

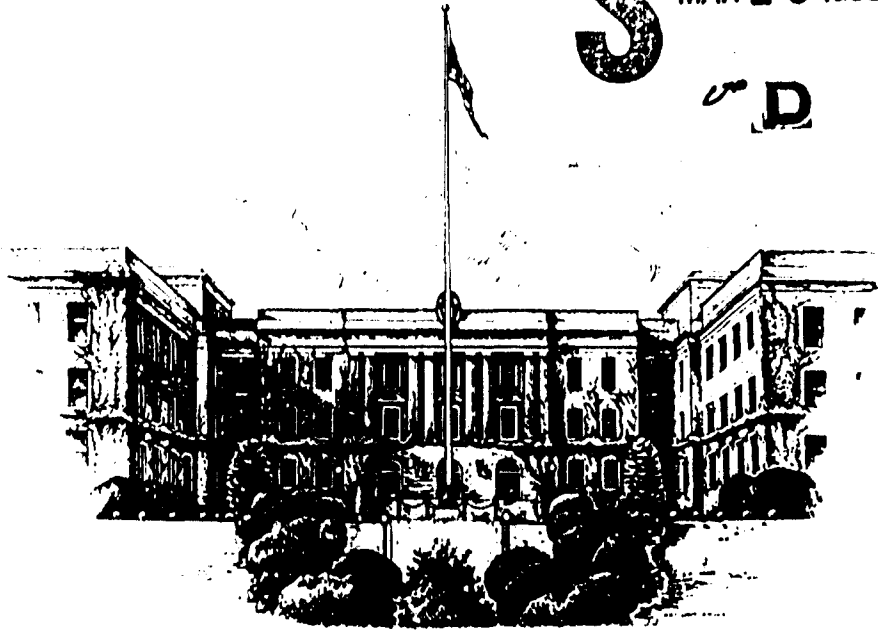
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# THE HUMAN RESPONSE TO THE GANDER MILITARY AIR DIASTER: A SUMMARY REPORT

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**DIVISION OF NEUROPSYCHIATRY**

**Walter Reed Army Institute of Research**

**Washington, D. C. 20307-5100**

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THE HUMAN RESPONSE TO  
THE GANDER MILITARY AIR DISASTER:  
A SUMMARY REPORT

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December 1987

Walter Reed Army Institute of Research  
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and

U.S. Army Medical Research and Development Command  
Ft. Detrick, MD 21701-5012

DEDICATION:

For all members of the 3-502nd Task Force:  
Those who died, those who survived;  
and their families.



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Literally hundreds of dedicated people contributed to this work, both directly and indirectly. It would be impossible to thank them all by name in this short space. Perhaps that is as it should be, since the spirit of this endeavor has been one of altruistic concern for those suffering from sudden, tragic loss and grief. Many have in fact asked to remain anonymous. Nevertheless, we must thank three key individuals at Ft. Campbell by name.

The Commanding General of Ft. Campbell, Kentucky, Burton J. Patrick, granted our research team unrestricted access to Ft. Campbell, and gave us his personal endorsement at a time of extreme sensitivity. Without his support many important lessons about military community responses to disaster would be lost.

Secondly, the Brigade Commander, John P. Herrling, also lent his support to the research mission and provided many insights into the special demands placed on military leaders when disaster strikes their units.

Finally, Battalion Commander Harry E. Rothmann opened his doors to us, making it possible to closely monitor the recovery process in the most seriously affected unit. Without the faith and trust of these men, given at a time of great personal stress and challenge for them all, this research could not have been done.

To them, and to all those who shared their thoughts and feelings with us at Ft. Campbell, Dover Air Force Base, and around the country, we extend our warm thanks. Whatever valuable lessons might be contained in this document are due to them.

Additionally, special thanks must be given to those colleagues, particularly LTC James A. Martin and LTC Frederick J. Manning, who provided input to this report throughout its development. This report could not have been produced, assembled, and distributed without the efforts of a number of Department of Military Psychiatry personnel. In this regard, Tina Sanicola and Victoria Leu deserve special credit for their invaluable assistance in manuscript preparation.

## PREFACE

This paper is one of a series of occasional, informal accounts of work in the Division of Neuropsychiatry at the Walter Reed Army Institute of Research. The reports generally address topics in Army preventive medicine for which implementation responsibility lies significantly outside the Medical Department. Although their contents may overlap partly with our publications in the scientific literature, most papers are based on trip reports, briefings, and consultations involving specific Army audiences. Comments to the senior author are welcome.

This work was supported by Research Area III -- Health Hazards of Military Systems and Combat Operations -- of the U.S. Army Medical Research and Development Command and the Unit Manning System Division -- Office of the Deputy Chief of Staff for Personnel -- Headquarters, Department of the Army.

The Human Response to the Gander Military Air Disaster:  
A Summary Report

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## EXECUTIVE SUMMARY

On 12 December 1985, 248 members of the 101st Airborne Division were killed in a military air disaster in Gander, Newfoundland. This is a summary of the human response to that event. Throughout the report leadership emerges as the key variable ameliorating stress. However, this variable is most likely to be situation dependent. This report, therefore, is an attempt to facilitate consistent, appropriate responses in mass casualty situations, and to provide a source of expertise and consultation for next time. It also has implications beyond those related to infrequent mass tragedies.

