The 'First Wave': Earliest Intervention in Peritraumatic Processes among Survivors of Catastrophic Events

Killorin Riddell, PhD*

Trauma Intervention Specialists, USA

Monty Clouse, PhD

Trauma Intervention Specialists, USA

ABSTRACT: *A longitudinal perspective on findings of earliest reactions to catastrophic events and psychoanalytic and neurobiological approaches to treatment of Posttraumatic Stress Syndromes from a developmental framework is utilized to create consultation products for business contingency planning. Immediate intervention in peritraumatic processes protects the functionality of individuals and work groups charged with emergency response and recovery, and mitigates the cumulative impact of trauma upon the organizational system.*

KEYWORDS: *Business contingency planning, Early intervention and prevention, Comprehensive psychosocial emergency management, Crisis support*

SCOPE OF NEED

Sociologists recognize the impact of a traumatic event on society. Giralamo (1993) believes that "a disaster creates a discontinuity in the social structure, and the social aspects of the disaster situation should be considered as more important than the physical event and its components." Quaranteli (1978, 1984) and Drabek (1986) emphasize that the "concept of threat and damage to the whole community system implies potentially important consequences, and may govern intervention strategy and its impact at all system levels – individual, group, organization, community, and society - because these levels are interlinked (p.106).

The prospect of widespread devastation to communities and business caused by a regional disaster has become a conscious consideration for emergency planners. Community stakeholders see that it could be fatally unwise to depend solely upon public safety personnel to survive extensive damages to life and property resulting from a moderate earthquake, firestorm, flash flood, hurricane, typhoon, tsunami, or biochemical hazard. The recognition that local government agencies will not be able to respond to all sites of need has motivated corporations to prepare themselves for the immediate aftermath of natural catastrophes by developing "stand-alone" emergency response capacities.

Public emergency management agencies in many areas of the United States recommend that business organizations be prepared to provide emergency response for up to 72 hours following a regional disaster, since it may take that long for public safety agencies to reassert control within their jurisdictions. Possibly lacking immediate assistance from outside, it is incumbent upon corporations to equip their employee responders with the resources necessary to manage complex emergency scenarios. The absence of external operational assistance, and the important psychological protection that such assistance would provide, means that corporate emergency response capabilities must be both resilient and durable. In such situations, the fact that outside help is not on its way is a potent force in exacerbating stressful aspects of emergency response work.

Numerous corporations now understand that their business interests mandate a comprehensive emergency response upon company premises at the time of an emergency event. The standard competencies of emergency response used for corporate planning include fire suppression, hazardous materials containment, damage assessment, search and rescue, medical triage, urgent medical care and transport, communications, logistics, and emergency food and shelter. Although all of these are critical, they are not sufficient.

One factor that affects corporate emergency response is human skill in managing emergencies. Volunteer employee emergency responders differ from professional emergency responders in how they cope with the stressful aspects of emergency work. Volunteer employee emergency responders are more similar to personnel in volunteer fire departments (that exist in many rural communities), or to other occasional responders, such as volunteer responders for the American Red Cross. Volunteer employee emergency responders will, in most situations, quickly move from role of "survivor" in an emergency to role of "responder." Research findings indicate that these individuals are likely to express verbal and behavioral stress reactions more frequently, openly and quickly than professional emergency responders (Mitchell & Everly, 1996).

While professional emergency responders (such as police, firefighters, and emergency medical technicians) routinely provide

*Correspondence regarding this article should be directed to: traumaspecialists@pacbell.net

emergency service, volunteer employee emergency responders provide these services infrequently, or on rare occasions. As a result, they do not have well-developed occupational support networks. The professional responder relies upon his or her coworkers for group support in mitigating emergency response stress as a matter of routine, while the volunteer responder must develop group support as the stressful work begins.

Professional and volunteer emergency responders also differ in degree of certainty about areas of responsibility during emergency response operations. Professional responders experience less role confusion because of formal training activities and on-the-job experience. Volunteer responders, on the other hand, are far less familiar with, and practiced in, the specific skills involved in emergency work. Volunteer responders, therefore, are more likely to experience stress as a result of task and role ambiguity (Dyregrov et al., 1996).

The effect of these conditions upon corporate emergency response capability indicates the need for a *Crisis Support Team*. The duration of stand-alone emergency response for up to three days necessitates a careful pre-incident analysis of psychological risks and resources, in order to meet specific support requirements of volunteer employee emergency responders.

The development of effective crisis intervention and management capacities within private industry is an important link in community-wide recovery from disaster. As powerful organizational structures, businesses direct individuals' bonds of affinity and common interests, impact thousands of employees directly, and many more members of the community indirectly. In addition, and perhaps most importantly, effective interruption of traumatogenic processes adds a protective factor in the prevention of acute stress disorder and posttraumatic stress disorder for countless individuals affected by the event and performing actions to ameliorate the damages.

