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

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Disclaimer

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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...
COURSE OVERVIEW

• Disaster Mental Health Principles
• Climate-Related Disasters
• Pandemics (Exposure and Contamination)
• Mass Violence
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.
WHAT IS DISASTER PSYCHIATRY?
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

*World Health Organization, 2002
Disaster Psychiatry

• “The professional application of mental health knowledge and expertise to the unique setting of disasters.”

Garakani et al., 2004
Synthesis of Many Fields

- Emergency
- Trauma
- Community
- Consult-liaison
- International

“Disaster Psychiatry”, 2011 (Stoddard)
# Broad Focus

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<tr>
<th>PSYCHIATRY</th>
<th>DISASTER PSYCHIATRY</th>
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<td>Individual</td>
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<td>Disease/Disorder</td>
<td>Wellness</td>
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<td>Treatment</td>
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<td>Medical Consultation</td>
<td>Leadership Consultation</td>
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<tr>
<td>Interpersonal Comm</td>
<td>Health Risk/Crisis Comm</td>
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<tr>
<td>Fixed/known facilities</td>
<td>Whenever &amp; wherever</td>
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TYPES AND FREQUENCY OF DISASTERS
Categories of Disasters

**Natural Disasters**
- Meteorological
- Hydrological
- Geological
- Pandemic
- Wildfires

**Human-Generated Disasters**
- Non-intentional
- Technological
- Intentional
- Mass Violence
- Terrorism

Adapted from James M. Shultz, Ph.D., DEEP PREP training
Global Climate-Related Disaster Incidence & Cost (1950-2012)

Active Shooter Incidence


“an individual(s) actively engaged in killing or attempting to kill people in a populated area.”
Disaster Cycle / All Hazards Planning

https://aretehs.com/images/Emergency-management-diagramCOLOR.png
ADVERSE PSYCHOLOGICAL AND BEHAVIORAL RESPONSE TO DISASTERS
In a disaster, the size of the psychological “footprint” greatly exceeds the size of the medical “footprint.”

Psychological & Behavioral Responses to Disasters

Distress Reactions
- Anxiety
- PTSD
- Depression
- Complex Grief

Health Risk Behaviors
- Change in Sleep
- Irritability, Distraction
- Isolation, Avoidance
- Decreased Sense of Safety
- Smoking
- Alcohol
- Over dedication
- Change in Travel
- Separation Anxiety

Psychiatric Disorders

Severity of Psychosocial Consequences by Type of Disaster

Mass Violence > Technological Disasters > Natural Disasters

Population Exposure to Event

- Family, Friends, Broader Population
- First Responders & Public Health Emergency Workers
- Family of Survivors
- Direct Victims
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 — 451 in Utah, 1,154 in Kansas, 165 way out in Alaska. They are clustered by the thousands in large Southern cities like Dallas, Atlanta and Memphis, and huddling in handfuls in unlikely hamlets like Shell Knob, Mo. (pop. 1,363) and Fountain Inn, Ky. (pop. 290).

Evacuees fled Hurricane Katrina and the floods that followed in caravans of cars and fleets of buses, on helicopters and chartered planes, by bus and, a few, on foot. A month after the storm, a map emerged 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, 94 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 to Nome, Alaska, 3,927 miles from the French Quarter and another in Little Rock, 1,570 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 applications came from counties where blacks were 38 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, applications are spread like the wind that whipped through their old neighborhoods: none of the other 90-plus metropolitan areas has even 1 percent of the total. Some 40 ZIP codes — among them Pascagoula, Miss.; Pensacola, Fla.; and Hope, Mich. — had just one applicant.

Applications by state

Applications by distance from New Orleans

Applicants, pct.

 restrained individuals are. It appears that the number of applications from a ZIP code

Applicants, pct.

 restrained individuals are. It appears that the number of applications from a ZIP code

Applicants, pct.
Phases

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

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

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

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

- Reality; discouragement
- Chronic varied stressors
- Business as usual
- Predictable
- Should be acknowledged
- Cohesion / healing
Phases

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

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
INTERVENTIONS FOLLOWING DISASTERS
This review concerns the efficacy of single session psychological “debriefing” in reducing psychological distress and preventing the development of posttraumatic 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.

