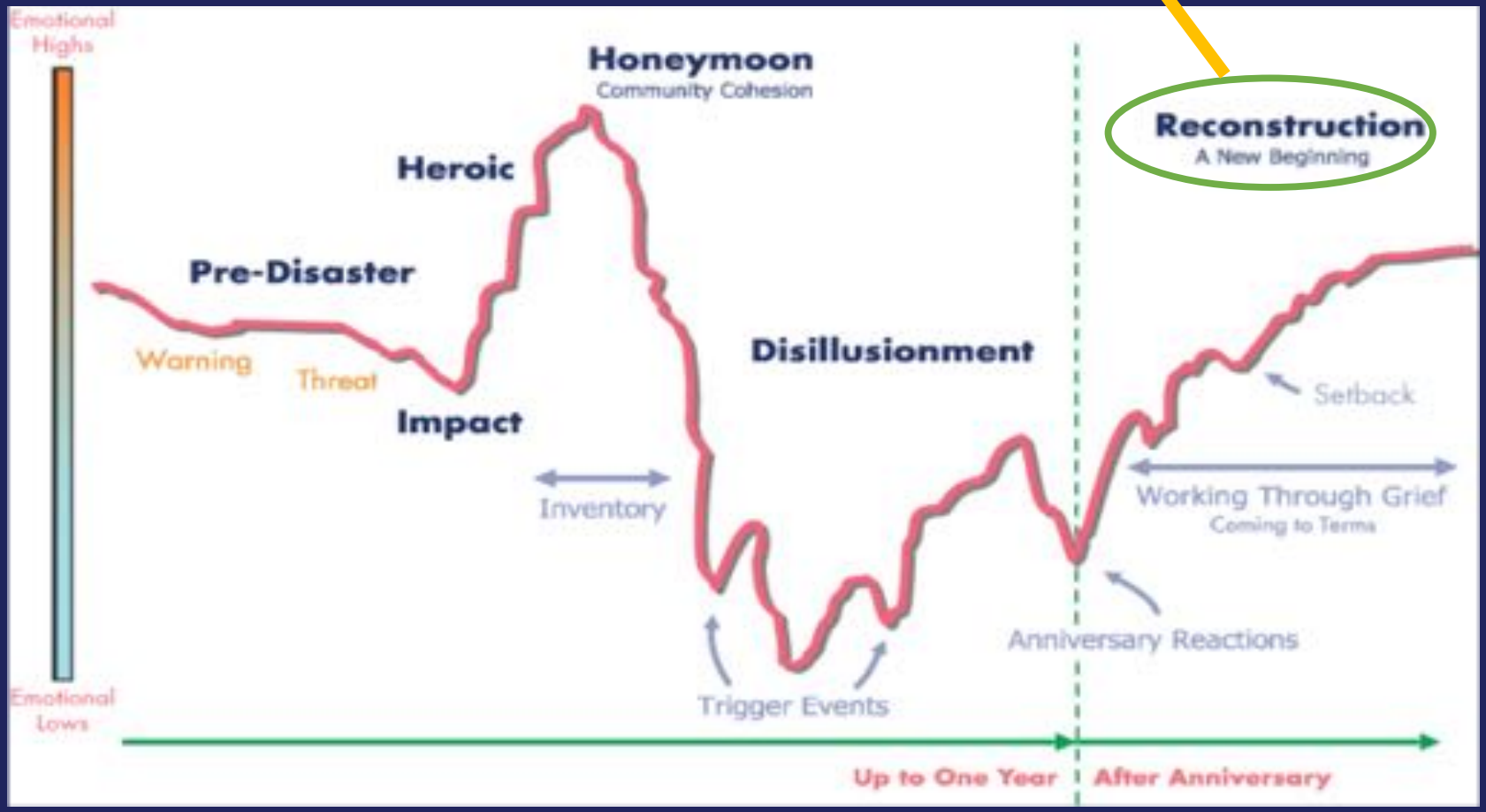
Phases

- Self sustainment
- Loss/pain -> meaning/growth
- “New normal”



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Vulnerability to Disasters due to…

- Pre-event demographics / variables
  - SES, Age, Gender, Culture, limited social support
- Event impact
  - Injury, loss of home, displacement, bereavement
- Recovery impact
  - Relocation, job loss, degradation of support network

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

Vulnerable Populations

- Pre-Existing Mental Health
- Children and Adolescents; Elderly
- Women, Pregnancy, Post-Partum
- First Responders & Emergency Workers
- Economically Disadvantaged & Homelessness
- Migrants & Refugees
- Loss of Home / Income / Social Support
- Physical Injury

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INTERVENTIONS FOLLOWING DISASTERS

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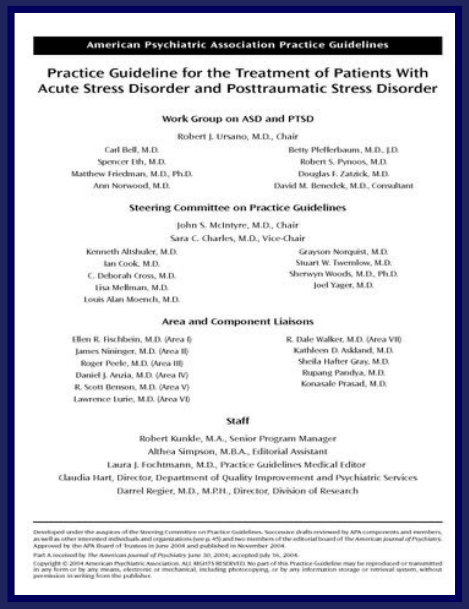
Psychological Debriefings (CISD/CISM)

This review concerns the efficacy of single session psychological "debriefing" in reducing psychological distress and preventing the development of post traumatic stress disorder (PTSD) after traumatic events. Psychological debriefing is either equivalent to, or worse than, control or educational interventions in preventing or reducing the severity of PTSD, depression, anxiety and general psychological morbidity. There is some suggestion that it may increase the risk of PTSD and depression. The routine use of single session debriefing given to non selected trauma victims is not supported. No evidence has been found that this procedure is effective.

Rose, et al. (2002). Psychological debriefing for preventing post traumatic stress disorder (PTSD). *The Cochrane Database of Systematic Reviews*, (2), CD000560.



American Psychiatric Association Practice Guidelines

Practice Guideline for the Treatment of Patients With Acute Stress Disorder and Posttraumatic Stress Disorder

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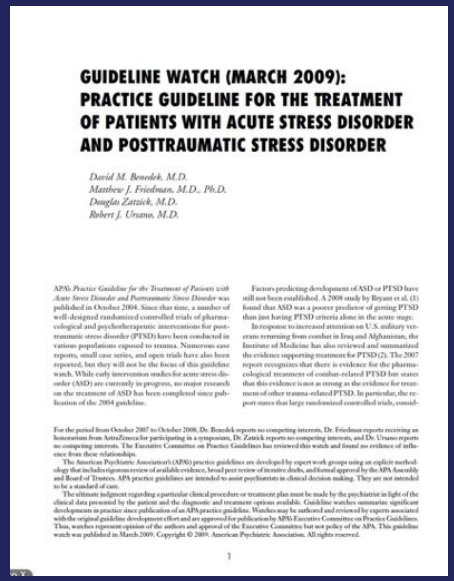
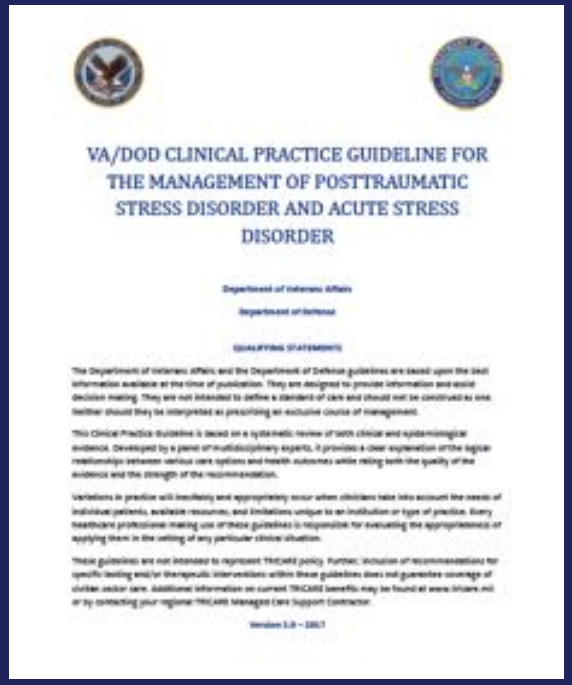


GUIDELINE WATCH (MARCH 2009): PRACTICE GUIDELINE FOR THE TREATMENT OF PATIENTS WITH ACUTE STRESS DISORDER AND POSTTRAUMATIC STRESS DISORDER

David M. Benedek, M.D.
Matthew J. Friedman, M.D., Ph.D.
Douglas Zatzick, M.D.
Robert J. Ursano, M.D.



VA/DOD CLINICAL PRACTICE GUIDELINE FOR THE MANAGEMENT OF POSTTRAUMATIC STRESS DISORDER AND ACUTE STRESS DISORDER

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Psychological First Aid (PFA)

The Five Elements:

Sense of safety
Calming
Sense of Self- and Community Efficacy
Connectedness
Hope

Landmark article:
Five Essential Elements of Immediate and Mid-Term Mass Trauma Intervention: Empirical Evidence
Psychiatry, 70(4), 2007
Authors: Steven Hobfoll plus 19 other disaster mental health experts

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What is PFA?

- What it IS…
  - Analogous to other forms of “First Aid”
  - Population-based response “framework”
  - “Do no harm” approach; resilience vs disease
- What it is NOT…
  - Cure or treatment for illness
- What it MAY be…
  - Mitigation strategy; reduce distress, dec illness

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Basis for PFA

- Safety – decrease threat exposure
- Calming – reduce arousal/anxiety
- Efficacy – belief in one's ability to manage
- Connectedness – increase social support
- Hope / Optimism – better things are possible

Safety

- It's the "C" in CAB for basic life support
- Relocate to place that is clearly safe
- Educate about making environment safer
- Accurate, updated info re ongoing threat
- Engage media re messages of safety and resilience-promoting behaviors

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Safety

- DC Sniper shootings 02-24 October 2002; survey May 2013
- 1204 random residents of Washington, DC and Maryland
- Phone survey; Response rate 56.4%
- Decreased safety >>> Increased PTSD, Depression, Alcohol use

Table 2. Perceived safety in community settings (n = 1205, except for workplace category where n = 876)

Degree of safety	In neighborhood % (95% CI)	At workplace and surrounding area % (95% CI)	At other public places % (95% CI)	At gas stations % (95% CI)
A lot less safe	21.5 (18.7–24.2)	22.7 (19.2–26.1)	30.6 (27.5–33.7)	38.6 (35.4–41.9)
A little less safe	35.7 (32.4–38.9)	31.5 (27.9–35.4)	35.3 (32.1–38.5)	31.1 (27.9–34.2)
As safe as usual	42.4 (39.0–45.8)	45.6 (41.6–49.5)	32.0 (28.8–35.2)	26.8 (23.7–30.0)
"Don't know" and refusals	0.5	0.2	2.1	3.5

CI, confidence interval.

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.

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Schulden, J., Chen, J., Kresnow, M.-J., Arias, I., Crosby, A., Mercy, J., et al. (2006). Psychological responses to the sniper attacks: Washington DC area, October 2002.*Amepre*,*31*(4), 324–327.