Emotional Trauma

The *DSM-5* and *ICD-11* have sparked research and debate about our understanding of traumatic stress disorders. Explanations of the effects of trauma frequently adopt a PTSD framework to explain the impacts of a potentially traumatic event. However, as Hetzel-Riggin (2012) points out, it is clear that the emotional, cognitive, behavioral, and physiological consequences of trauma are not encompassed in the diagnosis of Posttraumatic Stress Disorder (PTSD) or Acute Stress Disorder (ASD). Mental health consequences of trauma exposure may also produce other diagnosable disorders, as well, such as major depression, substance abuse, anxiety disorders, etc.

However, the contention of the authors is that if peritraumatic processes are addressed immediately, trauma does not have to result in psychopathology. Decades ago, crisis interventionists, such as Caplan (1964) maintain that the earliest intervention and prevention of psychic injury in catastrophic circumstances involves the provision of external support. Riddell and Clouse (2004) propose that the survivor of a catastrophic event fundamentally requires a temporary other, who cares for the survivor's immediate physical and psychological needs. At all other times, this support function is performed on one's own.

One of the reasons that an object relation activation is experienced as greater in survivors of catastrophe is that sustained trauma has an effect on the brain. Read et al. (2014) report that changes found in developing brains of individuals who had gone through multiple traumatic events include: 1) Overactivity of the hypothalamic-pituitary-adrenal (HPA) axis (the body's stress regulation system); 2) Abnormalities in the neurotransmitter systems, especially dopaminergic system; 3) hippocampal damage; 4) cerebral atrophy; and 5) Reversed cerebral asymmetry.

In childhood development, research finds that disturbed attachment creates a dysregulation of the stress response system. Debbane et al. (2016) propose an integrative model of five developmental pathways through which disturbed attachment in childhood may affect the neurological integrity of key networks that sustain self and other mentalizing in individuals at risk for mental disorders: 1) Impairments in the hypothalamic-pituitary-adrenal axis; 2) Dopamine dysfunction; 3) Reduced oxytocin levels; 4) Neuroinflammation; and 5) Oxidative stress. They suggest that "attachment security could foster protective psychological processes related to long-term adaptation in the face of childhood traumatic events…" (Debbane et al., 2016).

In adult survivors, it is found that trauma interferes with higher cortical functions of synthesis and integration. Cognitive responses such as these occur because excessive stimulation alters the brain's biology causing problems in evaluation of information and decision making. Van der Kolk (1988, 1997) reports that inescapable shock results in biochemical changes including alterations in norepinephrine, dopamine, serotonin, and endogenous opioid, which may produce the stress induced analgesia observed in survivors of catastrophic events. He finds that the traumatic experience is not stored in semantic memory where it can be brought into conscious awareness for managing the event, but, rather, stored in somatic memory as flashbacks or physical sensations.

Bergman (2008) proposes that bilateral stimulation in Eye Movement Desensitization and Reprocessing (EMDR) therapy for trauma facilitates a process that metabolizes somatic memory into general semantic memory and that a related surge in acetylcholine is a consequence. It is thought that EMDR produces a REM-like sleep state that decreases the strength of hippocampally mediated episodic memories and amygdaloid mediated negative affect. The use of EMDR therapy is recommended by the World Health Organization (2013) for treatment of PTSD.

Riddell and Clouse (2004) describe a second reason for why a *temporary object* is needed as a protective shield in the face of trauma. A radically-altered sense of the relationship between self and others occurs in the immediate aftermath of catastrophic events, oftentimes characterized by feelings of detachment or estrangement from others (Sloan, 1988), and a sense of time having changed and the event or oneself feeling unreal (Marmar et al., 1994; Cardena & Spiegel, 1993). On the other hand, desperate efforts to rescue others are sometimes observed. Holen (1993), in his review of the reactions of survivors of an oil rig disaster, finds that those who attempted to rescue another and were not able to do so, reacted with "merciless self-blame" (p. 476).

Lifton (1993) emphasizes the trauma's impact upon the

self-structure. Lifton suggests that the effects of cognitive disorganization and psychic numbing are experienced by the survivor as a severance of the mind from its own forms, and are disintegrating to the self…the essence of the formative-symbolizing process is virtually suspended" (p.19). That severance results in a sense of failed enactment and survivor guilt.

Viewed from an epidemiological perspective, the primary effect of a devastating, shattering, cataclysmic event is one of helplessness, in keeping with Freud's original concept of trauma as productive of overwhelming affects and the development of automatic anxiety. Krystal (1978) compares the subjective experience of overwhelming anxiety in this state to that of an infant left alone, unprepared to survive. Although acute anxiety seems to disappear as development progresses, it is not eradicated, but remains as a potential response under the surface, even in psychologically healthy adults. In the face of overwhelming disasters, even the strongest people are likely to experience disorganizing panic. This intense anxiety retains its earlier developmental tendency to be expressed in the form of a massive somatic discharge. Adult catastrophic trauma produces a state like the undifferentiated distress pattern which is timeless and objectless in the immature psyche of the infant.

As Krystal (1978) points out, "In the acute traumatic state one stands alone and abandoned by all sources of feelings of security. This requires an ability to face helplessness and death" (p.111). Van der Kolk (1998) maintains that, "both the etiology and the cure of trauma related psychological disturbance depend fundamentally on the security of interpersonal attachments" (p. 287).