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
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
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
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

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<thead>
<tr>
<th>Table 2. Perceived safety in community settings (n = 1205, except for workplace category where n = 876)</th>
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<tr>
<td><strong>Degree of safety</strong></td>
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<tr>
<td>In neighborhood % (95% CI)</td>
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<tr>
<td>A lot less safe 21.5 (18.7–24.2)</td>
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<td>A little less safe 35.7 (32.4–38.9)</td>
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<tr>
<td>As safe as usual 42.4 (39.0–45.8)</td>
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<td>“Don’t know” and refusals 0.5</td>
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<tr>
<td>At workplace and surrounding area % (95% CI)</td>
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<tr>
<td>A lot less safe 22.7 (19.2–26.1)</td>
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<tr>
<td>A little less safe 31.5 (27.9–35.4)</td>
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<tr>
<td>As safe as usual 45.6 (41.6–49.5)</td>
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<td>“Don’t know” and refusals 0.2</td>
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<td>At other public places % (95% CI)</td>
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<td>A lot less safe 30.6 (27.5–33.7)</td>
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<td>A little less safe 35.3 (32.1–38.5)</td>
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<tr>
<td>As safe as usual 32.0 (28.8–35.2)</td>
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<tr>
<td>“Don’t know” and refusals 2.1</td>
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<td>At gas stations % (95% CI)</td>
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<tr>
<td>A lot less safe 38.6 (35.4–41.9)</td>
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<td>A little less safe 31.1 (27.9–34.2)</td>
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<tr>
<td>As safe as usual 26.8 (23.7–30.0)</td>
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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

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, meetings, collaborations, rituals)
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


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
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
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

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

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
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


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 (*)

Leadership Consultation

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

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

Source: Saathoff, 2002

Communication is a behavioral health intervention
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.
Communication - Focus

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

“Therapeutic rapport” on a population level
Communication - Forms

- Written and spoken word
- Behavior
- Imagery
- Rituals & Symbols
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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PREPAREDNESS: PROVIDERS & PATIENTS
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
Curriculum Recommendations for Disaster Health Professionals

Disaster Behavioral Health

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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 exceed the local response and recovery resources and external resources must be utilized. Disasters can include such naturally occurring events such as floods, hurricanes, 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
Disaster Behavioral Health Education Fact Sheets

Center for the Study of Traumatic Stress

Safety, Recovery and Hope After Hurricanes Harvey, Irma, Katia and Maria: Helping Communities and Families

Psychological First Aid

- Teach children about disaster and how to deal with it
- Help them understand that they are not alone
- Encourage them to talk about their feelings and experiences
- Provide them with opportunities to express their thoughts and emotions
- Help them develop coping strategies for dealing with stressful situations

Anxiety

- Allow children to ask questions and express their concerns
- Provide reassuring and comforting responses
- Help them feel safe and secure
- Encourage them to seek help when they need it

Center for the Study of Traumatic Stress

Addressing the Needs of the Seriously Mentally Ill in Disaster

- Help people who are fearful or anxious
- Provide support and comfort
- Offer guidance and advice
- Help people who are devastated by the experience

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

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”

Not an endorsement, just an option!!!
$14.5 Billion rebuilding and reinforcing barriers and levee system of Louisiana

$12.5 Billion to screen and treat primary mental health disorders in disaster population


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:

Integrating Emergency Management and Disaster Behavioral Health:

Disaster Psychiatry Handbook
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
Climate-Related Disasters

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School of Medicine
Uniformed Services University
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
A CHANGING GLOBAL CLIMATE & RELATED DISASTERS
Where the Oceans Have Been Colder and Hotter Than Average

Average temperatures from each decade compared with the 20th-century average.
Grinnell Glacier from Mt. Gould
1938 - 2006

1938
Hilleman photo
GNP Archives

1981
Key photo
USGS

1998
Fagre photo
USGS

2006
Holzer photo
USGS

Underwater Homes in Virginia Beach

12,348 homes (8.4% of the Virginia Beach housing stock), worth a combined total of $4.7B, would be underwater if sea levels rose 6 feet.

Underwater Homes in Boston

21,629 homes (17.8% of the Boston housing stock), worth a combined total of $24.5B, would be underwater if sea levels rose 6 feet.

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.