Calming

- Help w/ sleep problems
- Teach simple relaxation techniques
- Listen to people who want to talk, stay calm
- Be compassionate even if people are angry
- Provide help to solve problems; manageable issues
- Info on family/friend safety & further danger
- Psychoeducation: normal reactions; signs of more severe illness/dysfunction; minimize use of alcohol and tobacco; where to get help
- Encourage limiting exposure to news media

Calming

- 1787 NY adults
- Multiple assessments post 9/11
- Study outcome = probable PTSD
- Exposure was hrs watching the 9/11 “1-yr anniversary” media coverage

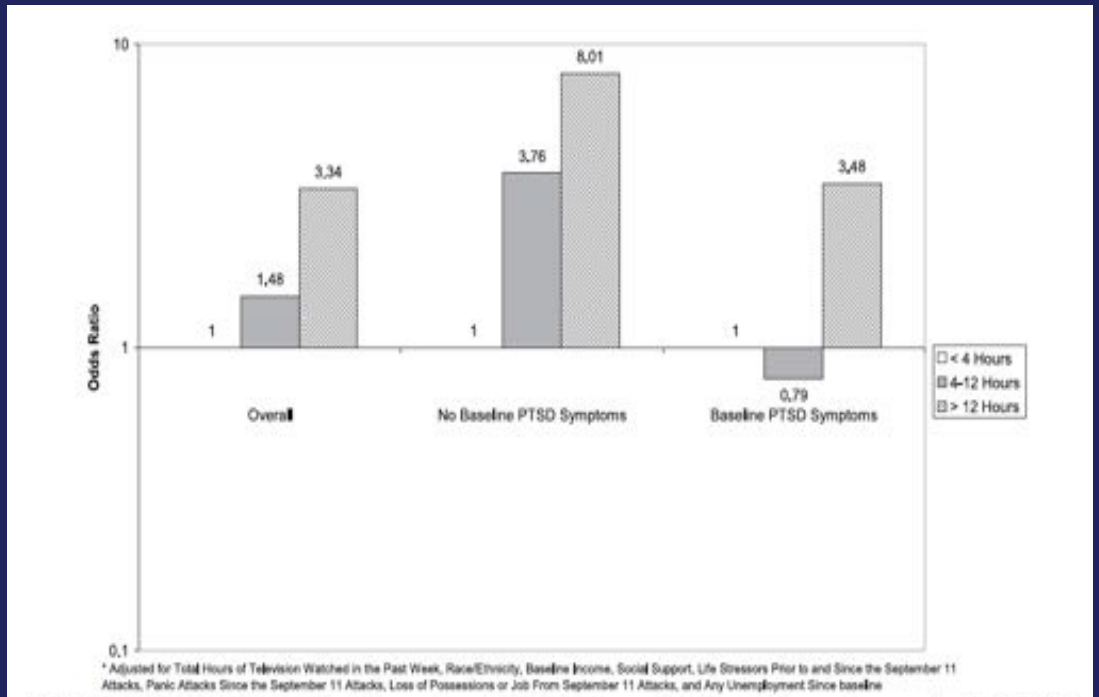

FIGURE 1. Odds ratios for the relation between hours of WTCD anniversary television viewing and new-onset probable PTSD in an adjusted model.*

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Bernstein, K. T., Ahern, J., Tracy, M., Boscarino, J. A., Vlahov, D.,&Galea, S. (2007). Television watching and the risk of incident probable posttraumatic stress disorder: a prospective evaluation.*The Journal of Nervous and Mental Disease*,*195*(1), 41–47.

Self & Community Efficacy

- Provide outside resources, timely updates
- Education material (“how to talk/fill out/etc…”)
- Community involvement in policy, efforts
- Promote community conceived & implemented ideas (religious, metings, collaborations, rituals)

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Self & Community Efficacy

- Help individuals set achievable goals to:
  - Reverse feelings of failure / inability to cope
  - Create repeated success experiences
  - Re-establish a sense of environmental control
- Set achievable goals by:
  - Focusing on 1 need at a time
  - Focus first on needs w/ immediate solutions
  - If can’t solve rapidly, take action steps to address

Self & Community Efficacy

- Community Collective Efficacy (CE) – "Willingness of community members to intervene for the common good."
  - 2,249 Florida DOH workers s/p 2004 Florida Hurricanes
  - Age, gender, marital status, storm damage/injury
  - CE, depression, PTSD
  - Higher CE >>> Decreased depression and PTSD

Fullerton, C. S., Ursano, R. J., Liu, X., McKibben, J.,&Wang, L. (2015). Depressive symptom severity and community collective efficacy following the 2004 Florida hurricanes.*PLoS ONE*. http://doi.org/10.1371/journal.pone.0130863.t002

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*. http://doi.org/10.1371/journal.pone.0088467.t006

Self & Community Efficacy

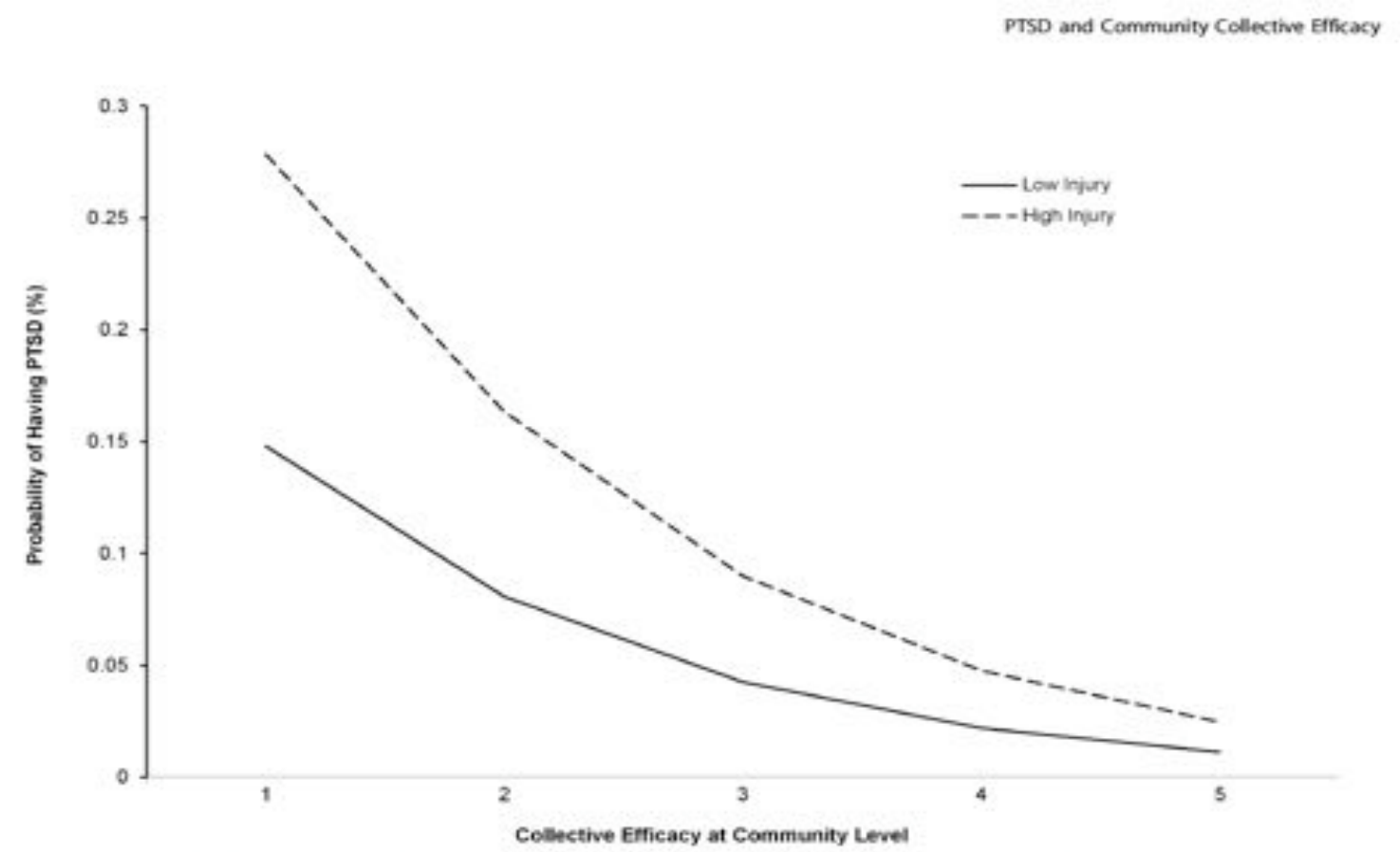

Figure 1. Changes in probability of having PTSD over two injury/damage groups and five community-level efficacy levels.
doi:10.1371/journal.pone.0088467.g001

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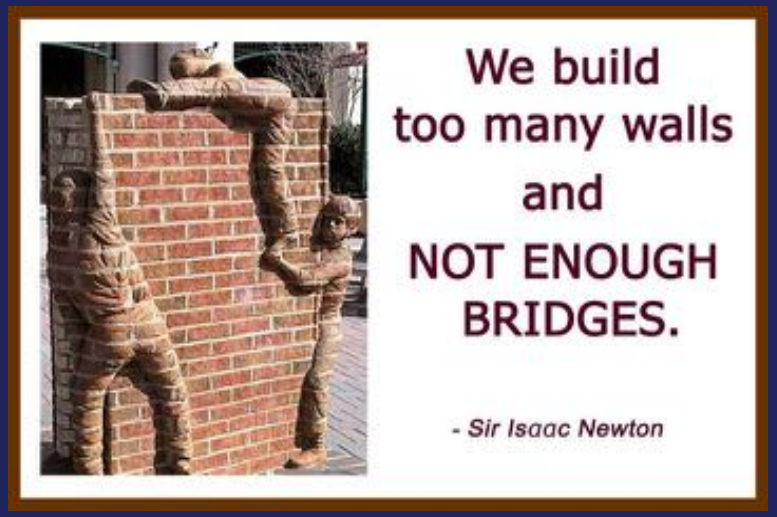
Ursano, R. J., McKibben, J., Reissman, D. B.,&Liu, X. (2014). Posttraumatic stress disorder and community collective efficacy following the 2004 Florida hurricanes.*PLoS ONE*. http://doi.org/10.1371/journal.pone.0088467.t006

Social Connectedness

- Help individuals find, communicate, stay w/ loved ones (cell phone, web, etc)
- Identify/assist

  vulnerable populations:
  - Lacking good support
    (or access to usual support)
  - Isolated due to socioeconomics
    illness, mental health



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Social Connectedness

- Enhance access to primary support persons
- Encourage use of immediately-available support
- Discuss support-seeking
  - Identify possible support persons
  - Discuss what to do/talk about
  - Explore reluctance to seek support
- Address extreme isolation or withdrawal

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Social Connectedness

- Hurricane Katrina
- 1,077 displaced or greatly affected houses
- In-person 6-12 mon, telephone 20-23 mon
- Stronger reported social support a/w sig better mental health status

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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.