According to the authors, peritraumatic processes are interrupted by the presence of a *temporary other* who provides a "holding environment" to detoxify feelings through which the survivor has come to consider herself impotent, cowardly, or guilty for surviving while others died. The other who assists the survivor is clearly a *temporary other*, in that he or she was not needed in the same manner before the traumatogenic occurrence. It can be stated that the survivor's ultimate wish, in the seeking of such a critical attachment, is to reach a point in time when he no longer requires the other's involvement in order to fully engage functional capacities.

The value of a *temporary other* in response to trauma experience is derived from clinical findings in disaster mental health delivery. In such settings, survivors who have greater difficulty in recovering, describe a sense of being *without objects* at the time of the catastrophe. They report a state in which they were unable to feel when terror was acute, and a loss of connection with any other person who could relate to their experience, or who could imagine what their experience was like. Trauma, therefore, resulted in instantaneous alienation and estrangement, encapsulation of intense sensations and affects, isolation, interpersonal conflicts, psychosocial complications, or pathology.

The importance of object relationships in functional recovery is underscored in current research on mentalization. Mentalizing means that we reflect upon our own thoughts, feelings, and wishes, and upon those of others around us. Fonagy et al. (2012) suggests that the ability to understand one's mental states is related to the social context in which thinking develops. Mentalization is

critically connected with the quality of attachment relationships. Because attachment relationships provide the context in which the ability to mentalize initially develops, it is thought that relationships with attachment figures may provide the best setting for mental state understanding in the case of traumatic occurrences.

Growing evidence indicates that there are essential links between the concepts of metacognition, Theory of Mind (ToM), and mentalization, both theoretically and empirically, in that they refer to a social understanding which is impaired in persons with mental disorders: specifically, the capacity to represent *Self* and *Other* in one's mind. The research also supports that this capacity is etiologically founded in early attachments (Fonagy & Bateman, 2012). Attachment security has been shown to contribute to the early development of the capacity to link behavior with states of mind - feelings, thoughts, and desires (mentalization).

Attachment is the gravity of our human behavior. It orients and propels us, and provides the basis for all of our efforts. Earliest attachment experiences, usually with our parents, show us that we can be understood. Attachment is the protoplasm for showing that another person gets what we're conveying, even before we have words to convey anything, and "feels us" so that we can understand ourselves and mentalize.

Promotion of connectedness is the single most beneficial factor in the first wave of trauma.

"There is a tremendous body of research on the central importance of social support and sustained attachments to loved ones and social groups in combatting stress and trauma. Although this is perhaps the most empirically validated of the five principles, interventionists and policy makers will have to be creative in translating this evidence to intervention" (Hobfoll, 2007).

The authors maintain that peritraumatic processes impel the survivor toward intensely powerful interactions with others. A state of *object demand* is created. The survivor urgently seeks supportive objects and urgently struggles with available objects. The individual's trauma experience, when added to the situation of emergency in which the functionality of response and recovery work groups is critical, illustrates the possibility of cumulative, or organizational traumatization. This is the case because the degree of success of the business organization's response and recovery efforts will affect many other individuals who depend upon the business to orient them and to confer upon them meanings of belonging and self-valuation. Effects such as these are highly important protective factors for all employees and any other sectors of the community who depend economically or emotionally upon the business.

EARLIEST INTERVENTION

Psychological First Aid (PFA) is a supportive intervention for use in the immediate aftermath of disasters and traumatic events. PFA is considered by emergency mental health experts as the "acute intervention of choice" when responding to the psychosocial needs of survivors (National Child Traumatic Stress Network: National Center for PTSD, 2006). PFA is delivered by first responder teams that may be embedded in incident command systems, primary and emergency health care, Community Emergency Response Teams

(CERT), American Red Cross, Medical Reserve Corps, and other disaster relief organizations.

Psychological First Aid (PFA) seeks to reduce distress and attend to basic needs following a potentially traumatic event by providing simple interventions such as comfort, information, support, and practical assistance. There are eight core components of psychological first aid (Australia, 2013), as follows:

1. Initiating contact and engaging with an affected person in a non-intrusive, compassionate and helpful manner;

2. Ensuring immediate and ongoing safety, and providing both physical and emotional comfort;

3. Stabilizing survivors who are overwhelmed and distraught by providing reassurance and containment;

4. Gathering information in order to determine immediate priority needs and concerns, and to tailor subsequent PFA interventions;

5. Providing practical assistance in helping the survivor address immediate needs and concerns;

6. Connecting the survivor with social supports by helping to structure opportunities for brief or ongoing contacts with primary support persons and/or community helping services;

7. Providing information on coping, including education about stress reactions and coping (often in a written format);

8. Linking the survivor with appropriate services and providing information about services that may be needed in the future.

The primary goal of PFA is to enhance an individual's natural resilience and coping ability in the aftermath of trauma.

