Prioritizing "Psychological" Consequences for Disaster Preparedness and Response: A Framework for Addressing the Emotional, Behavioral, and Cognitive Effects of Patient Surge in Large-Scale Disasters

Lisa S. Meredith, PhD; David P. Eisenman, MD, MSPH; Terri Tanielian, MA; Stephanie L. Taylor, PhD; Ricardo Basurto-Davila, PhD; James Zazzali, PhD; Dickson Diamond, MD; Barbara Cienfuegos, LCSW; Sandra Shields, LMFT, CTS

ABSTRACT

While information for the medical aspects of disaster surge is increasingly available, there is little guidance for health care facilities on how to manage the psychological aspects of large-scale disasters that might involve a surge of psychological casualties. In addition, no models are available to guide the development of training curricula to address these needs. This article describes 2 conceptual frameworks to guide hospitals and clinics in managing such consequences. One framework was developed to understand the antecedents of psychological effects or "psychological triggers" (restricted movement, limited resources, limited information, trauma exposure, and perceived personal or family risk) that cause the emotional, behavioral, and cognitive reactions following large-scale disasters. Another framework, adapted from the Donabedian quality of care model, was developed to guide appropriate disaster response by health care facilities in addressing the consequences of reactions to psychological triggers. This framework specifies structural components (internal organizational structure and chain of command, resources and infrastructure, and knowledge and skills) that should be in place before an event to minimize consequences. The framework also specifies process components (coordination with external organizations, risk assessment and monitoring, psychological support, and communication and information sharing) to support evidence-informed interventions.

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When preparing for a surge of casualties resulting from a large-scale public health emergency,[1,2] health facility disaster plans tend to focus on physical casualties,[3] with little guidance for responding to large numbers of people with psychological needs, including emotional, behavioral, and cognitive reactions or health-related concerns following disasters.[4-6] A large-scale event would increase demands for health and mental health services from survivors, family of survivors, and staff in these facilities.[7] Although people usually do not panic during a disaster or large-scale emergency,[8] much of this surge may be from people fearful that they have been exposed to a harmful agent[9] and unexposed patients who have somatic symptoms mimicking exposure symptoms.[10-12] For example, when a radioactive substance in Brazil contaminated 250 people in 1987, 5000 of the first 60 000 persons screened had symptoms of acute radiation sickness (eg, vomiting, diarrhea, and neck or facial rash), but none were actually contaminated.

This initial mental health surge has the potential to overwhelm the medical system for as long as the public health crisis continues. Initially it may deplete valuable medical resources, strain staff, and create workflow bottlenecks at health facilities. Mental health issues will remain at the forefront if the disaster is prolonged. In the event of a contagious disease, quarantine measures to control the spread of disease may generate further behaviors based on fear and lack of trust, including noncompliance. Health care workers will not be immune to the same stressors affecting the people for whom they are caring. In the Toronto (Ontario, Canada) severe acute respiratory syndrome (or SARS) epidemic, 40% of the 20 000 quarantined people were health care workers with high rates of mental health symptoms.[13,14] Staff may have obstacles to work, especially after disasters caused by humans (eg, a radioactive bomb or a biologic agent),[15-17] further stressing the response capabilities.[15-17] A systematic review of the literature indicated that concerns for family, personal safety, and pet care are barriers to willingness to work.[18] Preparedness that addresses these issues may reduce role strain among personnel.