Hope & Optimism

- Encourage programs that restore normalcy
- Develop/publicize problem-solving programs
- Support rebuilding of local economies
- Role for community leaders:
  - Encourage link-up w/ resources, cooperation
  - Coping behaviors & hope thru role modeling
  - Memorializing and creating meaning
  - Accepting necessary life & environmental changes

Mobile Resource

- PFA Mobile app (Free)
  - Summaries of the 8 core PFA actions
  - Match PFA interventions to specific stress reactions of survivors
  - Get mentor tips for applying PFA in the field
  - Self-assess to determine your own readiness to conduct PFA
  - Assess and track victims' needs to simplify data collection and referrals

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https://www.ptsd.va.gov/professional/materials/apps/pfa_mobile_app.asp

Non-Pharmacologic Interventions

- Psychoeducation / Normalization
  - Expected reactions and when to seek help
  - “Normal reaction to an abnormal stressor”
- Social Support
  - Use and build support networks
- Optimize Sleep & Enhance Calming
  - Sleep Hygiene, Diaphragmatic Breathing, Progressive Muscle Relaxation, Visual Imagery

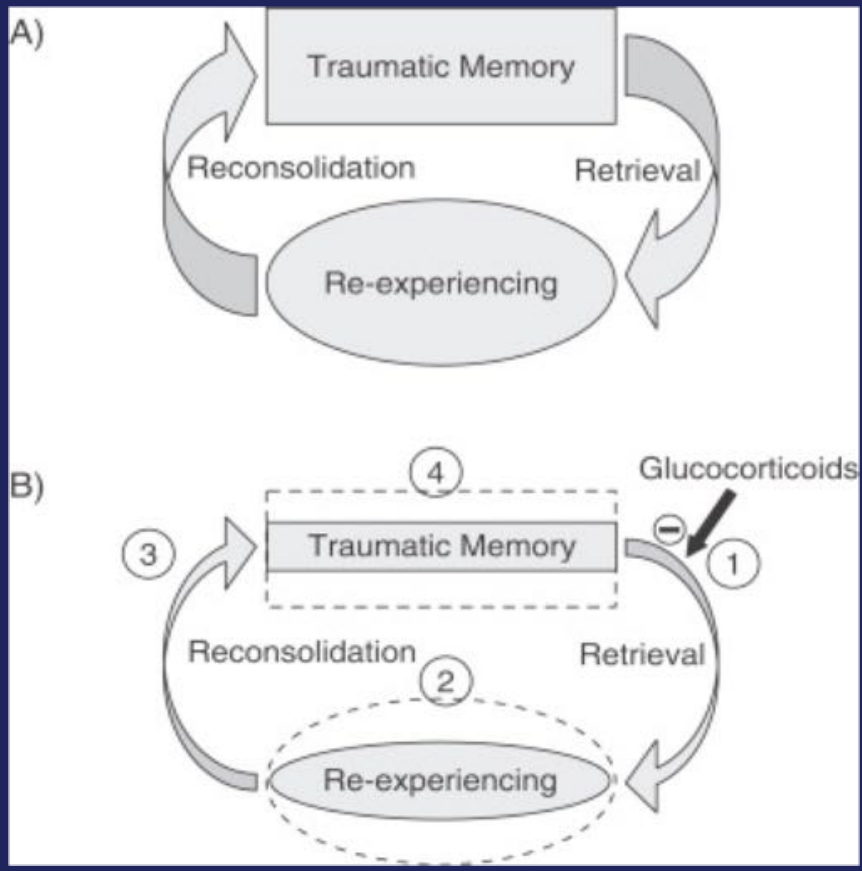
VA/DOD CPG Management of ASD and PTSD, July 2017

Medications – acute care

- Sleep is essential to aid calming
- Short-term meds options:
  - Prazosin 3-15mg qhs (nightmares)
  - Trazodone 25-100mg qhs (helpful for co-morbid depression or in those at increased risk of dependence; priapism risk)
  - Lunesta 2-3mg qhs prn (sleep initiation & maintenance)
  - Ambien 5-10mg qhs prn (sleep initiation & maintenance)
  - Sonata 5-10mg qhs prn (sleep initiation)
  - Caution w/ SGAs (generally unhelpful, may cause harm)

Medications – future directions

- Interrupt / modify neurobiological pathways
- Decrease trauma response
- Glucocorticoids – strongest evidence in prevention of ASD/PTSD



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de Quervain, D. J.-F. (2008). Glucocorticoid-induced reduction of traumatic memories: implications for the treatment of PTSD.*Progress in Brain Research*,*167*, 239–247.

Howlett, J. R., & Stein, M. B. (2016). Prevention of Trauma and Stressor-Related Disorders: A Review. *Neuropsychopharmacology*, *41*(1), 357–369.

Collaborative Care

- Distress Reactions, Health Risk Behaviors, Psychiatric Disorders generally present first in Primary Care and ED settings
- Collaborate care with PCMs to provide education & consultation on interventions
- Medicare now covers Psychiatric Consultations in Collaborative Care (*)

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http://alert.psychnews.org/2016/07/cms-announces-medicare-coverage-of.html

Leadership Consultation

- Grief Management
  - Anticipate, identify, support
- Stress Management
  - ”Put on your oxygen mask first”
- Communication
  - What, when, how

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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*.

"Better than any medication we know, information treats anxiety in a crisis."

Source: Saathoff, 2002

Communication is a behavioral health intervention

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Communication - Rationale

The behavioral choices people make to stay in place, evacuate, seek or not seek medical care, search for loved ones, etc. *are very real life and death decisions*.

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Communication - Focus

What People Want To Know
In Addition To
What We Want Them To Know

"Therapeutic rapport" on a population level

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Communication - Forms

- Written and spoken word
- Behavior
- Imagery
- Rituals & Symbols

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Health Risk & Crisis Communication

- Clear, timely, accurate, repeated
- Start with most relevant info
- If you don't know, say so
- Never make things up
- Use language people understand
- Victory favors the prepared
  - Message mapping…

It's not WHAT you say, it's HOW you say it!

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Reynolds, B. S.,&Seeger, M. (2012). Crisis and Emergency Risk Communication. Centers for Disease Control and Prevention.

Covello, V. T. (2003). Best practices in public health risk and crisis communication. *Journal of Health Communication*.

PREPAREDNESS: PROVIDERS & PATIENTS

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Organization / Clinical Practice

- Clarify your role(s)
  - Treatment, Leadership Consultation
- Organizational management
  - APA District Branch, NGO, other
  - Internal Expertise, Clear Messaging
- Establish partnerships
  - Healthcare, Aid / Relief Organizations
  - Community Services
- Ready your practice
  - Record systems, communication, high risk

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Disaster Behavioral Health Curriculum

Published 01/14

NCDMPH | Uniformed Services University of the Health Sciences | Center for the Study of Traumatic Stress

Curriculum Recommendations for Disaster Health Professionals
Disaster Behavioral Health

Authors

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Joshua C. Morganstein, MD, CDR, USPHS, Scientist, Center for the Study of Traumatic Stress, Assistant Professor, Department of Psychiatry, Uniformed Services University of the Health Sciences

Target Audience: Educators and trainers working with health professionals
Purpose: To plan education and training activities on behavioral health factors in disasters

Introduction

The world has long been aware that a wide variety of extreme events produce psychological, social, and biological sequelae that today we label with terms such as stress, trauma, grief, and bereavement. These consequences are visited upon individuals, families, workplaces, schools, communities, and nations. They can result from a wide variety of causal factors that are both natural, human-generated or a combination of both.

For the purposes of this document, focus will be on the general topic of exposure to disasters. Disasters are defined as extreme events in which needs of the impacted population and/or area exceeds the local response and recovery resources and external resources must be utilized. Disasters can include such naturally occurring events such as floods, hurricane, fires, tsunamis, epidemics, and pandemics. They can also be human generated in terrorism, war, community unrest, mass shootings, and industrial accidents. Some disasters involve both natural and human-generated elements. Examples include a plane crash caused by wind shear, a flood caused by a dam collapse, or a wildfire sparked by an arsonist.

The field of disaster behavioral health continues to evolve following the classic paradigm of synergistic interactions among research, training, and services (Figure 1). Fundamentally the questions driving the field are:

- What do we know about the individual and collective impact of disasters?
- What approaches and interventions, to accomplish what, provided by whom, and in what contexts are most efficacious?
- How can we ensure that those involved in disaster preparedness, response, and recovery have the knowledge and skills necessary to produce optimal results?

Figure 1

1

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https://ncdmph.usuhs.edu/Documents/BehavioralHealthRecommendations-201401.pdf

Disaster Behavioral Health Education Fact Sheets

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https://www.cstsonline.org/fact-sheet-menu/fact-sheet-search

Mobile Resource

- SAMHSA Behavioral Health Disaster Response app (Free)
  - Pre-event preparation, on-the-ground assistance, post-event resources, more
  - Share resources (like tips for helping survivors cope) with others
  - Find local behavioral health services
  - Self-care support for responders

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http://store.samhsa.gov/apps/disaster

Patients / Providers

- Develop / practice Family Emergency Plan
- Know Work / School Emergency Plans
- Have / use trusted sources of information
- “Emergency Go Kit”
  - http://www.redcross.org/get-help/prepare-for-emergencies/be-red-cross-ready/get-a-kit

Not an endorsement, just an option!!!

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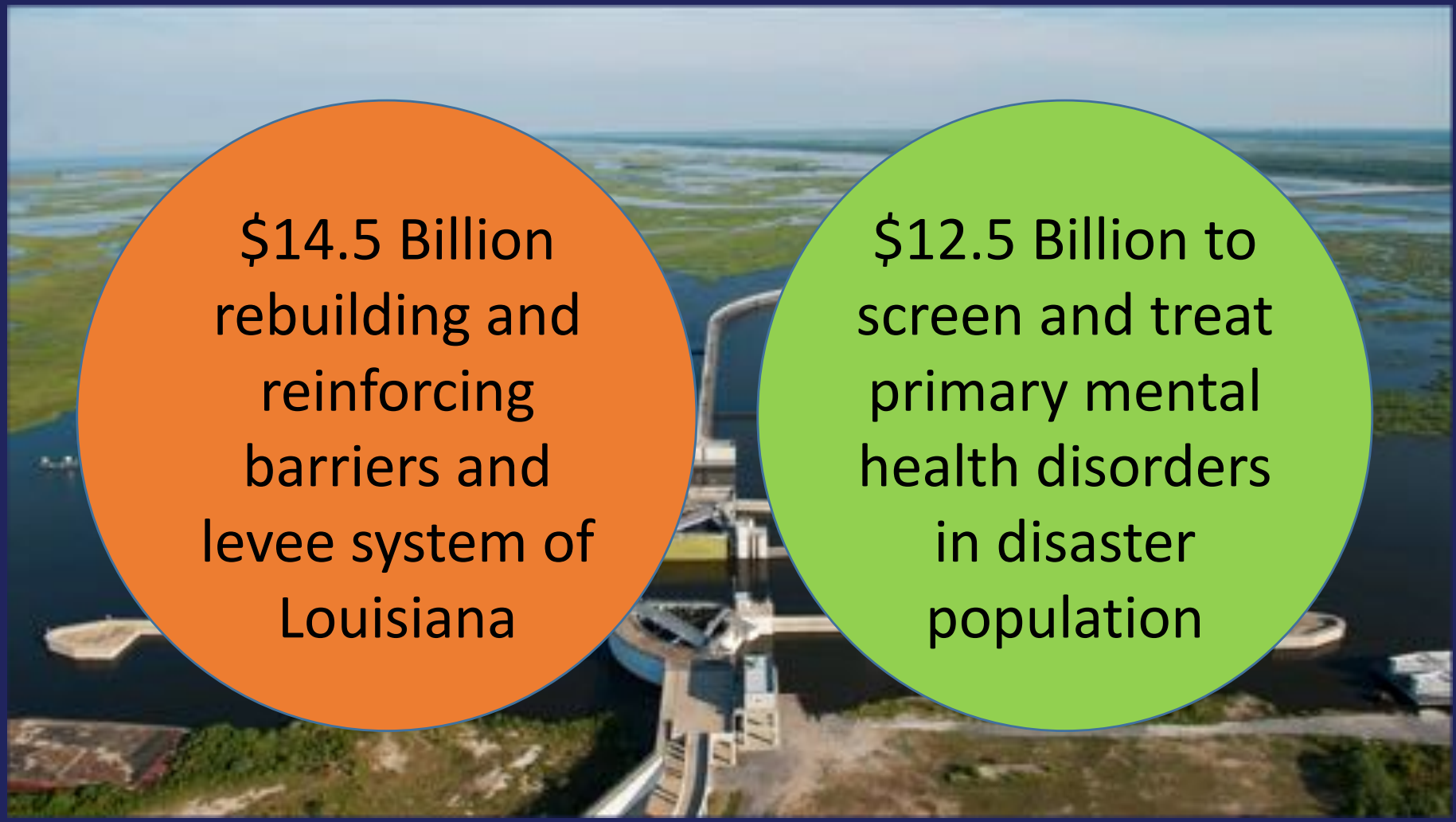

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Schoenbaum, M., Butler, B., Kataoka, S., Norquist, G., Springgate, B., Sullivan, G., et al. (2009). Promoting mental health recovery after hurricanes Katrina and Rita: what can be done at what cost. *Archives of General Psychiatry*, *66*(8), 906–914.