SUPPORT STRUCTURES FOR EARLIEST INTER-VENTION IN PERITRAUMATIC PROCESSES

Beginning in 1995, the authors forecast the promise of improved acceptance of psychosocial supports, such as PFA, by corporations affected by disaster, following the January 1994 Northridge, California earthquake. To adequately, yet realistically address the need, using critical thinking and effective strategic planning, they identify core aspects of humans' inclinations and vulnerabilities within emergency milieu:

- *Evolutionarily-determined emergency behavior*, as a subset of attachment schema, mandates that humans will work to protect and rescue each other, even when doing so places them at risk, and even when they have limited affiliative bonds with those they protect and rescue. Following a traumatogenic event, it is also a universal human experience to feel abandoned. There is a sense of having no protective shield from the horrifying consequences, at a time when it is most needed.

- *Disadvantaged neurocognitive abilities* within the confusion and "fog of war" conditions after disaster strikes result in significantly lowered functioning at a time when higher analytic and problem-solving skills are most needed.

When these two considerations are kept in mind during

contingency planning, it is prudent to organize response; pre-train and pre-deploy employees; and design organizational structures that serve the function of a *temporary other* post-impact. It becomes possible to anticipate which emergency operations require the greatest comprehensive psychosocial emergency management support, far in advance of an event.

In their design of training programs for companies' emergency response activities, the authors base their interventions upon an understanding of the trauma survivor's experience as a state of crisis, in which capacities for cognitive evaluation, affect management, and symbolic meaning structures are adversely affected.

From anecdotal accounts of the immediate psychological aftermath of disasters, from review of the psychoanalytic and neurobiological literature on treatment of post-traumatic stress, and from an object relations orientation to understanding the survivor's post-trauma state as one of *object demand*, they have developed a pre-arranged contingent stand-alone corporate model of support structures for volunteer employees of emergency response teams to activate immediately following a disaster. These structures are referred to as the Crisis Support Team.

CRISIS SUPPORT TEAM

In order to manage the challenging conditions inherent in corporate emergency response scenarios, it is essential to identify those areas of operations that are most likely to affect employees' welfare. A careful pre-incident analysis of psychological risks and resources makes it possible to anticipate expectable stress-impacts upon employees and to build opportunities for enhancing employee coping. By taking actions to address employee needs, the probability of operational success throughout emergency response is significantly increased.

These activities require a Crisis Support Team to provide emergency crisis support to uninjured and injured employees, to fellow employee responders, and to emergency operations as a whole. The Crisis Support Team consists of employee responders who have indicated a willingness to participate in further training on human needs in emergency response. The Crisis Support Team mitigates stress at several critical points within the emergency response organization. It's members activities are summarized as follows:

1. Contact, comfort, and direct employees out of the affected area while performing crisis triage and referral for employees affected by acute traumatization;

2. Provide uninjured employees with information on community conditions to assist them in how to safely leave company premises and travel home, and offer care and referral to any employees who suffer acute psychological traumatization as a result of the disaster;

3. Support emergency responders' focus on assigned tasks, group cohesion and internal coordination, and intervene in stress reactions that disrupt team functioning;

4. Provide emotional support to seriously injured employees and resource support to Disaster Medical Team responders who deliver urgent medical care

Transition Out of the Affected Area

The first activity of crisis support is to facilitate safe transition of employees out of the areas that have sustained heaviest damages. Although it may seem logical that people will readily leave devastated buildings on their own volition, research findings on the nature of earliest reactions to sudden, life-threatening events actually predicts that many individuals will not leave impact areas on their own. Some will try to find or to rescue coworkers, or to recover their own possessions, including work projects. Others will have difficulty in leaving damaged areas because of dissociative stress reactions, according to recent research on acute stress reactions (Cardena & Spiegel, 1993; Koopman et al, 1996).

Attenuated degrees of dissociative stress reaction may also make it difficult for some employees to leave the corporation's premises and proceed to their homes safely. Some employees will leave the premises so quickly that they place themselves in danger on damaged roadways.

The first requirement is that members of employee crisis response teams actively perform outreach to affected employees, utilizing a contact approach that responds to initial reactions of shock and disbelief. This exercise intervenes in trauma experience at a point prior to the development of posttraumatic symptoms and serves as the first step in provision of psychological support, assessment, psychological triage, and redeployment of personnel.

Crisis Intervention Responders (CIR) are taught that trauma experience, whether in its briefest moments or in longer duration, consists of four components. These elements and the intervention associated are summarized below (Table 1).

As CIRs contact their co-workers, they are taught to perform a Crisis Triage that is based on orientation, using themselves as the barometer of the survivor's responsiveness. Triage Levels II and III require CIR escort to the next point of contact. See table below for details on the triage method (Table 2)

The second activity of crisis support is to provide employees with a checkout point (Resource Center) where they can receive information about community conditions, and pause to plan a safe route out of area before they leave. This location also serves as the site at which uninjured employees and their coworkers, or family members, if necessary, meet on premises before leaving for home. Members of the Crisis Support Team provide this assistance, as well as more intensive care to any employees who are acutely traumatized.

Crisis Case Responders (CCR) are taught to greet employees exiting through the Resource Center, provide prepared handouts on stress management, connect employees to their families and other support systems, and refer individuals most affected to a higher level of mental health care.

CCRs are taught that crisis support needs include: 1) Safety and transition out of the impacted area; 2) Information to decrease confusion and anxiety; and 3) Reunion with groups of other survivors and family. Crisis Support Needs for survivors who are crisis-triaged Levels II or III include: 4) Reduction in environmental stimulation; 5) Restoration of coping and links to outside support; and 6) A safe place to express reactions.