Health care staff may lack training in responding to such psychological consequences of a surge.[19,20] Equipping staff with information about what to expect, how to protect

themselves, and how they can provide assistance during disasters, as well as training backup personnel, are essential to planning.[15,21] Many hospitals and clinics have on-site mental health professionals well-suited for providing psychological interventions, but they may not be appropriately trained and integrated into disaster planning efforts. Strategies for obtaining mutual aid from other facilities or redeploying personnel to new functions may offset the consequences of a surge.[22] Still, we know of no models to guide facilities in how this information should be incorporated into planning and response. For example, the national Hospital Incident Command System (HICS) for emergency management includes mental health job action sheets for health care workers but does not give specific details on responding to psychological casualties.[22,23]

This article describes 2 frameworks that provide guidance for appropriate disaster response to address the needs of health care workers and the patients and families who seek health care in hospitals and clinics. One framework illustrates the antecedents of psychological and behavioral consequences ("psychological triggers") of disasters. Another framework provides the foundation for the structures and processes needed to address the consequences of reactions to these psychological triggers. Our approach focused on facility-based mental health surge capacity or the ability of a health care facility to appropriately expand its operations to treat an unusually large influx of patients in response to the incident.[24-29] The frameworks informed the development of a training program for hospitals and clinics throughout Los Angeles County.[30]

ANTECEDENTS OF EMOTIONAL, BEHAVIORAL, AND COGNITIVE EFFECTS: PSYCHOLOGICAL TRIGGERS

Based on a review of the literature, we identified factors that were associated with psychological reactions among survivors, responders, and staff that are common across disasters, whether natural or caused by humans. These elements were reviewed and then categorized into 1 of 5 key antecedents or "psychological triggers" that have been shown to be associated with emotional, behavioral and cognitive reactions during large-scale emergencies. These triggers, depending on the context and magnitude, may contribute to adaptive or maladaptive reactions and in each area offer opportunities for targeting response activities. With appropriate preparation, anticipation, and response to these triggers, the consequences of the triggers can be moderated or mitigated in a manner that seeks to move the reactions from maladaptive to adaptive. In the following sections, we describe the 5 trigger areas in more detail.

Restricted Movement

During a large-scale disaster, emergency responders may need to impose movement restrictions on individuals or groups. These response actions affect how people interact physically and verbally with others and include isolation, shelter-in-place, decontamination, quarantine, increased social distance, and evacuation. Because these response actions may limit how people interact, it may limit a person's ability to rely on natural social support systems for coping opportunities. As such, potential reactions to these restrictions on movement may include sadness, anger, fear, and maladaptive behavior such as noncompliance with public health recommendations.[31,32]

Limited Resources

During a response to disasters, people may also react to how resources or services are delivered or issued. If people perceive their needs to be met, they may have confidence in the response and feel a sense of safety and security; however, limited resources and supplies can decrease a person's sense of safety. Such situations include places where access to care, resources, or support is denied, limited (eg, if medical countermeasures are delivered to only part of the population exposed or at risk), or temporarily suspended (eg, if routine medical care is denied during an emergency). Reactions might include anger, feelings of being stigmatized, agitation, and hostility due to actual or perceived inequitable distribution of supplies or services and can exacerbate preexisting psychological symptoms.[33]

Trauma Exposure

By their very nature, disasters, public health emergencies, and terrorism are traumatic incidents. Research has repeatedly demonstrated that exposure to traumatic events can elicit psychological and behavioral responses among people. As such, trauma exposure is an important trigger to monitor in patients, their families, and in staff, and it may be a primary predictor of long-term psychological consequences.[34-36] People with particularly intense or prolonged direct exposure to a trauma (including witnessing the incident or encountering grotesque images of people who are injured or ill) are most likely to experience psychological consequences. Indirect and repeated vivid exposure to trauma through the media can also have significant psychological consequences.[37] Many people might seek care even if not directly exposed to a traumatic event or will seek care for their loved ones. In response to these experiences, people might exhibit a range of emotions—including grief, anger, and worry and, for staff, psychological distress from compassion fatigue or from burnout due to adverse work conditions that persist for weeks or months.[38-40] These reactions can exacerbate existing psychological symptoms or psychiatric illness and may also lead to maladaptive behaviors such as inadequate or unhealthy coping (eg, smoking, drinking, or risk taking) or absenteeism.