Additional References

Disaster Psychiatry (F Stoddard):

https://www.appi.org/Disaster_Psychiatry

Resiliency in the Face of Disaster and Terrorism (J Napoli):

https://www.amazon.com/Resiliency-Face-Disaster-Terrorism-Survive/dp/1932181180

Disaster Psychiatry: What Psychiatrists Need to Know (T Ng)

http://www.psychiatrictimes.com/disaster-psychiatry/disaster-psychiatry-what-psychiatrists-need-know

Textbook of Disaster Psychiatry, 2nd Edition:

http://www.cambridge.org/gb/academic/subjects/medicine/mental-health-psychiatry-and-clinical-psychology/textbook-disaster-psychiatry-2nd-edition

Integrating Emergency Management and Disaster Behavioral Health:

https://www.elsevier.com/books/integrating-emergency-management-and-disaster-behavioral-health/flynn/978-0-12-803638-9

Disaster Psychiatry Handbook

http://www.eird.org/isdr-biblio/PDF/Disaster%20psychiatry%20handbook.pdf

Summary

- Increasing frequency of human-generated and natural disasters increase the need for disaster mental health care
- Distress reactions and health risk behaviors predominate after disaster
- Early interventions reduce adverse impacts for individuals and communities
- Education & preparation decrease distress and enhance effectiveness of community response and recovery

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Climate-Related Disasters

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OBJECTIVES

- Describe the type and frequency of climate-related natural disasters
- Review provider resources which enhance disaster preparedness and response
- Participate in case-based application of:
  - Measures to enhance provider and patient preparedness before a climate-related disaster
  - Evidence-based early interventions following a climate-related disaster

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A CHANGING GLOBAL CLIMATE & RELATED DISASTERS

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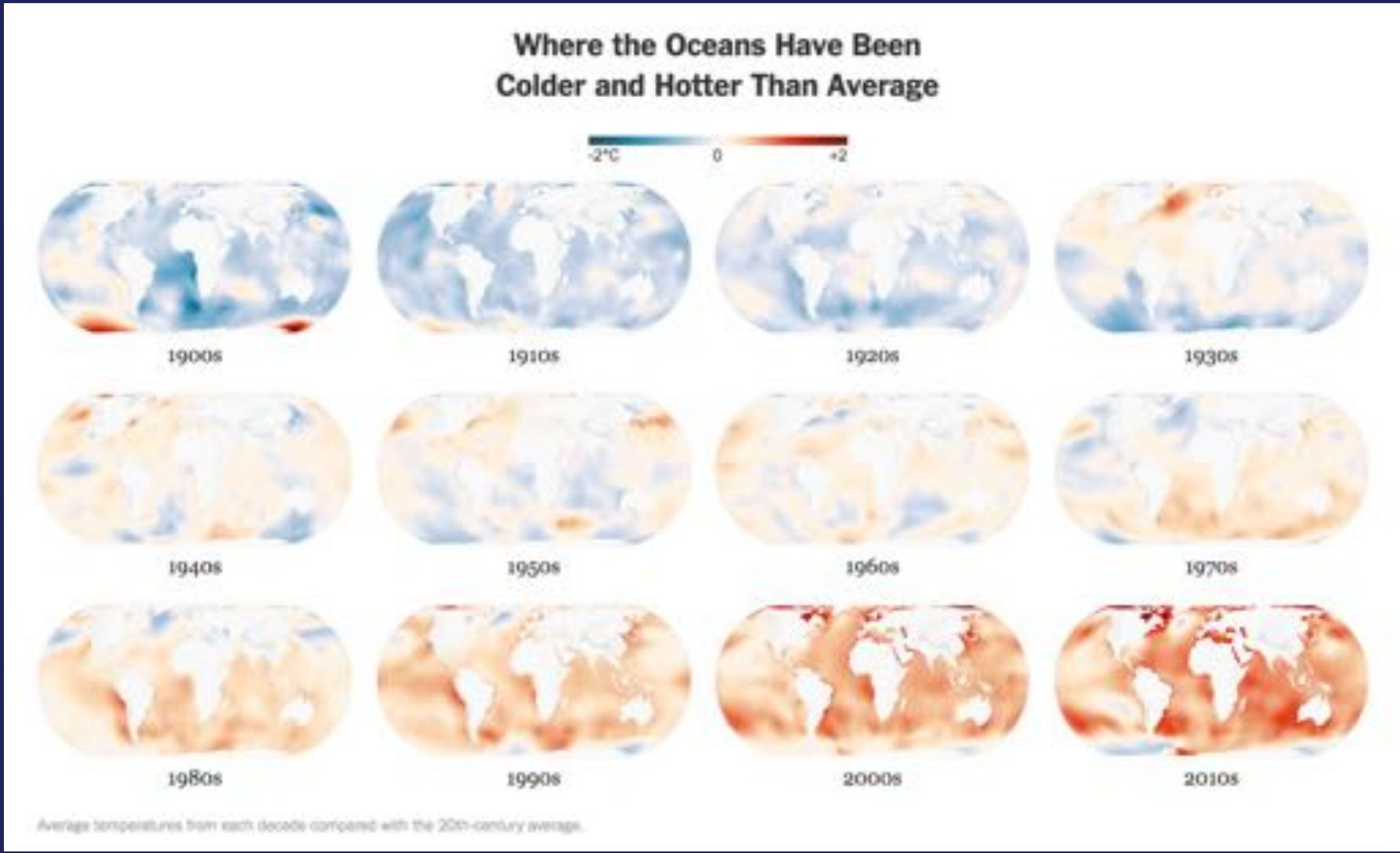

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National Oceanic and Atmospheric Administration

Grinnell Glacier from Mt. Gould

1938 - 2006

1938
Hileman photo
GNP Archives

1981
Key photo
USGS

1998
Fagre photo
USGS

2006
Holzer photo
USGS

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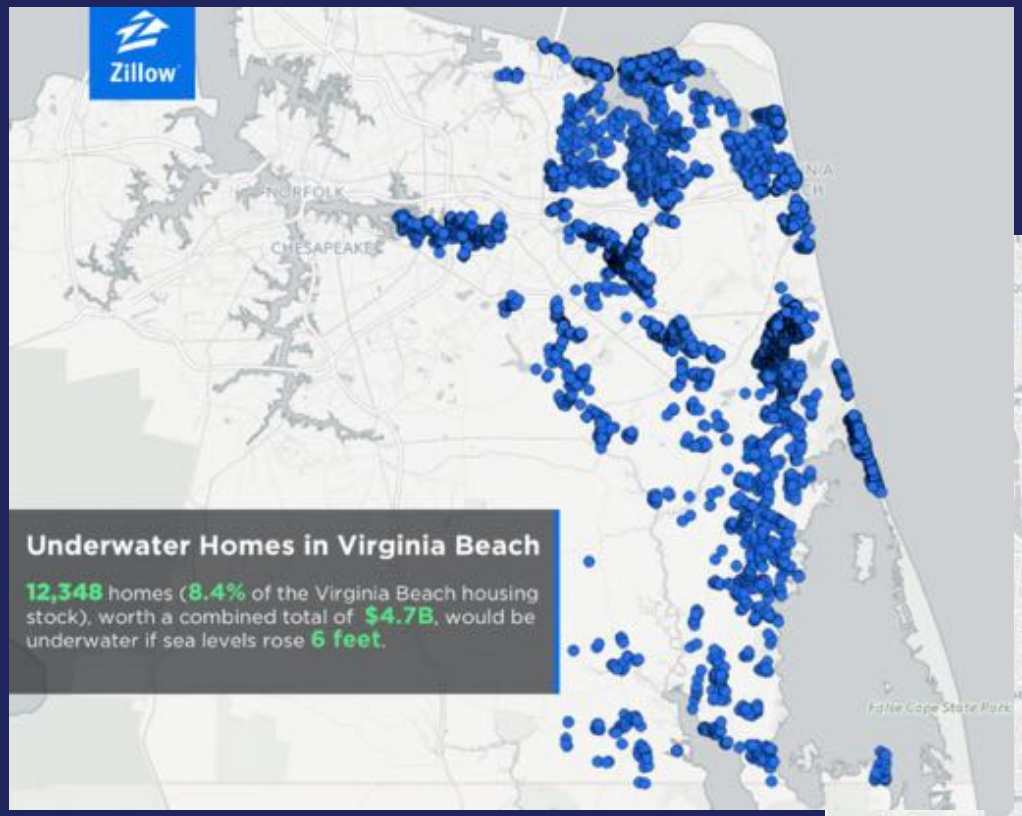
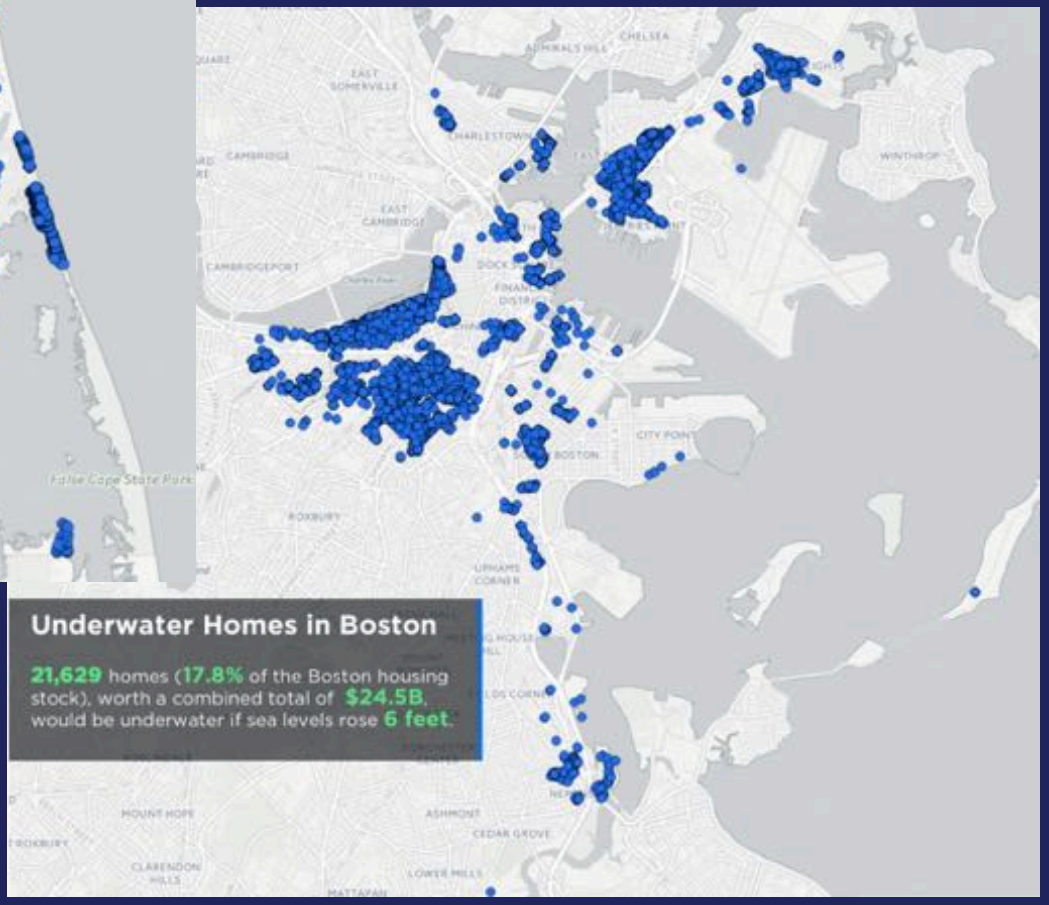
https://www.usgs.gov/science/science-explorer?lq=grinnell+glacier





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https://www.washingtonpost.com/news/energy-environment/wp/2016/08/24/as-sea-levels-rise-23-states-could-see-nearly-1-9-million-homes-underwater/?utm_term=.3cd208242057

The entire Atlantic seaboard would vanish, along with Florida and the Gulf Coast. In California, San Francisco's hills would become a cluster of islands and the Central Valley a giant bay. The Gulf of California would stretch north past the latitude of San Diego, which may be completely underwater.