CCR provisions are summarized as follows:

Step 1: Follow their function acronym: **C**-Cover evacuation areas and offer blankets, beverages, and handouts; **C**-Count survivors evacuated; and **R**-Report estimates of evacuated survivors on the CCR report form.

Step 2: Give **HOPE**: **H**-Help; **O**-Organize; **P**-Protected; **E**-Exit

For survivors triaged Levels II or III:

Step 3: Follow their function acronym: **C**-Catch survivors received at Resource Centers; **C**-Connect survivors with supportive family members or friends; and **R**-Release survivors to off-site support and care.

Step 4: Provide **CARE**: **C**-Clarify event and context of support;

Table 1.
The elements and the intervention associated

Survivor Experience	Intervention	Goal
Disconnection from others	Pro-actively contact survivor, introduce self as crisis support team member. Demonstrate interest, concern, openness, and acceptance to encourage expression of reactions, thoughts, feelings	Provide expression: To help the survivor to communicate his or her perceptions; bring reactions into verbalized semantic memory and cerebral context; with purpose of making contact
Loss of orientation	Provide orientation: "What is your name? What happened in your area? I'm here to help you and your co-workers to be able to gather away from here and provide us with critically-needed information."	Provide context: To clarify the survivor's situation through providing orientation about what is being done to help survivors. This allows the survivor to contextualize his experience within a broader base of support.
Loss of sense of control	Facilitate recovery of a sense of self-control. "It was terribly scary for you, considering the damages you witnessed. Can you now leave the area if I give you directions?"	Provide validation: To encourage the survivor in her efforts to reestablish her equilibrium and adaptive strength so that she can regain a sense of self-control and mobilize resources to care for self and others.
Loss of purpose	Offer guidance for responsibility and a new sense of purpose. "We need for you to tell us what's happened in this building and what is needed. This will occur at our Resource Center, which is out this door to the yellow flashing light, then right to the brightly-lit trailer. Can we depend on you for that now?	Provide direction: To offer guidance for responsibility and a new sense of purpose. Loosening the survivor from helpless feelings by encouraging activity aids recovery. The survivor is directed to an area where his or her experience will be given value, and further information and action will be suggested.

A-Ask fact-based questions to assess awareness of surroundings; **R-**Reflect expressions that promote coping; and **E-**Exit with equipment for self-care and follow-up.

Emergency Responder Stress

Emergency response is inherently stressful to most individuals due to a number of factors, such as expectable reactions of fright, fear, confusion, and the overwhelming sense of urgency. In addition, volunteer emergency responders are even more susceptible to feeling that they should somehow do more than is either physically possible or operationally appropriate. For these reasons, it is necessary that provisions of crisis support include periodic defusing of employee response teams, during brief breaks initiated by the leader of emergency operations. The purpose of these response team meetings, led by members of the Crisis Support Team, is to assist emergency responders in staying on assigned tasks, to facilitate team cohesion and internal coordination, and to intervene if any emergency responders are experiencing stress reactions that are disrupting the team's effectiveness.

Crisis Support Responders receive introduction to principles of emergency management from the perspective of Tavistock group relations literature. The conditions identified for effective emergency management that promote performance and mitigate stress include the following in Table 3.

Crisis Support Responders (CSR) are taught the stages of emergency reactions:

Alarm - Responders comprehend the state of emergency; Mobilization - Responders gather information and resources to assist survivors; Action - Responders perform tasks as directed; and Letdown - Responders feel uneasy when emergency activities pause or cease. Common stress effects of emergency response work (derived from employee experiences in actual disaster and disaster response simulations) are also explained, as illustrated in Table 4.

CSR activation is simplified, to protect responder task and role orientation. CSR contacts are: 1) Arranged by Emergency Operations Command; 2) Convened by employee Emergency

Table 2.
Details on the triage method

	Is the Survivor…					
	Responsive?		**Under-Responsive?**		**Non-Responsive?**	
Connection	Able to express reactions and talk to the responder? Survivor is distracted but describes what happened.	Agitated, frightened, stunned, or grief-struck, but can describe the experience with difficulty	Able to express reactions and talk to the responder? Survivor is overwhelmed and cannot communicate well.	Panicky, argumentative, irritable or excessively guilty, and cannot focus when talking	Able to express reactions and talk to the responder? Survivor is unreachable.	Mute, babbling, collapsed, frozen, or completely withdrawn
Orientation	Able to orient to his surroundings? Survivor is confused but understands that there is an emergency.	Disoriented, unable to plan, think, concentrate or remember very well, but knows what happened	Able to orient to her surroundings? Survivor is in denial and ignores perilous situations.	Poor attention, distortion of reality, and cannot evaluate a dangerous situation	Able to orient to his surroundings? Survivor is out of touch with reality	Does not know where he or she is, or acts bizarre
Control	Able to recover a sense of self-control? Survivor is upset but regains her balance.	Crying, numb, unaware of injury or emotional state, hyperactive or sluggish, but capable of movement	Able to recover a sense of self-control? Survivor is unable to cope and cannot handle his feelings.	Emotionally labile, excessive self-doubting or talking, and has impaired movement, fainting, or physical distress	Able to recover a sense of self-control? Survivor cannot leave the area on his own	Flailing, screaming, aggressive or combative, and refusing to move
Purpose	Able to receive assistance? Survivor is undecided but accepts guidance about what to do next.	Using less sound judgment, helpless, suggestible, apathetic or concerned about others, but accepts direction	Able to receive assistance? Survivor is hopeless or reckless and cannot cooperate easily.	Impaired judgment, despair, and makes frantic attempts to save others	Able to receive assistance? Survivor is oblivious to self-protection.	Aimlessly wandering, or behaving dangerously
	Triage Level I		**Triage Level II**		**Triage Level III**	