Limited Information

This trigger refers to any actual or perceived lack of appropriate information about risks, potential consequences (symptoms), and appropriate response actions (what to do or where to go for help). Limited information can occur when there is no information disseminated or when risk communication is inefficient or insufficient. Conflicting information is another way in which this trigger may lead to psychological reactions including fear, anxiety, frustration, and even hostility.[41] People may also seek information from nonauthoritative sources, which could lead to maladaptive behavioral responses (eg, taking the

wrong action, becoming withdrawn, noncompliance with public orders, and spreading rumors that proliferate the wrong information).

Perceived Personal or Family Risk

This trigger includes fear and concern about one's own safety and well-being and the safety and well-being of family and loved ones. People who perceive a personal or family risk, such as being exposed to harmful agents or becoming ill, may be motivated to take appropriate self-protective action and adaptive responses such as obtaining vaccination, complying with movement restrictions, or moving or staying out of harm's way, but the perception of risk may also cause people to become fearful and anxious, angry, or hostile, particularly if they believe the risk is being imposed intentionally. Potential reactions to such perceptions include inappropriate response such as not taking precautionary measures to avoid exposure or avert illness.

Psychological Triggers Apply Across Hazards

When planners think about preparing for large-scale emergencies, they often use specific scenarios. Before the September 11, 2001 terrorist attacks, these scenarios focused on natural disasters, not taking into account events that had the potential to generate fears of contagions and infectious disease. Scenarios such as smallpox, SARS, H1N1, a sarin gas attack, or a radiological incident highlight examples of more recent concerns about acts of bioterrorism and emerging infectious disease. Although the idiosyncrasies and differences in these events are important for understanding appropriate medical responses, psychological reactions are similar across all types of hazards. Therefore, it is important to use an "all-hazards" approach when creating appropriate preparedness and response plans and programs, drawing on generalizations across types of emergencies that will stimulate similar psychological reactions. It is important to note, however, that although an all-hazards perspective applies to psychological reactions across situations, planners and first responders will still need to be flexible about and may need to adapt processes and plans for the particular situational circumstances. For example, events that involve significant uncertainty, present possibility of loss of life, present vivid and dreaded consequences, and require difficult actions for self-protection (eg, deliberate acts with weapons of mass destruction) may require different responses compared with more "ordinary" disasters (eg, earthquake).

The framework for antecedents of psychological triggers as the critical psychological feature that drives demand for health facility response (**Figure 1**) includes 5 overlapping dimensions: (1) the type of terrorist incident (these examples of terrorist events were dictated by the agency that funded the present work, although this framework is useful for a broad range of public health emergencies, particularly those involving a surge of people reporting to health care facilities for assistance); (2) the persons who or groups that may be affected by such incidents, in-

FIGURE 1

Framework for Understanding the Antecedents of Psychological Consequences ("Psychological Triggers") of Public Health Emergencies Using Scenarios of Intentional (Terrorism) and Naturally Occurring Events.