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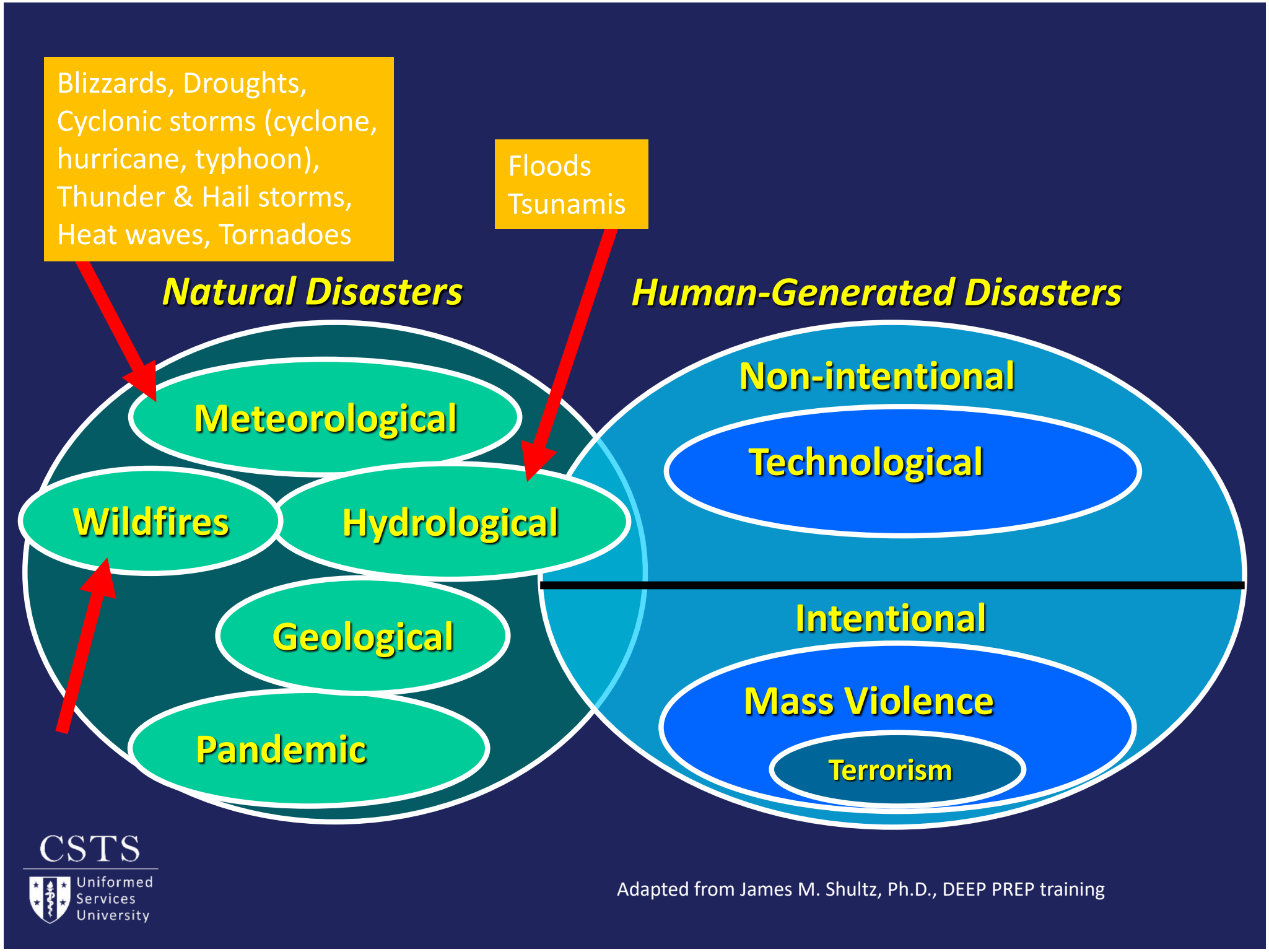
http://ngm.nationalgeographic.com/2013/09/rising-seas/if-ice-melted-map



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Adapted from James M. Shultz, Ph.D., DEEP PREP training

Global Climate-Related Disaster Incidence & Cost (1950-2012)

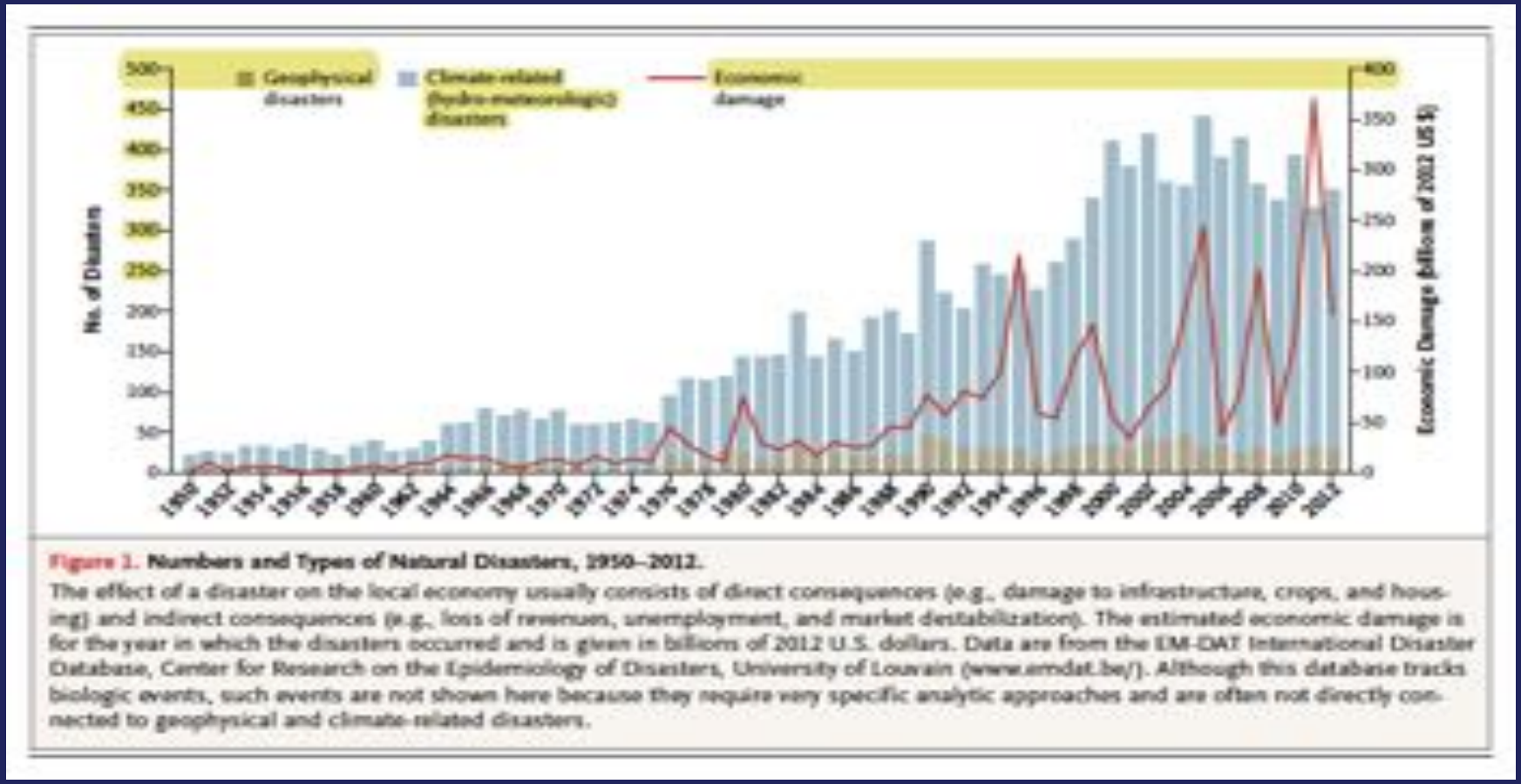

Figure 1. Numbers and Types of Natural Disasters, 1950–2012.

The effect of a disaster on the local economy usually consists of direct consequences (e.g., damage to infrastructure, crops, and housing) and indirect consequences (e.g., loss of revenues, unemployment, and market destabilization). The estimated economic damage is for the year in which the disasters occurred and is given in billions of 2012 U.S. dollars. Data are from the EM-DAT International Disaster Database, Center for Research on the Epidemiology of Disasters, University of Louvain (www.emdat.be/). Although this database tracks biologic events, such events are not shown here because they require very specific analytic approaches and are often not directly connected to geophysical and climate-related disasters.

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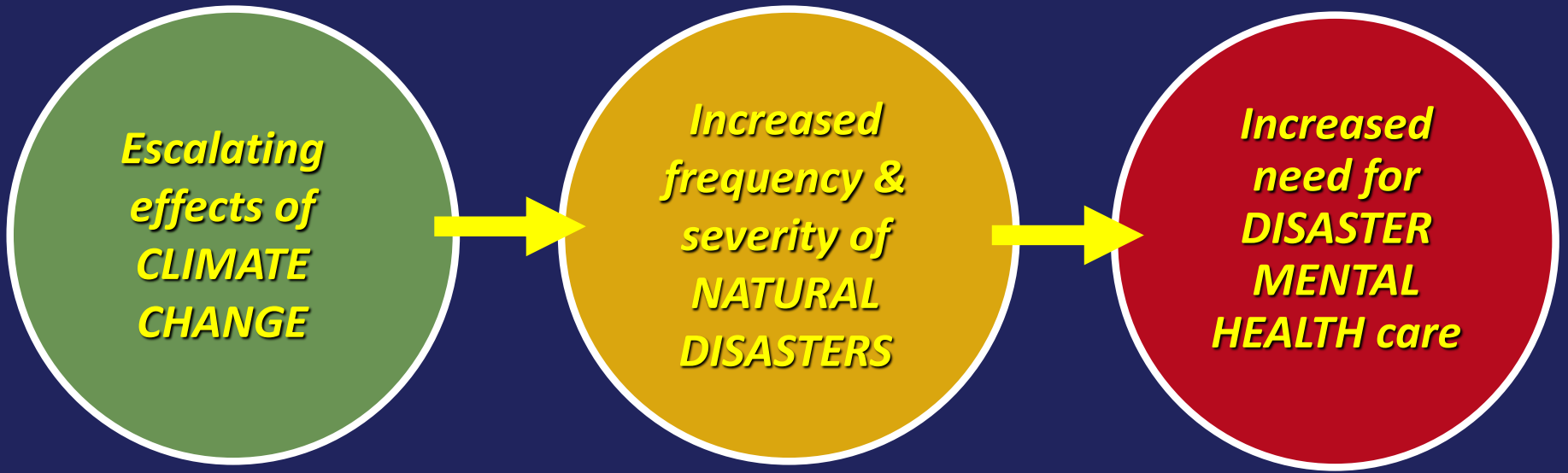
Leaning, J., & Guha-Sapir, D. (2013). Natural disasters, armed conflict, and public health. *The New England Journal of Medicine*, *369*(19), 1836–1842.