Table 3.
The conditions identified for effective emergency management that promote performance and mitigate stress

Primary Purpose	Invests team with authority to protect and direct human resources
Leadership	Guides deployment; Mobilizes & deactivates operations
Specified tasks and roles	Delimits activity; Provides contact command channel for gathering information
Coordination	**"Organizing Relations"** • Mitigate biochemical impacts on cognition • Channel the survival-oriented "urge to rescue"
Communication	Acknowledges crisis experience, values team members, promotes work group focus

Response Team Leaders (e.g., Search & Rescue); and 3) Facilitated by Crisis Support Responders. The primary objective is to support a response team's coordination and functioning.

CSRs are taught and practiced in how to implement the contact format, referred to as **COPE**: **C** – Coordinated; **O** – Operations; for **P** – Performance; in **E** – Emergency (Table 5).

CSRs are also taught an *Action Plan for Relief Assignment* to assist employee emergency response team leaders in follow up to the C.O.P.E. contact. This action plan is adapted from Diane Myers (1994) *Disaster Response and Recovery: A Handbook for Mental Health Professionals.*

Steps for "Relief Assignment" are summarized as followed:

1. During Response Team Contact (C.O.P.E.), CSR observes that employee emergency responder shows obvious signs of distress which disrupt her concentration or verbalization. Employee Emergency Response Team Leader confirms that this responder is behaving differently than he was at start of response work.

2. CSR informs employee Emergency Response Team Leader that responder's degree of stress is disruptive to his functioning, and may interrupt other responders' focus on their response duties, if it continues without intervention. Secure employee Emergency Response Team Leader's agreement to temporarily re-assign disrupted responder to a "relief assignment."

Table 4.
Common stress effects of emergency response work (derived from employee experiences in actual disaster and disaster response simulations)

Psychological	Feeling heroic; denial; identification with survivors; survivor guilt
Emotional	Irritability; restlessness; anger; grief
Cognitive	Confusion; loss of objectivity; blaming; difficulty setting priorities
Physical	Upset stomach; "muffled hearing; headache; excessive fatigue or dizziness

Table 5.
CSRs are taught and practiced in how to implement the contact format, referred to as COPE: C–Coordinated; O – Operations; for P – Performance; in E – Emergency

C.O.P.E.

Contact step	Personnel responsible	Action	Guidelines
Step 1: Briefing	Team Leader	State purpose and structure	"We're meeting for about 20 minutes to maintain our effectiveness, then we'll take a 10-minute break before we return to work. (Name of CSR) has been sent by Emergency Operations Command to act as our facilitator for this meeting."
		Provide updated status report	Present basic facts of response (3-5 sentences) first. Repeat these if necessary. State facts concisely and objectively.
Step 2: Information – Gathering	CSR	Collect incidents	Listen three times as much as you talk.
			Explicitly value and validate each situation as important.
Step 3: Assessment	CSR	Ask about needs, and consider stressors	Listen four times as much as you talk. Your task is to hear problems out, not to fix them at this point.
			Sequence of questions to ask, depending upon how responders share about their work: "What do you need?" "What stressors are you finding?"
			"How are you managing with these stressors?"
		Note obvious signs of distress which disrupt responders' concentration or verbalization, if any	Briefly record any answers to questions about performance needs and any descriptions of disrupted response on C.O.P.E. CONTACT FORM.
		Note any major unresolved obstacles to team's functioning, if any	Briefly record any response obstacles on C.O.P.E. CONTACT FORM.
		Reinforce work group orientation	Encourage team about their work capacity under difficult conditions.
			Encourage team to speak up as needs or solutions occur to them.
Step 4: De-escalation	CSR	Facilitates team communication and coordination	Encourage team members to verbalize how they can support each other in accomplishing tasks.
Step 5: Decompression	CSR	Praises task accomplishments	Validate importance of work done, positive attitude adopted for response work.
		Directs team to self-care (rest break)	During rest break, confer with Team Leader about:
			1) Relief assignment for disrupted responder, if any (see Action Plan for Relief Assignment).
			2) Problem-solving approach to major team obstacle, if any (see Action Plan for Problem Solving Obstacle).
Step 6: Dispatch	Team Leader	Redeploy team to new assignment(s)	Report suggestions adopted, planned solutions to obstacles.
			Give team members new assignment(s).