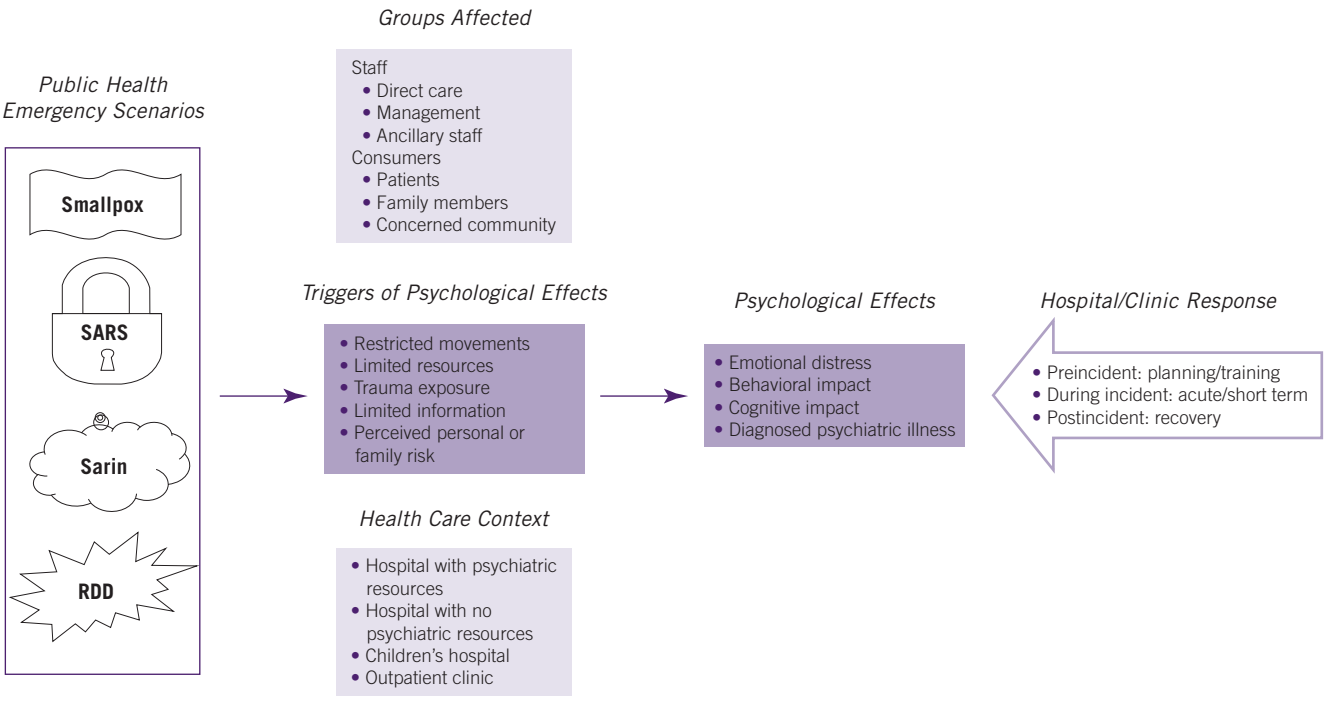
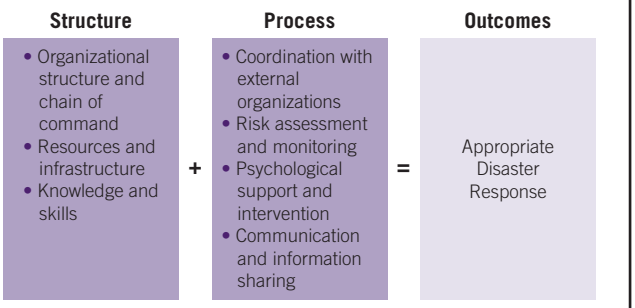


FIGURE 2

Framework for Addressing the Consequences of Reactions to Psychological Triggers: Recommendations to Guide Appropriate Disaster Response.



cluding consumers and health care workers; (3) the health care settings in which affected people will seek care; (4) the triggers of psychological and behavioral reactions; and (5) the psychological and behavioral consequences that could occur. Figure 1 illustrates how these 5 dimensions come together to determine the types of hospital and clinic responses that might be required: (1) preincident, which involves appropriate planning and training activities; (2) during incident, which concerns the acute and short-term responses; and (3) postincident, which is necessary to facilitate recovery.[42]

CONSEQUENCES OF PSYCHOLOGICAL REACTIONS: APPROPRIATE DISASTER RESPONSE

An understanding of these psychological triggers allows us to develop better disaster planning curricula for hospitals and clinics. To that end, we adapted Donebedian's[43] framework of effective health services delivery (structure + process = outcome) in which, in this case, *outcome* refers to appropriate mental health disaster response by hospitals and clinics. *Structure* includes all of the resources, skills, and setting characteristics that are necessary for successful planning for the psychological impact of disasters to take place. *Process* refers here to the different types of (evidence-informed) organizational activities in which individuals or groups can engage. When the right structures are paired with the right processes, an organization will produce an appropriate response. Based on the disaster preparedness and response literature and input from experts, we developed a framework (**Figure 2**) consisting of 3 structural elements and 4 process elements critical to appropriate disaster response.