Making the Connection…



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PROVIDER RESOURCES

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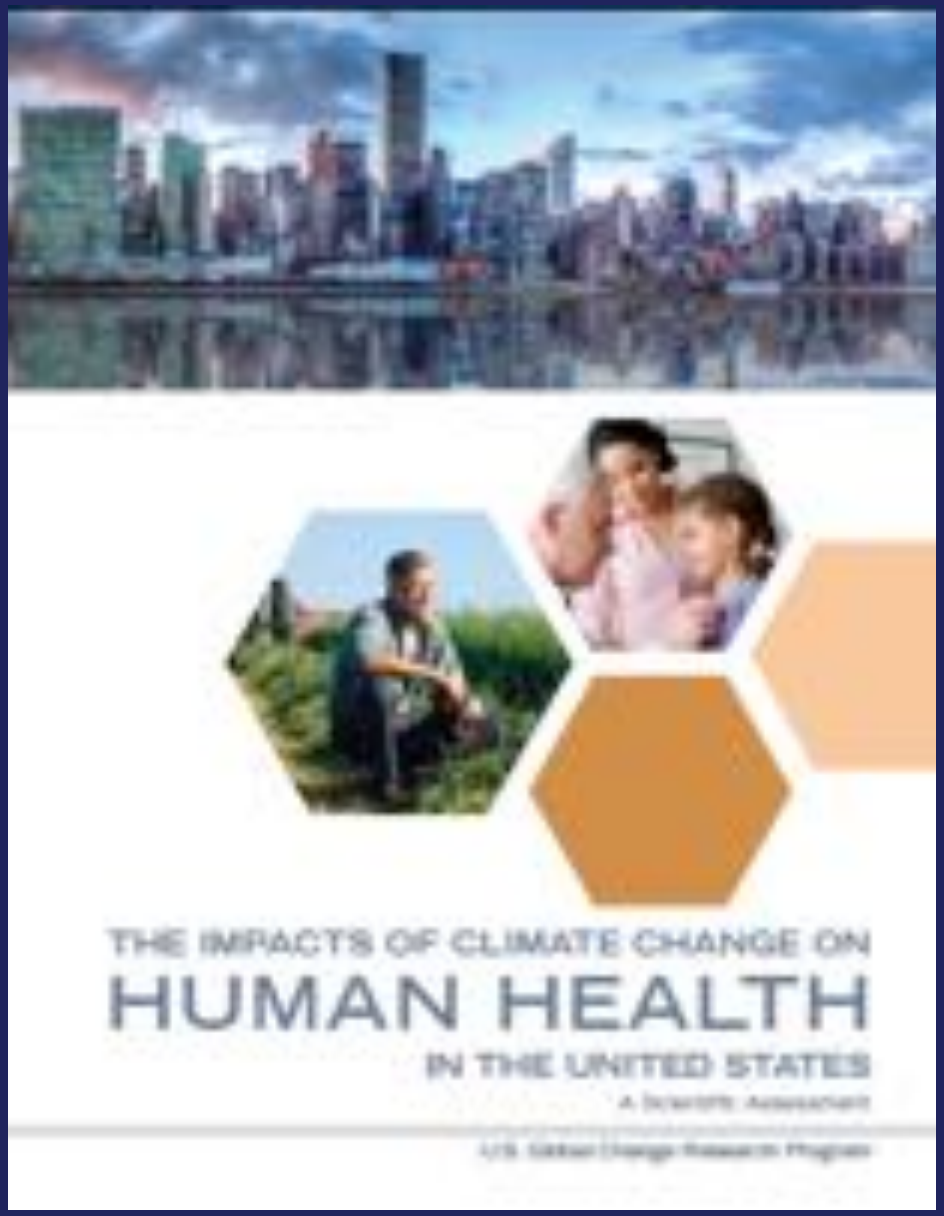

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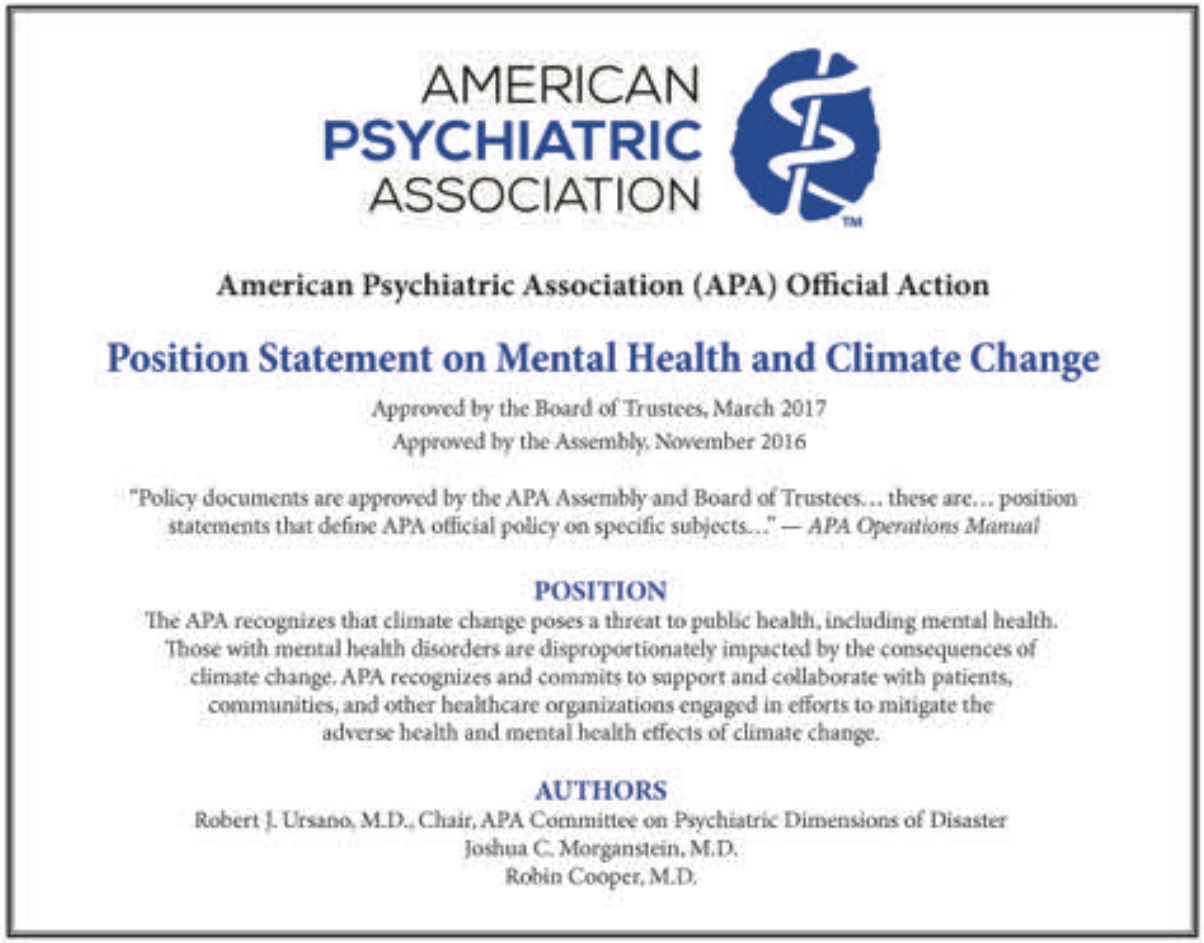
https://health2016.globalchange.gov/mental-health-and-well-being

APA Position Statement



AMERICAN PSYCHIATRIC ASSOCIATION

American Psychiatric Association (APA) Official Action

Position Statement on Mental Health and Climate Change

Approved by the Board of Trustees, March 2017
Approved by the Assembly, November 2016

"Policy documents are approved by the APA Assembly and Board of Trustees… these are… position statements that define APA official policy on specific subjects…" — *APA Operations Manual*

POSITION

The APA recognizes that climate change poses a threat to public health, including mental health. Those with mental health disorders are disproportionately impacted by the consequences of climate change. APA recognizes and commits to support and collaborate with patients, communities, and other healthcare organizations engaged in efforts to mitigate the adverse health and mental health effects of climate change.

AUTHORS

Robert J. Ursano, M.D., Chair, APA Committee on Psychiatric Dimensions of Disaster
Joshua C. Morganstein, M.D.
Robin Cooper, M.D.

POSITION STATEMENT:
https://www.psychiatry.org/File%20Library/About-APA/Organization-Documents-Policies/Policies/Position-2017-Mental-Health-Climate-Change.pdf

RESOURCE DOCUMENT:
https://www.psychiatry.org/psychiatrists/search-directories-databases/library-and-archive/resource-documents

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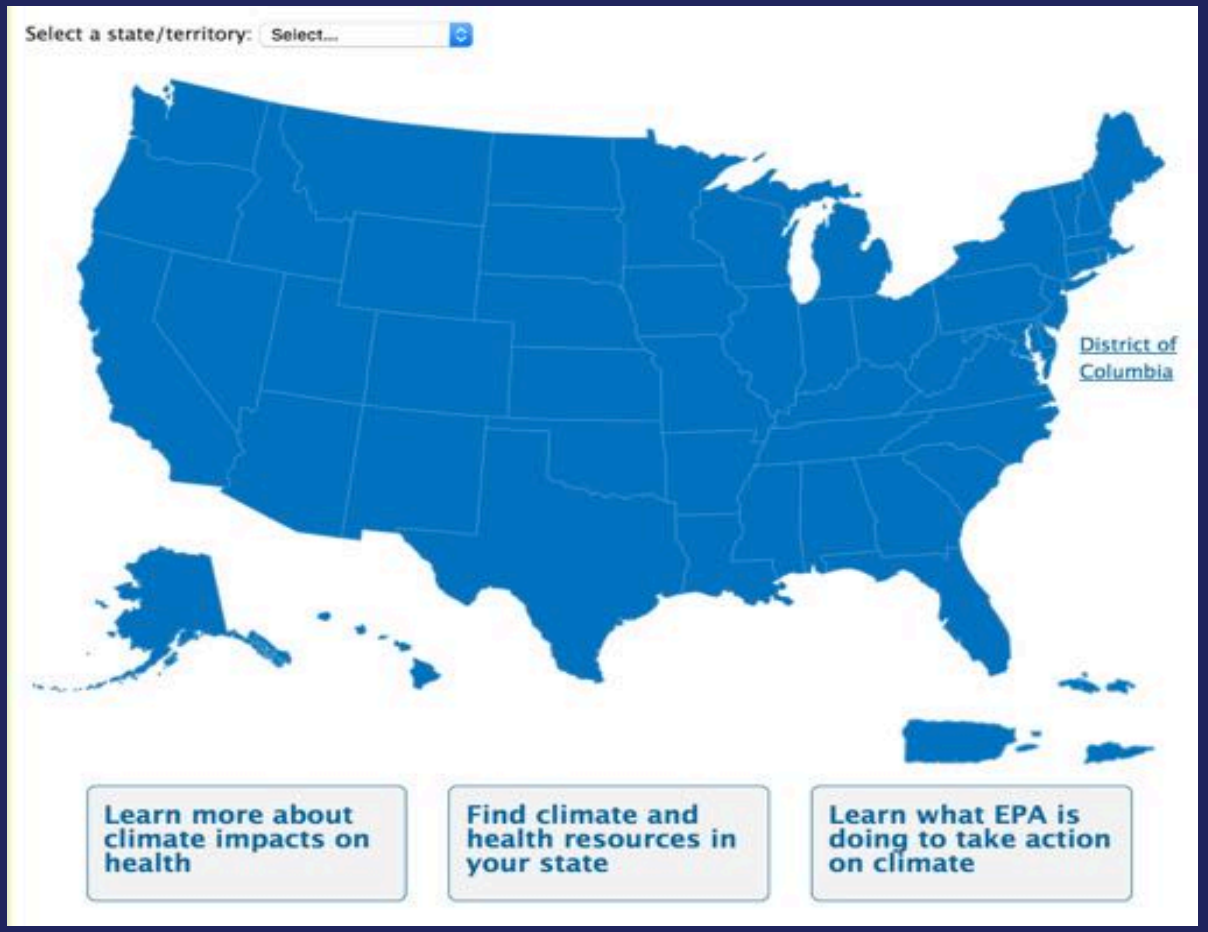
Regional Issues

