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MENTAL HEALTH RESPONSE TO COMMUNITY DISASTERS: A FACT SHEET FOR DISASTER MENTAL HEALTH PLANNERS, RESPONDERS, AND PROVIDERS

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Despite technological and scientific advances, disasters continue to occur throughout the world. Disasters, whether they are natural or man-made in origin, or contain elements of both, can cause extensive destruction, injury, and death. Regardless, profound mental health consequences can be expected as a result of major disasters of all types. Additionally, technological advances are bringing disturbing up-close on-scene media coverage of disasters to more people than ever.

The following factsheet reviews the effects of disasters on mental health and describes a recommended mental health response for community disasters. This factsheet can be used by anyone preparing for or responding to the mental health consequences of disasters.

GENERAL PRINCIPLES FOR DISASTER MENTAL HEALTH

Based on empirical study of disasters, several main principles of disaster mental health have been established and described in the disaster mental health literature.[1]

1. **The first principle is that people are resilient.** In efforts to identify mental health problems to be addressed, it is easy to overlook the resilience of the majority who do not develop psychiatric disorders, even after exposure to severe disaster trauma. Some people may even experience personal growth or have other positive outcomes.

2. **The second principle clarifies that even though most people do not develop psychiatric illness after exposure to disaster trauma, most people will experience at least some emotional distress.** Thus, emotional distress after exposure to disasters is normative, and a normal response. Intrusive memories and hyperarousal symptoms are particularly common manifestations of emotional responses to disasters. Distress not meeting criteria for a psychiatric disorder is important and may benefit from psychosocial interventions. There are more opportunities to assist disaster survivors with distress than with psychiatric illness, because distress is far more prevalent.

3. **The third principle is that one size does not fit all for survivors of disasters, and some people may develop psychiatric disorders after exposure to disaster trauma.** It is important to differentiate emotional distress from psychopathology, because different interventions are required for these two different entities. PTSD or any other psychiatric disorder is never normal, even if it occurs in relation to a disaster; diagnosis and treatment of psychiatric disorders is indicated.

4. **The fourth principle emphasizes the need to identify psychiatric disorders and provide appropriate treatment for them.** Psychiatric disorders developing in the wake of disasters deserve formal assessment and treatment just as in other settings. Accurate diagnosis is essential, because it determines the most appropriate type of intervention. A parallel example in the care of medical illness is that patients presenting to the emergency room with chest pain will benefit from an accurate diagnosis before the administration of definitive treatment, because chest pain caused by a heart attack requires very different care (e.g., clearing clots from coronary arteries) than that indicated for chest pain which may present with identical symptoms but be caused by, for

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example, pneumonia (e.g., antibiotics), esophageal spasm (e.g., anti-esophageal reflux medications), heartburn (e.g., antacids), musculoskeletal pain (e.g., non-steroidal anti-inflammatory agents), or a panic attack (e.g., psychopharmacologic medication such as benzodiazepines or antidepressant medication).

5. **The fifth principle is that posttraumatic stress disorder (PTSD) is usually the most common psychiatric disorder to develop after exposure to disaster trauma.** A corollary is that PTSD is a conditional diagnosis, based on sufficient exposure to a qualifying traumatic event. In other words, people who are not exposed to trauma (according to *DSM-5*)—by physical endangerment, directly witnessing others being endangered, injured, or killed, or by having a close associate who was exposed—cannot be candidates for a diagnosis of PTSD. PTSD usually develops quickly after disaster exposure (within the first few months), and it is often chronic, lasting many months to years. PTSD is usually accompanied by other psychiatric disorders and often medical illness. Avoidance and numbing symptoms are less common than intrusive memories or hyperarousal symptoms and are markers of risk for PTSD. The second most common diagnosis is usually major depression. This disorder, unlike PTSD, may develop even in people without trauma exposure, for example, in people who experience loss of valued possessions or economic losses.

6. **The sixth principle is that new alcohol and other drug use disorders do not regularly commence after disasters.** Although alcohol and drug use may increase in some groups after certain disasters, this occurrence does not regularly translate into new substance use disorders.

These principles provide general guidance for clinicians to address mental health effects of disasters.

PUBLIC HEALTH AND MENTAL HEALTH IN EMERGENCY AND MEDICAL PREPAREDNESS AND RESPONSE TO DISASTER

Public health expertise has been incorporated into the emergency and medical preparedness and response to disaster. It is also important to integrate mental health into emergency and medical preparedness and response to disaster.[2-9] Although mental health has not routinely been specifically included in emergency and medical preparedness, examples of successful deployment of mental health operations in conjunction with general disaster response are known.

One example of mental health integration in disaster response was the establishment of a mental health specialty unit as part of a general medical clinic providing acute medical care to evacuees of Hurricane Katrina at a large evacuee shelter in Dallas, Texas in 2005.[10] This cooperative effort between medical and mental health caregivers in the community was so successful that the process was repeated in Dallas shelters housing evacuees of Hurricanes Gustav and Ike in 2008. The shelter health care operation very effectively limited further strain on the area's already-overcrowded emergency departments.