Structure

Organizational Structure and Chain of Command. Hospitals and clinics must have the right organizational structures in place to coordinate activities and execute plans for effective response to a surge of psychological casualties. The structures may be those that the hospital or clinic uses to oversee and manage day-to-day activities, or additional structures such as the HICS or interorganizational structures that can be activated during an event. The structures should identify responsible parties for overall mental health response for patients and staff, how mental health will be integrated into the HICS, and the number and type of facility staff who will be involved in the response and their roles and responsibilities.

Resources and Infrastructure. Resources might include the appropriate number of staff, the ability to arrange in advance for mutual aid from partner health facilities or other appropriate community resources with mental health staff, the space to screen and treat people who are in emotional distress, and necessary supplies such as toys for children and disaster mental health brochures.

Knowledge and Skills. Hospital and clinic staff should have the appropriate knowledge and skills to assist with the psychological needs of patient, family, and staff following disasters. Evidence-informed practices such as psychological first aid[23,42] should be offered by a broad spectrum of facility staff. If mental health professionals are not accessible within the facility, non–mental health staff (such as chaplains, child life specialists, and volunteers) may need to be trained in advance to identify people experiencing emotional trauma.

Process

Coordination With External Organizations. Hospitals and clinics should coordinate with external organizations, making use of interorganizational structures to respond to organizational needs before and following disasters. Health facilities may want to make mutual aid agreements with other hospitals, clinics, or other community organizations to loan mental health staff following a disaster. Facilities may also want to forge relationships with their local governmental mental health department because this entity will be responsible for coordinating mental health services to the community following disasters, including longer term mental health care for people most affected. Other governmental partners may include emergency medical services authorities and offices of emergency management. These organizations will help the health facility become familiar with existing governmental disaster resources, ongoing disaster planning efforts, and incident management systems (such as that National Incident Management System)[44] that health facilities may need to access information and resources.

Risk Assessment and Monitoring. A major clinical component of an appropriate disaster response involves triage to identify people needing immediate medical attention due to exposure or contamination and assessing and monitoring them for negative psychological outcomes. This triage may take the form of various screening activities for patients and staff during an event and longer-term monitoring after the event.

Psychological Support and Intervention. Hospitals and clinics need to provide psychological support to address the needs of patients and staff who are at risk of negative psychological outcomes. Support could include short-term interventions (eg, psychological first aid[45] and crisis intervention) or longer term interventions such as cognitive behavioral therapy for postdisaster distress.[46]

Communication and Information Sharing. During and after an event, facilities should ensure they are proactively commu-

TABLE 1

Psychological Triggers and Associated Recommended Actions for Responding to Psychological Surge