Climate Change & Human Health Risks in Your State



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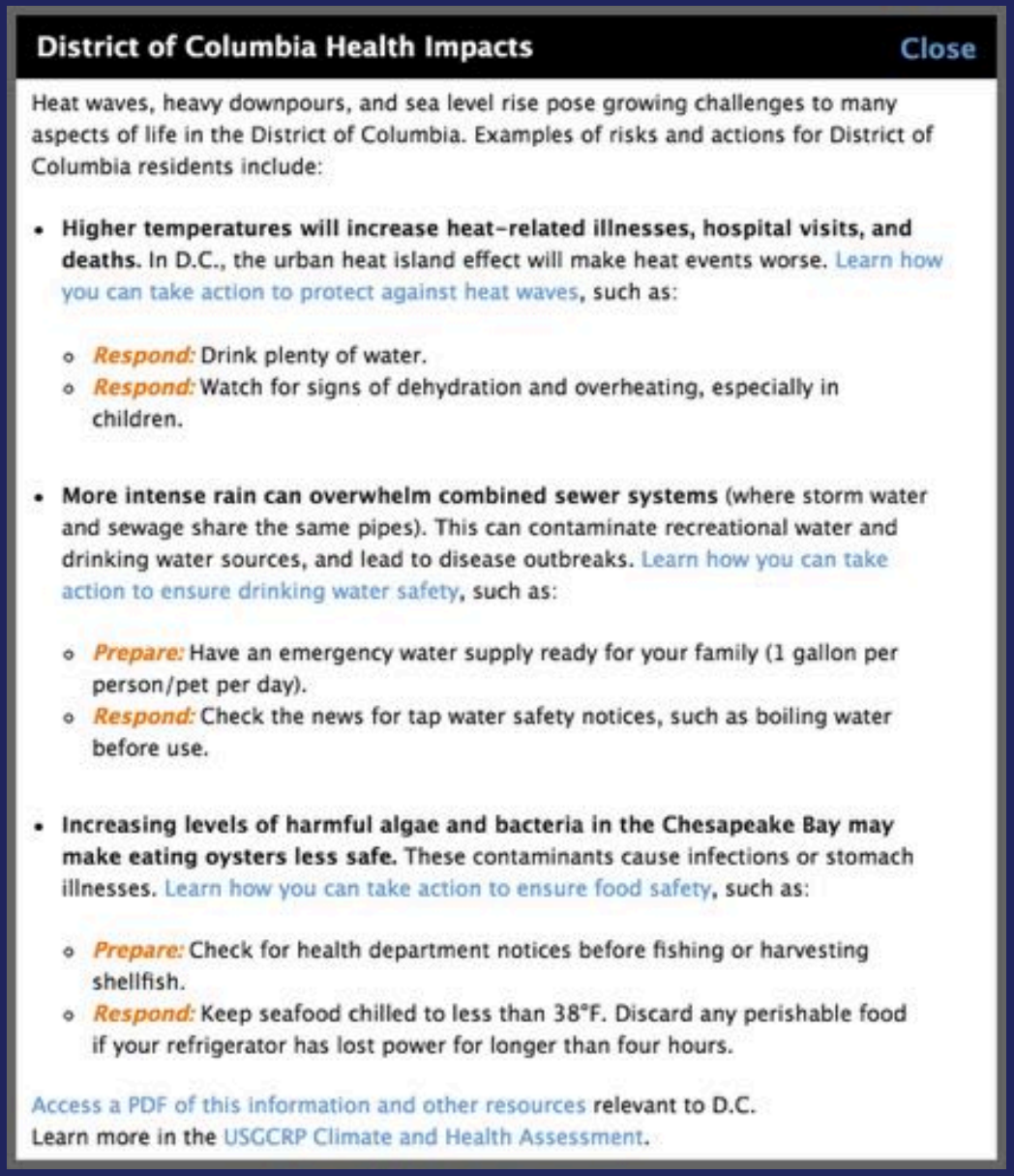
https://19january2017snapshot.epa.gov/climate-impacts/climate-change-and-human-health-risks-your-state_.html#healthmap



District of Columbia

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Medications:
Climate considerations

- Medication risks associated with treatment of pre-existing or new-onset conditions
  - Climate-related disaster environments:
    - Extremes of temperature
    - Disruption in electricity / food / water
  - Caution warranted for meds which:
    - Disrupt thermal regulation (antipsychotics)
    - Create electrolyte imbalance (lithium)
    - Predispose to dehydration (anticholinergics)
    - Narrow therapeutic window (lithium)

INTERVENTIONS

- Clinical monitoring (lack of efficacy, side effects)
- Serum levels (lower threshold for checking)
- Dosing Adjustments
- Patient education (dosing, side effects, hydration, nutrition)

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SMALL GROUP BREAKOUT (15-20 min)

A severe hurricane is approaching the coastal city where you live and work.

1. What concerns do you have for your patients in the days leading up to the storm?
2. What concerns do you have for your patients after the storm?
3. What action steps could you take as a psychiatrist to help your patients as well as local community?

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Pandemics

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Assistant Director, Center for the Study of Traumatic Stress
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OBJECTIVES

- Discuss the unique psychological and behavioral reactions to exposure and contamination.
- Describe the impact of pandemic behaviors on population and healthcare provider well-being.
- Understand the public health significance of risk and crisis communication during pandemics.

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PSYCHOLOGICAL AND BEHAVIORAL RESPONSE TO PANDEMICS

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Psychological & Behavioral Responses to Disasters

- **Change in Sleep**
- **Decreased Sense of Safety**
- **Irritability, Distraction**
- **Isolation, Avoidance**

- **Smoking**
- **Alcohol**
- **Over dedication**
- **Change in Travel**
- **Separation Anxiety**

- **Anxiety**
- **PTSD**
- **Depression**
- **Complex Grief**

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Ursano, R.J., Fullerton, C.S., Weisaeth, L., Raphael, B. (Eds.). (2017). Textbook of Disaster Psychiatry, 2ED. London, UK: Cambridge University Press

Psychological & Behavioral Response

- Chemical, Biological, Radiological, Nuclear… Exposure & Contamination
- Novelty, unfamiliar, mysterious
- Invisible agent; powerful, evil, imperceptible
- Fear, anger, scapegoating
- Potential for “Panic”

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McCormick et al. (2015). Mental health consequences of chemical and radiologic emergencies: a systematic review. *Emergency Medicine Clinics of North America*, *33*(1), 197–211.

Psychological & Behavioral Response

- Uncertainty re “site” of event
- Delays in detection, non-specific symptoms
- Effects of isolation and quarantine
- Shortages & scarcity (prophylaxis, antidote, treatment)
- Medically unexplained physical symptoms (MUPS)
  - 50-100:1 (seek care vs actual exposure)

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Engel, C. C., Jr, Adkins, J. A.,& Cowan, D. N. (2002). Caring for medically unexplained physical symptoms after toxic environmental exposures: effects of contested causation. *Environmental Health Perspectives*,*110* (Suppl 4), 641–647.

Perception as natural & human-generated…

Mass Violence > **Technological Disasters** > **Natural Disasters**

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Norris, F. H. et al. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981-2001. *Psychiatry*, *65*(3), 207–239.

Disruption in Community Phases

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www.samhsa.gov

IMPACT ON POPULATIONS & HEALTHCARE PROVIDERS: LESSONS LEARNED

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History

- 1918 - Spanish Flu
- 1981 – HIV/AIDS
- 2002-2004 – SARS
- 2009 – H1N1
- 2014 – Ebola
- 2015 – Zika

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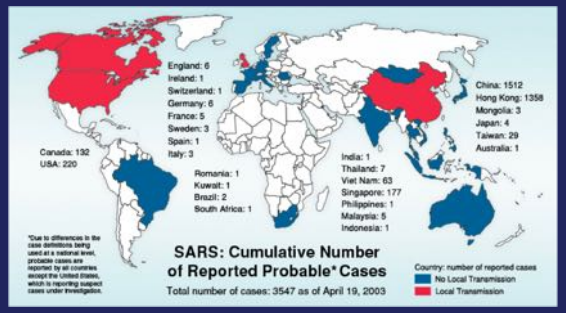
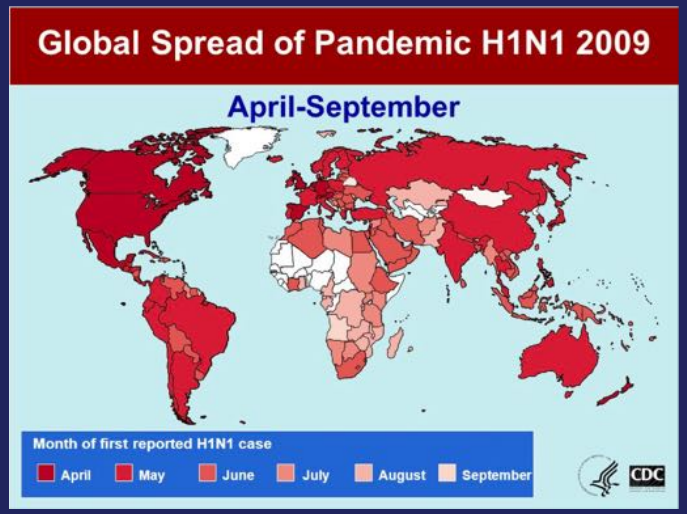
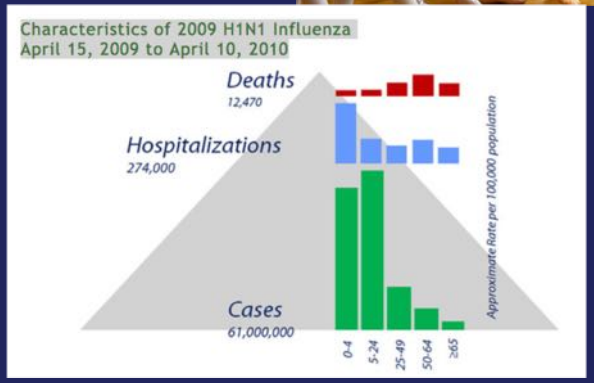
Important Themes

- Perception of risk influences…
  - Population stress
  - Preventive measures
  - Provider well-being







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HEALTH RISK & CRISIS COMMUNICATION: INFLUENCING POPULATION HEALTH BEHAVIORS

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"Better than any medication we know, information treats anxiety in a crisis."