Another example of mental health integration in disaster response was described by a group in Georgia that produced a county bioterrorism response plan. This plan integrated mental health into the Operations Sector of an Incident Command Structure to organize resources and orient relationships among public safety departments and other agencies.[6]

These examples have demonstrated the need for inclusion of mental health into emergency and medical response to disaster and the role of psychiatric expertise in coordination with the emergency and medical parts of the operation.

INTRODUCTION TO FRAMEWORK FOR MENTAL HEALTH RESPONSE TO DISASTER

The essential elements of emergency and medical response to mass casualty incidents involve three main activities:

1) search and rescue,
2) acute stabilization and triage, and
3) definitive medical treatment.[11]

Application of these elements to mental health functions in disaster response translates into:

1) identifying psychiatric disorders and mental health needs,[5]
2) triage and referral,[12,13] and
3) providing appropriate mental health services and interventions.[14]

These functions serve as a framework to organize and guide disaster mental health responses.

CASE IDENTIFICATION

Following this framework, the mental health evaluation begins with assessment of exposure to disaster trauma, which is the basis of all that follows in the three elements

of the mental health response framework.[3] The *DSM-5* criterion A for PTSD is used to define trauma, because the diagnosis of PTSD—the most common psychiatric disorder after most disasters—depends on having had sufficient exposure to a qualifying trauma. In short, exposure to trauma is the experience of threat to life or limb.

There are three main ways to be exposed to a qualifying trauma in a disaster:

1) being directly endangered in the disaster;
2) being an eyewitness to others being killed, injured, or endangered in the disaster; and
3) having a close associate (i.e., nuclear family member or close friend) who was killed, injured, or endangered in the disaster.

A fourth way to qualify for trauma exposure is to experience repeated or extreme exposure to aversive trauma details. Examples are first responders collecting human remains or police officers repeatedly exposed to details of child abuse. Exposure through electronic media, TV, movies, or pictures does not qualify unless this exposure is work-related. Seeing news coverage of a disaster (without personal exposure or any loved one involved) would therefore not qualify.

People with qualifying trauma exposures in the disaster should be monitored for development of PTSD and acute stress disorder. Evaluation for these disorders will require examination of full *DSM-5* diagnostic criteria. If the number of exposed individuals is prohibitively large to permit full diagnostic evaluation of them all given the available resources, a screening tool may be used to begin the process. Treatment decisions should not be made based upon a positive screen. Those who screen positive will require triage to full diagnostic assessment and referral to interventions or services depending on the results. Assessment for PTSD or acute stress disorder are not needed for people without qualifying exposures to trauma in the disaster. Because PTSD is usually associated with comorbid psychiatric disorders, assessment of people with PTSD should include evaluation for other psychiatric disorders. Major depression and anxiety disorders may also occur after exposure to disaster trauma, and people who lose loved ones may experience bereavement. Because time is required for new psychiatric disorders to develop, PTSD cannot be diagnosed until a month and major depressive disorder until two weeks after the disaster, according to *DSM-5* criteria. Thus, different types of assessments will be required in different time frames.

Disasters also create stressors that affect people in ways other than through trauma exposure, such as with property destruction, economic losses,

separation from loved ones, disruption of social networks, and inconveniences such as impassable roads, traffic congestion, and closure of favorite stores and recreational locations. These stressors may be associated with the development of major depressive disorder or anxiety disorders. Although alcohol and other drug use disorders do not regularly commence after disasters, people with pre-existing substance problems may be at risk for exacerbation or relapse, and any individuals with escalation of substance use after disaster may be at risk for a substance use disorder; thus monitoring of these individuals for excessive substance use may be appropriate.

Pre-existing psychopathology may recur or be exacerbated after disasters. Some disasters disproportionately affect lower socioeconomic groups who may have substantial amounts of serious mental illness and longstanding substance dependence. An example of this situation occurred with Hurricane Katrina evacuees who were exposed to the storm and evacuated by bus to shelters in Texas.[10] Many of these evacuees arrived at the shelter without their medications and no access to their usual medical care. There was a substantial need for treatment of pre-existing psychiatric disorders endemic in the population that evacuated to the shelters, such as schizophrenia, bipolar disorder, and alcohol and other drug dependence requiring the expertise of emergency psychiatry physicians.

Especially in large evacuee populations, there is always potential that some individuals may develop a psychiatric crisis. Suicidal or homicidal ideation, acute exacerbation of psychosis, psychiatrically-based inability to care for oneself or one's dependents, withdrawal syndromes, and acute mental status changes (e.g., delirium) require urgent evaluation and management, and may result in transport to emergency care in hospital facilities.

TRIAGE AND REFERRAL

Triage and referral to services depends on accurate

mental health evaluation, as described above. This helps to ensure that mental health interventions provided will be appropriate for individual needs. Individuals with a positive screen for PTSD or depression will need further psychiatric evaluation with full diagnostic assessment to inform the most appropriate choice for treatment. Effective treatment decisions are fundamentally based on full diagnostic assessment.