Psychological Trigger	Recommended Actions
Restricted Movement	
Isolation	Reduce the person's sense of isolation. • Allow isolated persons access to a telephone to contact family members at home. • Provide access to e-mail and the Web. • Develop online "buddy" groups. Manage family members. Explain to family members the risks of coming in contact with the isolated person, and discuss options for contact.
Shelter in place at the health facility	Reduce the person's sense of isolation and make MH care available. • Allow everyone access to telephones to communicate with family at home. • Provide access to e-mail and the Web. • Because shelter-in-place needs can occur during night or on a weekend, have an MH staff person available 24 h/d or conduct MH training (such as psychological first aid) for key non-MH staff who are scheduled to work nights and weekends. This will ensure that someone is available to provide basic MH care to reduce people's sense of isolation. Manage family members. • Before a disaster occurs, devise a plan for allowing incoming calls to the hospital or clinic so that family members can call people who are sheltered, but without flooding the telephone lines, so that all sheltered persons have an equal opportunity to be reached by their family members.
Decontamination	During the planning stage • Train non-MH staff to help keep people calm and possibly also to identify MH trauma. • Prepare decontamination instruction signs in languages appropriate for residents of surrounding communities. • Think through privacy and modesty issues that may be cultural and plan to address them. During the decontamination process • Try not to separate parents and children. • Place MH staff in the "clean" area to assess for MH reactions following decontamination. • Place MH staff in areas were people have been triaged as nonexposed (no need for decontamination) to assess for reactions and provide information and reassurance.
Quarantine	Reduce a person's sense of isolation. • Give isolated people access to a telephone to contact family members outside the facility. • Provide access to e-mail and the Web. • Develop online "buddy" groups. Manage family members. • Explain to family members the risks of coming in contact with the quarantined person, and discuss options for contact. • Provide education and reinforcement of the rationale for adherence to infection control at home (eg, wearing masks).
Increased social distance	Provide access to alternative forms of communication to reduce feelings of isolation and connectedness with colleagues and loved ones. During a contagious and/or biological event • Limit opportunities for people to gather in large crowds; use multiple smaller spaces. • Limit interaction among symptomatic and asymptomatic people. • Encourage "telecommuting" and voluntary quarantine for nonclinical staff who do not need to be at the facility; adjust staff work schedules to maximize distance. • Encourage use of appropriate health hygiene (eg, cough etiquette and hand washing).
Evacuation	During the planning stage • Know in advance where patients, family, and staff can be evacuated safely and securely inside and outside of the facility. • Arrange for coordinating transportation to the new location. • Develop a system for tracking and monitoring patients, families, and staff. • Ensure access to supplies (eg, medications, water, and coping mechanisms) once relocated. During the evacuation • Define roles for staff. • Assist people with mobility limitations. • Try to keep patients and families together; if already separated, have procedure for notifying the family of the patient's new location. • Provide communication opportunities for people to stay in touch with loved ones. • Offer information on coping with stress for people during the displacement.
Limited Resources	
Staffing shortages under surge	During the event • Include hospital chaplains and/or employee-assistance program staff in the MH team. • Arrange for on-site, temporary child care with appropriately trained caregivers to allow staff to report to and remain at work following disasters. • Enlist volunteers to help with the MH response as appropriate. For example, volunteers can help direct people to the right services and assist with phone calls. During the planning stage • Ask each staff member to develop a family disaster plan to reduce anxiety about the well-being of their families following a disaster. • Establish formal relationships with other hospitals, clinics, or other community resources to obtain loaned MH staff if the other agencies are unaffected by the disaster. • Train staff to recognize potential expected psychological reactions following a disaster and the more serious psychological trauma that should be referred to MH staff for follow-up. • Pediatric facilities should train "child life" personnel to assess psychological risk and provide some psychological care to children and their families.
Space limitations for providing psychological care	As facilities provide medical care for the surge of survivors, there might not be space to provide MH care within the facility. Consider using your facility's parking lot or its nearby auxiliary buildings.
Availability of personal protective equipment (PPE)	During the event • Place adequate supplies of PPE near all areas of high need. Educate staff on the use and location of PPE. For outpatient clinics • Before a disaster occurs, obtain as much PPE as your facility deems appropriate and train staff on how to use it.

(continued)

nicating accurate disaster information to patients and staff. Facilities should consider what type of information needs to be communicated, how it should be presented, and which specific audiences should receive the information. Health facilities should include mental health professionals in regular briefing meetings in which internal and external communication plans are

TABLE 1

Psychological Triggers and Associated Recommended Actions for Responding to Psychological Surge (continued)