Source: Saathoff, 2002

Communication is a behavioral health intervention

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Health Risk & Crisis Communication

- Clear, accurate, timely, repeated
- Start with most relevant info
- If you don't know, say so
- Never make things up
- Use language people understand
- Victory favors the prepared
  - Message mapping…

It's not WHAT you say, it's HOW you say it!

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Reynolds, B. S.,&Seeger, M. (2012). Crisis and Emergency Risk Communication. Centers for Disease Control and Prevention.

Covello, V. T. (2003). Best practices in public health risk and crisis communication. *Journal of Health Communication*.

Templates

- 1N = 3P
- Primacy / Recency
- 27 / 9 / 3
- CCO

In a crisis, people hear negative messages more easily than positive.

Will take 3 positive messages to equal the impact of one negative message.

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Templates

- 1N = 3P
- Primacy / Recency
- 27 / 9 / 3
- CCO

Tend to remember messages in this order:

First > Last > Middle

Prioritize your messages with that order in mind!

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Templates

- 1N = 3P
- Primacy / Recency
- 27 / 9 / 3
- CCO

Human attention limited in a crisis:

27 words, 9 seconds, 3 messages

Example: "I share the sense of tragedy with you. This hospital will continue responding with everything we have. We will emerge stronger and even better prepared."

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Templates

- 1N = 3P
- Primacy / Recency
- 27 / 9 / 3
- CCO

Compassion,
Conviction, Optimism

Example: "I share the sense of tragedy with you. This hospital will continue responding with everything we have. We will emerge stronger and even better prepared."

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Summary

- Pandemics, and other CBRN events involving “exposure and contamination’, create unique psychological and behavioral reactions
- Perception of risk strongly influences population behaviors, including adoption of preventive measures and well-being of healthcare personnel
- Health risk and crisis communication are particularly important behavioral health interventions during pandemics

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SMALL GROUP BREAKOUT #1 (8-10 min)

- A physician traveling back from West Africa on a humanitarian medical mission and was quarantined at LaGuardia for suspected Ebola infection and will be transported to a nearby hospital for further evaluation.
  1. Discuss the populations in which adverse psychological and behavioral effects may occur.
  2. What early interventions would you recommend and for whom?

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SMALL GROUP BREAKOUT #2 (8-10 min)

- The physician is diagnosed with Ebola. The CDC is coming to NY to begin surveillance and threat containment. The Mayor of NYC is concerned and wants to know what to say when she goes out to interact with the news media in 30 minutes.
  1. What concerns should the mayor anticipate when addressing the public?
  2. Craft a preliminary message for the mayor to deliver.

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Mass Violence

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School of Medicine
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OBJECTIVES

- Compare adverse psychological and behavioral reactions to acts of mass violence to those of other disasters.
- Discuss the impact of modern media and communications on individual and community reactions to acts of mass violence.
- Consider the role of psychiatrists as advisors to community leaders following acts of mass violence.

ADVERSE PSYCHOLOGICAL AND BEHAVIORAL REACTIONS TO MASS VIOLENCE

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Mass Violence

- Shootings
- Bombings
- CBRN attacks
- Other terror attacks
- War

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Blair, JP, and Schweit, KW. (2014). A Study of Active Shooter Incidents, 2000 - 2013. Texas State University and Federal Bureau of Investigation, U.S. Department of Justice, Washington D.C. 2014

European Union Terrorism and Situation Report 2017

Severity of Psychosocial Consequences by Type of Disaster

Mass Violence > **Technological Disasters** > **Natural Disasters**

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Norris, F. H. et al. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981-2001. *Psychiatry*, *65*(3), 207–239.

Mass violence

- Disruption of sense of safety/violation of safe havens
- Exposure to dead and wounded
  - Direct
  - Media broadcasts
- Threat of CBRN exposure

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Ursano, R.J., Fullerton, C.S., Weisaeth, L., Raphael, B. (Eds.). (2017). Textbook of Disaster Psychiatry, 2ED. London, UK: Cambridge University Press

Psychological & Behavioral Responses to Disasters

- **Change in Sleep**
- **Decreased Sense of Safety**
- **Irritability, Distraction**
- **Isolation, Avoidance**

- **Smoking**
- **Alcohol**
- **Over dedication**
- **Change in Travel**
- **Separation Anxiety**

- **Anxiety**
- **PTSD**
- **Depression**
- **Complex Grief**

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Psychological and Behavioral Responses to Mass Shootings

- Prevalence of PTSD following mass shootings 4-91%[1]
- Prevalence of MDD following mass shootings 5-71%[1]
- Acquisition of handguns increases following mass shooting events.[2]

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1. Lowe MH, Galea S. (2017). The mental health consequences of mass shootings. Trauma, Violence, & Abuse, 18(1).
2. Studdert DM, et al. Handgun acquisitions in California after two mass shootings. Ann Int Med, 166(10).

Media Exposure and Mass Violence

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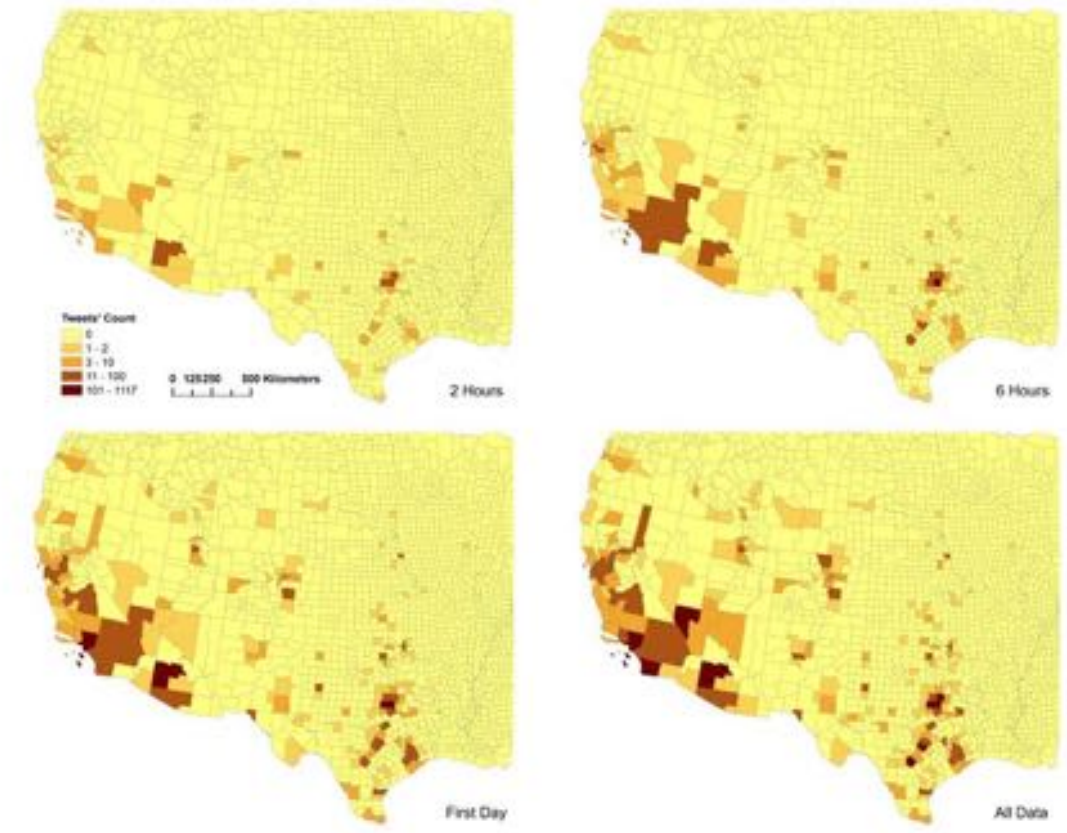

Figure 6. Tweets in the First 2 Hours, 6 Hours, First Day, from July 7th to July 31st at County Level

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Teng Y. (2017). Diffusion of Twitter messages on Dallas mass shooting: Patterns and factors. Tx State Univ thesis.

Media Exposure and Mass Violence

- Exposure to television coverage predicts fear of terrorism[1]
- Greater exposure to graphic images associated with higher PTS symptoms[2]
- Higher social media exposure associated with higher psychological distress[3]
- Higher television exposure in children associated with higher rates of PTSD[4]

1. Nellis AM, Savage j. (2012). Does watching the news affect fear of terrorism? The importance of media exposure on terrorism fear. Crime and Delinquency, 58.
2. Ahern J, et al. (2004). Television images and probable posttraumatic stress disorder after September 11. J Nerv Mental Dis, 65.
3. Goodwin R, et al. (2015). Association between media use, acute stress disorder, and psychological distress. Psycotherapy and Psychosomatics, 84.
4. Pfefferbaum, et al. (2008). Media coverage and children's reactions to disaster with implications for primary care and public health. J Ok State Med Assoc, 101.

INTERVENTIONS FOLLOWING MASS VIOLENCE

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Psychological First Aid

- Safety –individual and community sense of safety
- Calming – reduce arousal/anxiety
- Efficacy – identify community as resilient
- Connectedness
  - Individuals or groups singled out
  - Competing views
- Hope / Optimism – better things are possible

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Special Populations

- Law Enforcement
- First Responders
- Healthcare

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Havron WS, et al. (2017) Psychological effect of a mass casualty event on general surgery residents. J Surg Education, 74(6).

Summary

- Mass violence events have greater potential to generate severe or persisting responses
- Exposure to mass violence through conventional and social media can expand the affected population and aggravate responses
- Communication from community leaders should promote a sense of safety and calming and recognize potential challenges to efficacy and connectedness

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SMALL GROUP BREAKOUT #1 (8-10 min)

A lone gunman shoots 15 people in a local elementary school before turning the gun on himself as law enforcement arrives

1. What potential impacts should you anticipate on your patients' lives and health?

2. What do you recommend to your patients?

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SMALL GROUP BREAKOUT #2 (5-6 min)

A group of attackers drive a truck into a farmer's market in your community killing 6 people and injuring 28 more.

1. Your town council requests recommendations on messages to send to the community.

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Additional References

Disaster Psychiatry (F Stoddard):

https://www.appi.org/Disaster_Psychiatry

Resiliency in the Face of Disaster and Terrorism (J Napoli):

https://www.amazon.com/Resiliency-Face-Disaster-Terrorism-Survive/dp/1932181180

Disaster Psychiatry; What Psychiatrists Need to Know (T Ng)

http://www.psychiatrictimes.com/disaster-psychiatry/disaster-psychiatry-what-psychiatrists-need-know

Textbook of Disaster Psychiatry, 2nd Edition:

http://www.cambridge.org/gb/academic/subjects/medicine/mental-health-psychiatry-and-clinical-psychology/textbook-disaster-psychiatry-2nd-edition?format=HB#J2SuCufLhKF4tTvT.97

Integrating Emergency Management and Disaster Behavioral Health:

https://www.elsevier.com/books/integrating-emergency-management-and-disaster-behavioral-health/flynn/978-0-12-803638-9

Disaster Psychiatry Handbook

http://www.eird.org/isdr-biblio/PDF/Disaster%20psychiatry%20handbook.pdf

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