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

Natural Disasters

Blizzards, Droughts, Cyclonic storms (cyclone, hurricane, typhoon), Thunder & Hail storms, Heat waves, Tornadoes

Floods Tsunamis

Wildfires

Meteorological

Hydrological

Geological

Pandemic

Non-intentional

Technological

Intentional

Mass Violence

Terrorism

Adapted from James M. Shultz, Ph.D., DEEP PREP training
Global Climate-Related Disaster Incidence & Cost (1950-2012)

Making the Connection...

- Escalating effects of CLIMATE CHANGE
- Increased frequency & severity of NATURAL DISASTERS
- Increased need for DISASTER MENTAL HEALTH care
PROVIDER RESOURCES
APA Position Statement

POSITION STATEMENT:

RESOURCE DOCUMENT:
Regional Issues

Climate Change & Human Health Risks in Your State

District of Columbia Health Impacts

Heat waves, heavy downpours, and sea level rise pose growing challenges to many aspects of life in the District of Columbia. Examples of risks and actions for District of Columbia residents include:

- **Higher temperatures will increase heat-related illnesses, hospital visits, and deaths.** In D.C., the urban heat island effect will make heat events worse. Learn how you can take action to protect against heat waves, such as:
  - **Respond:** Drink plenty of water.
  - **Respond:** Watch for signs of dehydration and overheating, especially in children.

- **More intense rain can overwhelm combined sewer systems** (where storm water and sewage share the same pipes). This can contaminate recreational water and drinking water sources, and lead to disease outbreaks. Learn how you can take action to ensure drinking water safety, such as:
  - **Prepare:** Have an emergency water supply ready for your family (1 gallon per person/pet per day).
  - **Respond:** Check the news for tap water safety notices, such as boiling water before use.

- **Increasing levels of harmful algae and bacteria in the Chesapeake Bay may make eating oysters less safe.** These contaminants cause infections or stomach illnesses. Learn how you can take action to ensure food safety, such as:
  - **Prepare:** Check for health department notices before fishing or harvesting shellfish.
  - **Respond:** Keep seafood chilled to less than 38°F. Discard any perishable food if your refrigerator has lost power for longer than four hours.

Access a PDF of this information and other resources relevant to D.C. Learn more in the USGCRP Climate and Health Assessment.
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)
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?
Pandemics

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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.
PSYCHOLOGICAL AND BEHAVIORAL RESPONSE TO PANDEMICS
Psychological & Behavioral Responses to Disasters

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

Psychiatric Disorders
- Anxiety
- PTSD
- Depression
- Complex Grief

Health Risk Behaviors
- Smoking
- Alcohol
- Over dedication
- Change in Travel
- Separation Anxiety

Reference:
Psychological & Behavioral Response

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

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)

Perception as natural & human-generated...

Mass Violence → Technological Disasters → Natural Disasters

Disruption in Community Phases
IMPACT ON POPULATIONS & HEALTHCARE PROVIDERS: LESSONS LEARNED
History

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

• Perception of risk influences...
  • Population stress
  • Preventive measures
  • Provider well-being
HEALTH RISK & CRISIS COMMUNICATION: INFLUENCING POPULATION HEALTH BEHAVIORS
“Better than any medication we know, information treats anxiety in a crisis.”

Source: Saathoff, 2002

Communication is a behavioral health intervention
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!


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.
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!
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.”
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.”
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
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?
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.
Mass Violence

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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
Mass Violence

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


European Union Terrorism and Situation Report 2017
Severity of Psychosocial Consequences by Type of Disaster

Mass Violence > Technological Disasters > Natural Disasters

Mass violence

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

Psychological & Behavioral Responses to Disasters

Distress Responses
- Anxiety
- PTSD
- Depression
- Complex Grief

Psychiatric Disorders

Health Risk Behaviors
- Change in Sleep
- Decreased Sense of Safety
- Irritability, Distraction
- Isolation, Avoidance
- Smoking
- Alcohol
- Over dedication
- Change in Travel
- Separation Anxiety

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

Media Exposure and Mass Violence
Media Exposure and Mass Violence
Media Exposure and Mass Violence

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

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\(^4\)

INTERVENTIONS FOLLOWING MASS VIOLENCE
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
Special Populations

• Law Enforcement
• First Responders
• Healthcare

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
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?
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.
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:**

**Integrating Emergency Management and Disaster Behavioral Health:**

**Disaster Psychiatry Handbook**