Psychological Trigger	Recommended Actions
Trauma Exposure	
Use of evidence-informed practices	• Early, brief, and focused psychotherapeutic interventions can reduce distress. • Selected cognitive behavioral approaches may help reduce the incidence, duration, and severity of acute stress disorder, posttraumatic stress disorder (PTSD), and depression. • MH care should focus on problem solving and concrete solutions to increase resilience and emotional coping. • Survivors' participation in early intervention sessions (group or individual) should be voluntary. • MH providers should take the survivors' lead on pacing the care and not probe longer-term issues unrelated to the current disaster. • A wide range of ancillary services can help reduce stress, eg, help patients locate and contact families. • Early interventions that focus on the recitals of events do not consistently reduce risks of PTSD or related adjustment difficulties. Therefore, critical incident stress management may not be the most appropriate intervention in the acute phase following a disaster. • Similarly, the word *debriefing* should be used only for sharing operational information.
Expected MH needs	• Be prepared to treat common MH responses, eg, stress and anxiety. • Do not assume that people have clinically significant disorders immediately following a disaster, except if they have a preexisting psychological condition. Most of them will recover naturally.
Providing care	During the disaster • Ideally, the MH team addressing trauma would be multidisciplinary and include social workers, marriage and family therapists, psychologists, psychiatrists, chaplains, other clinical staff, and appropriate employee-assistance program staff. • Provide a list of MH care facilities to persons needing MH services during or after the event. • Distribute MH brochures on survivors' stress management. During the planning stage • Identify staff who speak languages other than English to interpret during an event to help in risk assessment and MH care. • Refine methods for screening and potentially tracking large numbers of psychological casualties. • Additional issues regarding staff burnout or traumatization from exposure to survivors and the event. • Pediatric facilities should train personnel to assess MH risk and provide some MH care to children and their families. • Clinics without multilingual staff should develop a strategy on how to obtain interpretation services following a disaster. After the disaster • Be prepared for persons to have psychological reactions on disaster anniversaries.
Staff burnout or traumatization	Tips for supervisors • Visibly and actively manage stress by continually walking through work areas and providing real-time support. • Remind staff how to monitor themselves for stress and how to obtain additional MH assistance if they need it. • Work with hospital and/or clinic infectious disease staff to address and review infection control procedures. • Design shift schedules and call in backup staff so that staff work only 12 hours with 12 hours off. • Delegate staff member's regular workload to others so they do not attempt disaster response in addition to usual workload. • Avoid conscripting staff to work in high-risk areas. • Be conscious of the effects of prolonged mandatory overtime, increased workloads, and assignments to unfamiliar work. • Manage conflicts between staff. • Provide demonstrated and tangible support for workers at work and in quarantine. • Provide regular stress-reducing activities, such as movies and music. • Address staff concerns about personal and/or family risks. • Distribute MH brochures on managing stress. Self-care principles to avoid burnout and reduce exposure to trauma • Understand that disasters are traumatic and that emotional reactions are common, universal, and expected. • Get adequate sleep and rest ("take a break, take a walk"), and nutrition. • Use your social support system. • Exercise, listen to music, talk, meditate. • Limit television viewing of event. • Seek help if reactions continue or worsen over time. During the planning stage • Prepare measures to monitor actual or perceived risks and psychological distress to staff. These measures will require typical management tracking activities on, eg, the number of hours each staff member works each day, the number of days staff members work, which staff members have lost loved ones. • To reduce anxiety about the unknown, ensure that all staff, including voluntary and night staff, are educated on their roles during a disaster and the risks and consequences associated with that disaster. The more clearly staff understand these issues, the less stress they will feel during the event.
Limited Information	
Communication systems	During the planning stage • Devise a comprehensive communication strategy with specific plans and roles for communicating with persons at incident command, with the staff and the public, and with external response organizations. • Plan to reduce interpersonal isolation by providing access to e-mail, the Web, and telephones.
Patient tracking systems	During the planning stage • Establish a tracking system to assist with risk assessment and monitoring of a potential surge of persons in need.
Educational materials	Educational materials • Obtain educational brochures from your county's department of MH or develop quick reference guides to educate patients and staff on the potential MH consequences of disaster, including reactions, how to alleviate reactions, and when and where to seek further MH treatment.
Perceived Personal or Family Risk	
Comfort in reporting to work	How to increase staff comfort • Address and review infection control procedures. • To reduce anxiety about the unknown, ensure that all staff, including voluntary and night staff, are educated about their roles during a disaster and the risks and consequences related to the current disaster. The more that staff members understand about these issues, the less stress they may feel during the event and the more likely they are to report to work. • Staff should not be conscripted to high-risk areas. Management should foster an atmosphere free of stigmatization, coercion, and fear of negative consequences. • Supervisors can manage stress by continually walking through work areas and providing real-time support. • Take additional steps to reduce staff burnout and exposure to trauma.
Availability of child care	Consider options for providing temporary child care for staff.