3. Meet with the disrupted responder privately. Suggest to responder that her functioning has diminished, and that a break away from normal duties is necessary in order to return to full potential as rapidly as possible. If the responder resists this, verbalize observations of the specific stress-related behaviors which have been noted. In communicating these facts, be firm, compassionate, and nonjudgmental. If necessary, tell the responder that his employee Emergency Response Team Leader has temporarily directed the responder to take a break rather than to return to normal response duties.

Sequence of "relief assignments" to provide for the disrupted responder include the following:

Short break away from the immediate sights and sounds of the response work. If possible, the CSR should accompany the disrupted responder during part of this 15 to 30-minute break. If a private room is not available for the break, a little-used corridor, or a walk outside, will suffice. During this break, the CSR may:

1. ASK what is happening with the individual now. What is the work like at this point? What will help right now?

2. LISTEN TO AND REASSURE the responder that his feelings are normal under the circumstances. Offer supportive comments. Try to provide for the responder's stated needs.

3. SUGGEST STRESS MANAGEMENT strategies that might seem appropriate, such as deep breathing, progressive relaxation, gentle muscle stretching exercises, or (positive) 'self-talk.' … Food and beverage should be suggested if the worker has not eaten for a while.

4. LET THE WORKER REST. After chatting with the responder, the CSR should allow him some "breathing room" for 15 to 20 minutes. When checking back on the responder, the … CSR and the responder can determine if the responder is ready to return to normal response duties. If the responder can do so, tell the employee Emergency Response Team Leader that the responder is ready for emergency response work.

A. Assignment to a task away from the immediate sights and sounds of the emergency response work, if feasible for the employee Emergency Response Team Leader. Advise the Team Leader that if the responder's concentration or verbalization further diminishes, she should be escorted to the Resource Center as soon as feasible for further assessment and intervention.

1. Occasionally, a responder may be so distressed and disrupted by emergency response work that he should be released from further work altogether; if so, make sure the responder is escorted to the Resource Center for support and assistance in leaving the premises.

A. In addition, CSRs learn an Action Plan for Problem Solving Obstacles to assist employee emergency response team leaders in follow up to the C.O.P.E. contact. Steps for solving obstacles that arise in the C.O.P.E. contacts are summarized as follows:

1. During response team contact (C.O.P.E.), a substantial unresolved team obstacle surfaces. This may be a serious operational or interpersonal difficulty, or may appear as stress reactions severe enough to compromise the employee emergency response team's functioning.

2. In private conference with the Emergency Response Team Leader, the CSR identifies the substantial team obstacle and asks what the Team Leader thinks should be done to address it. Allow the Team Leader time to develop ideas so that she takes responsibility for developing a solution.

3. If the Team Leader is unable to address the obstacle, the CSR more actively guides problem-solving by using the following sequence.

CSR briefly describes the employee emergency response team's role within the total emergency operation and the duration of its work to this point. For example, "Alan, your Search & Rescue team is one of 5 teams working damaged buildings at this point. They have already been doing early response work for 2 hours, under difficult conditions."

CSR invites the Emergency Response Team Leader to "develop a solution for the team's obstacle, which is " (state obstacle as briefly and objectively as possible). If the Team Leader still has difficulty addressing the obstacle, ask the following questions in sequence:

"What is the specific problem, as you see it?"
"What are a couple of potential solutions to this problem?"
"What do you think is the best solution?"

1. CSR reiterates to the Team Leader the best solution she reaches, notes it on the C.O.P.E. Contact Form, and advises the Team Leader to report back to her response team (during "Dispatch" step, following the rest break), as briefly and objectively as possible, the specific team obstacle identified and the plan for resolving it.

2. If the employee Emergency Response Team Leader refuses to discuss a substantive team obstacle; is completely unable to formulate a solution; or chooses one which seems likely to further diminishes team functioning, the CSR communicates the situation on an urgent basis to the Emergency Operations Command.

Employee Injuries

The most challenging area of crisis support involves the psychological care and management of seriously injured employees. Delivery of urgent medical care to employees involves difficult choices about the allocation of scarce resources. It may also involve employees' deaths. This work is, of course, inherently stressful. Members of the Crisis Support Team are charged with consoling injured employees and providing resource support to Disaster Medical Team Response Teams.

If employee casualties require medical care on premises while they await transport to hospitals, crisis support for severely injured, and the Disaster Medical Team responders who care for them, is critical. Crisis Support Team members are dispatched by the Emergency Operations Command to the Casualty Collection Points (CCPs) to provide emotional comfort to severely injured, and resource support for urgent care delivery.

The most significant challenges that confront the Casualty Collection Point include the "Golden Hour" post-impact, a brief period in which "Immediate Injured" can be saved; and "Friedrick's Time," the four to six hours before "Delayed Injured" lapse into more critical condition. Casualty Collection Support Responders (CCSRs) provide resource support to the Disaster Medical Team members.