Brief acute care for psychiatric stabilization may be needed (e.g., management of acute exacerbation of serious mental illness; prescription to resume previously-established psychotropic medication) before referral to ongoing mental health services for individuals without sources of care in the postdisaster setting. Individuals in psychiatric crisis may need EMS transport to hospital facilities.

Referral for professional evaluation and treatment is also appropriate for anyone requesting referral to mental health services.

MENTAL HEALTH INTERVENTIONS

The most effective disaster mental health interventions are those directed to needs identified by accurate mental health assessment. Formal psychiatric treatment is appropriate for postdisaster psychiatric disorders; wellness- and resilience-based psychosocial interventions are indicated for emotional distress and social problems. Because only a minority of even the most highly exposed survivors of disasters will develop a psychiatric disorder after the disaster, psychiatric treatment will not be needed for the majority of people.

Most people exposed to disasters will experience psychological distress to varying degrees, even if they do not develop a postdisaster psychiatric disorder. Early and continuing psychosocial interventions are therefore generally indicated for disaster survivors to address common distress, provide emotional support, inform, and normalize common emotional responses. The most-used psychosocial interventions described in the academic literature are psychological first aid, psychological debriefing (eg, Critical Incident Stress Debriefing), and crisis counseling.

- ***Psychological first aid*** is a collection of practical interventions and principles to address emotional distress. Developed from expert consensus, this practice has not been empirically tested.[15] Parallel to medical first aid, the goals of psychological first aid are to: assist with basic physical and psychosocial needs; address psychological distress; promote return to adaptive functioning; and direct individuals to appropriate levels of care. Psychological first aid can be delivered flexibly in diverse settings to individuals experiencing emotional distress after disasters, by clinicians or nonclinicians. Components of psychological first aid are: providing a calm, comforting, and compassionate presence; addressing essential physical needs; protecting

individuals from further harm; gathering relevant information including specific concerns of affected individuals; responding appropriately to psychological responses of affected individuals; delivering accurate and timely information about disaster-related risks and responses of authoritative bodies; providing social support and coping assistance; and linkage to social and psychiatric services. A number of available psychological first aid toolkits describe the procedures in detail.[16-19]

- ***Psychological debriefing*** is an intervention involving individual or group session(s) in the hours or days after a traumatic event, to provide emotional ventilation, trauma processing, and psychoeducation. This practice has gained extensive international popularity in spite of a lack of empirical evidence of its effectiveness.[20] Provision of psychological debriefing does not constitute a full mental health response to disaster mental health needs; this technique does not prevent or treat PTSD. Individuals at risk for PTSD or other psychopathology may worsen with debriefing, and should instead be identified and referred for psychiatric services.[20,21]

- ***Crisis counseling*** is a brief strengths-based intervention that can be delivered to individuals or groups by crisis workers and paraprofessionals in nontraditional community settings such as disaster shelters. Crisis counseling provides support, understanding of personal emotional reactions, assistance with coping and decision-making, and linkage to services. This intervention has many elements in common with psychological first aid to help survivors with psychological distress after disaster.

These psychosocial interventions are not adequate for psychiatric illness that arises after disaster, which requires formal treatment. For disaster survivors receiving psychosocial interventions, continuing vigilance is needed to identify the development of new psychiatric illness and refer it for complete evaluation and appropriate treatment.

For individuals who develop a postdisaster psychiatric disorder, effective treatment is selected appropriate to the identified psychiatric disorder(s). Standard treatment of trauma-related disorders and symptoms is indicated. For PTSD, usual treatments include pharmacotherapy (especially serotonin-specific or other selected antidepressant agents, and pharmacotherapy targeted for specific posttraumatic symptoms such as sleeplessness, nightmares, and anxiety) and psychotherapy (especially trauma-focused cognitive-behavioral therapies and exposure-based therapies). Standard treatment is also recommended for major depressive disorder, anxiety disorders, and pre-existing psychiatric disorders. Psychiatric expertise should be available for assessment and acute management of pre-existing serious mental illness (e.g., psychotic and bipolar disorders; substance dependence and withdrawal syndromes), psychiatric crisis (e.g., suicidal/homicidal ideation), and acute mental status changes (e.g., delirium). Additionally, psychosocial interventions such as psychological first aid may provide additional comfort after disaster to those with psychiatric illness.

CONCLUSIONS

The mental health response to disaster is best integrated into the broader emergency and medical response. Effective mental health response to disaster is fundamentally based on accurate assessment of mental health needs. Mental health assessment begins by addressing exposure to trauma and other stressors related to the disaster, and must include full evaluation of diagnostic criteria for psychiatric disorders for selecting appropriate treatment. Appropriate interventions are selected individually based on the results of mental health assessment: formal treatment for psychiatric disorders and psychosocial interventions for psychological distress. Psychosocial interventions such as psychological first aid may be helpful for psychological distress, but disaster responders must be vigilant for the development of psychiatric disorders after disaster that must be identified and referred for formal treatment.

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