MH indicates mental health.

discussed. Messages must be communicated in the appropriate languages at the right reading level and must be disseminated through multiple channels.

One way to overcome the impact of perceived risk with hospital and clinic staff is for facilities to meet and communicate frequently with all staff regarding accurate information about the disaster, current impact on the facility, any necessary disease- and contamination-related procedures, and where staff can ask questions and obtain additional information. Including information on the positive staff accomplishments during the disaster also helps staff realize their presence is making a difference in the recovery of their community.

Table 1 illustrates how the 5 types of psychological triggers are associated with particular types of responses from the health system. Specifically, it lists a wide range of actions that health care facilities could take to reduce the psychological consequences of large-scale disasters. This material was included with the Los Angeles County training materials in the form of a booklet, along with other tools such as disaster scenarios, that can be used to better prepare the staff at health care facilities before a disaster.[30]

DISCUSSION

We identified a number of implications for psychological preparedness response. One major implication was that rather than giving detailed guidance on how to respond to various types of events, it may be more constructive to focus on a set of triggers that drive the types of emotional, cognitive, and behavioral responses that people will exhibit, not the events themselves. This is consistent with the concept of an all-hazards approach to public health and emergency preparedness, which has gained acceptance in recent years.

We also outlined a strategy for integrating psychological needs into existing hospital and clinic preparedness and response plans and activities. The people responsible for emergency and disaster preparedness in health care facilities should ensure that the appropriate structural elements are implemented and exercised before an event so that the facility is prepared to respond to the surge of psychological concerns during disaster and public health emergencies. Such preparations will equip health care organizations with the capabilities to address the psychological consequences of these disasters for patients, their families, and staff.

CONCLUSIONS

This theory-based approach to hospital and clinic preparedness and response highlights the importance of psychological triggers and facilitates an all-hazards approach for addressing the psychological consequences of large-scale disasters. Putting structural elements in place before an event and during and after an event helps ensure that the needs of victims, their families, and hospital and clinic staff are met. Essential to hospital and clinical preparedness for a large-scale disaster involving a surge of psychological casualties is the need to integrate mental health services into existing hospital and clinic preparedness plans and activities.

Author Affiliations: Dr Meredith is with the RAND Corporation, Santa Monica, California; Dr Eisenman is with the RAND Corporation, Santa Monica, California, and the Department of Medicine, David Geffen School of Medicine, UCLA; Ms Tanielian is with the RAND Corporation, Arlington, Virginia; Dr Taylor is with the Center of Excellence for the Study of Healthcare Provider Behavior, VA Greater Los Angeles at Sepulveda; Mr Basurto-Dávila is with the Centers for Disease Control, Atlanta, Georgia; Dr Zazzali is with Genentech, Inc, San Francisco, California; Dr Diamond is with the Los Angeles County Department of Public Health, Los Angeles, California; Ms Cienfuegos is with the Los Angeles County Department of Mental Health, Los Angeles, California; Ms Shields is with the Los Angeles County Department of Health Services, Emergency Medical Services Agency, Sante Fe Springs, California.

Correspondence: Address correspondence to Dr Lisa S. Meredith, Senior Behavioral Scientist, RAND Corporation, 1776 Main Street, Santa Monica, CA 90407-2138 (e-mail: lisa_meredith@rand.org).

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