Another challenge that CCPs face is referred to as surge. Surge consists of asymmetrical, aperiodic flow of care-seeking survivors, due to: 1) Fastest self-transport toward Casualty Collection Points occurring among those who are less-seriously wounded (this tends to initially overwhelm CCPs); 2) Slowest transport toward Casualty Collection Points occurring among those most-seriously wounded; and 3) Clusters of self-transported casualties occurring due to interpersonal affiliations and extraction of numbers of survivors at the same time. The impacts of surge are that: 1) Increased rate of casualties may temporarily overwhelm disaster medical responders' abilities to triage, treat, and transport; 2) Increased rate of casualties may demoralize responders and cause additional "fatigue" reactions; and Increased rate of casualties may cause bottlenecks in the flow of supplies and materials.

Convergence is a phenomenon that occurs when people, goods, and services are spontaneously mobilized and sent into a disaster-stricken area. Although convergence may have beneficial effects, like rushing resources to the scene of a crisis, it can also lead to congestion, create confusion, hinder the delivery of aid, compromise security, and waste scarce resources. Convergence on various disaster sites cannot be stopped, so CCSRs' attempts must focus on channeling it along less disruptive lines. There will always be volunteers who will collect, and who may want to help. Convergence is driven by attachment, and is therefore marked by interpersonal urgency, intensity which can quickly result in frustration and conflict. The fact that convergence is driven by attachment also makes possible extraordinary achievements by groups of survivors.

Casualty Collection Support Responders (CCSRs) are prepared for additional challenges. Disaster rescue and medical aid require the cooperation of different individuals and groups. Such units may be poorly coordinated, at least initially. Unclear priorities may lead to staff conflict and overreaction. There may be contradictory information regarding the extent of damages, the numbers of injured and dead, and precisely who is involved. Finally, personnel who are involved in rescue tend to focus on their own specific areas of responsibility and action; they may fail to assess the overall situation.

Casualty Collection Support Responders (CCSR) are taught to organize their operations according to sequential elements (Table 6).

These components, based on empirical observations and findings from disaster research, implemented by CSSRs at Casualty Collection Points (CCPs), provide comprehensive psychosocial support to the delivery of emergency medical care.

SUMMARY

Through a careful pre-incident analysis of psychological risks and resources to maximize opportunities for enhancing

Table 6.
Casualty collection support responders according to sequential elements

Component	Purpose	CCSR Function
Anticipate	Estimate casualties and allocate resources	Organize chain of medical care
		1. Disaster Site
		2. Filter Area
		3. Casualty Collection Point
		4. Forward Control Point
Control	Establish perimeters for casualty care	Support environmental boundaries of casualty care
		1. Protect access to triage, immediate, delayed, and minor treatment areas
		2. Direct uninjured to Resource Center
		3. Collect supply, personnel, and support needs
Triage	Categorize casualties according to health vulnerability and resiliency	Facilitate distribution of casualty care
		1. Support Disaster Medical operations in triage station
		Assist with procedures
		Bring supplies
		Provide material needs
		Relay information
		2. Collect supply and personnel needs
Treatment	Stabilize critically-injured vulnerabilities	Provide interventions according to casualties' needs Safety
		Orientation
		Stress Delimitation
Transport	Discharge casualties to definitive care	Coordinate transfer of casualties off site
		1. Document casualty status and transport location
		2. Report information to CCP Manager to relay to EOC

employee coping, corporate emergency preparedness programs offer an important contribution to community recovery. The Crisis Support Team is designed to mitigate stress of emergency response scenarios that have the greatest potential for causing psychological harm to individuals on company premises following a disaster. As such the Crisis Support Team offers the functions of a *temporary other* to intervene in the first wave of peritraumatic processes in the event of a disaster or traumatic event.

This specialized team works within expectable conditions of corporate emergency response in a community-wide event: (1) the corporation may need to conduct response operations for three days without external assistance, and (2) the employee emergency responders who volunteer for this challenge cope with emergencies differently than professional responders.

The Crisis Support Team interacts with all other roles within the emergency response organization, to safeguard human welfare by providing emergency crisis support to employees. It is an essential

reinforcement to private sector emergency response capability, through its support of volunteer employee responders' coping following a disaster, and through its mitigation of psychological dysfunction among employees impacted. Practice-based findings indicate that the Crisis Support Team provides these benefits and optimizes the accomplishment of emergency management objectives.

The individual who has just witnessed and survived horrific circumstances is struggling with overwhelming reactions, and contending with the turmoil through a mixture of active coping efforts and some degree of numbed, attenuated perceptiveness. Depersonalization and derealization are both adaptive, however their continuation may result in damaging dissociative processes. Many survivors are likely to engage in desperate efforts to save the lives of others. Because of their cognitive disorganization and markedly impaired capacities for symbolization, integration, planning, and assessment, they can make dangerous decisions while believing that they are functioning effectively.

Research with primates demonstrates that ongoing neurobiological development is strongly influenced by the quality of attachment to caregivers. In humans, among other species, infants tend to seek increased attachment in the face of external danger. Studies on a variety of species show that the distress call is mediated by endogenous opioid, as in the maternal response to the distress call. Bowlby (1969) notes that lack of parental response to separation results in a biphasic protest/despair response which is correlated with hyperactivity or underactivity of a number of neurotransmitters. The provision of a *temporary other* under conditions such as these is the answer for human survival in the face of trauma.

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