First, the military is not psychologically prepared to deal with death in any significant numbers. It has been nearly 15 years since American soldiers saw combat in Vietnam. In troop units only a few aging first sergeants and command sergeants major have had direct combat experience. In the small primary combat unit the ability to effectively deal with death separates blooded from green units. Green units become disorganized in the face of loss; blooded units absorb loss and move forward with the mission. With an unblooded force preparing for come-as-you-are combat scenarios, it behooves the military to prepare now for accepting casualties, reconstituting units and continuing with the mission. There is currently no coherent effort to address this experience deficit.

Second, there is no doctrine for reconstituting Army units which have suffered severe losses, save the discredited individual replacement system which places new, isolated soldiers at high risk for stress breakdown. The replacement and reconstitution schemes used at Ft. Campbell worked masterfully. They provide a useful model for future doctrine in this arena.

Third, much is known both in the military and civilian literature about disasters, grief reactions, disaster worker reactions, and organizational responses. However, there is no central repository for this information, no designated keepers of the concepts, minimal longitudinal research on this topic, and no way to disseminate such information were it available. The present report was compiled by scientists and clinicians to summarize their experiences for those who must deal with death the next time.

Fourth, there will be a next time. In an age of high speed mass transportation, terrorist tactics, and rapid commitment of troops to combat, these kinds of casualties are most probable and must be expected. The following lessons from Gander will be relevant in all cases:

oo During crisis times attention focuses on the bereaved immediate family, but not on the large number of others who suffer but are neglected. They are also subject to substantial performance disruptions. For example, the Gander tragedy revealed two groups of the neglected who could profit from professional consultation: Troops in the units and senior leaders. Both tend to be difficult to access, and are likely to be neglected again the next time a crisis event occurs.



oo Other neglected groups include the different service providers in disasters, for example, the body handlers, security police, family assistance officers, and chaplains. Interventions with these individuals should be straightforward and anticipated with adequate planning.

oo Most professional mental health workers have not received adequate training in responding to mass casualty events and thus represent a seriously underutilized resource.

oo The responses at Ft. Campbell and Dover Air Force Base were appropriate and well-executed. This resulted from leaders who had established themselves as open to upward communication and concerned for servicemen's welfare. The Gander tragedy forcefully demonstrates how critical grief leadership is.

This report is intended as one of those papers packed and carried to each duty station around the world, filed carefully under, "Just In Case. . ."

## INTRODUCTION

On December 12, 1985 a chartered airliner stopped at Gander, Newfoundland to refuel. When the aircraft attempted to take off, it encountered difficulties, crashing into the forest at the end of the runway, exploding on impact, and killing all on board. The snowy crash site cut a long swath of burned and broken trees and debris, with bodies, equipment and personal possessions strewn over an extensive area.

The flight carried 8 aircrew and 248 U.S. Army soldiers, members of the elite 101st Airborne Division (Air Assault) from Ft. Campbell, Kentucky. They were all returning home after a six month deployment in the Sinai. The families of these soldiers awaited their homecoming, and a number of them had gathered at the Brigade gymnasium at Ft. Campbell to prepare for the celebration.

Word of the tragedy reached the 2nd Brigade, 101st Airborne Headquarters at Fort Campbell shortly after the crash occurred. During the next frantic hours, confirmation of the flight manifest began and families were notified to assemble at the Brigade gymnasium for an announcement.

In the meantime, initial body recovery operations began at Gander, involving Canadian authorities in collaboration with Department of Defense personnel. Together they gridded and searched the site, collecting bodies, equipment and possessions. The victims and their effects were initially placed in an airport hanger at Gander to await transport to Dover Air Force Base. Over the course of the next two months, Dover became the site of an extensive mortuary operation.

The Army dead included one-third of the battalion deployed as a peace-keeping task force representing U.S. Armed Forces in the Sinai. Approximately one-third of these soldiers were married and maintained their homes at Ft. Campbell, a tightly-knit military community straddling the border between Kentucky and Tennessee. The crash shattered the community and deprived thirty-six children of their fathers. It was the deadliest single-incident tragedy in peace or war for the 101st Airborne Division. The crash was also the worst aviation disaster to occur on Canadian soil, and America's most devastating military air catastrophe.

The bereaved community extended far beyond the borders of Ft. Campbell. This extensive community included families of the dead, survivors in affected military units, Gander crash site workers, Dover Air Force Base mortuary personnel, and a multitude of service providers, both professional and volunteer, who came in contact with the dead and the bereaved.

In the immediate aftermath of the tragedy, a small research team was rapidly assembled under the proponenty of the Walter Reed Army Institute of Research, the 101st Airborne Division, and the Uniformed Services University of the Health Sciences. The team, composed of Army and Air Force investigators, was sent to Ft. Campbell and Dover to observe and document responses of

affected groups to this traumatic event. The following report is written by the members of that team, and others, for the purpose of sharing observations collected over the course of the six month period following the crash.

The report is a condensation of team observations. It is organized as an overview of responses to the disaster from the perceptions of those who were primary participants in the aftermath. From initial immediate involvement with the dead by troops participating in body recovery and identification at Gander and the Dover mortuary, to the grieving community of families, commanders and comrades at Fort Campbell, the summary provides specific recommendations derived from post-disaster interventions and organizational responses that proved effective. The recommendations are presented in the hope that the lessons learned from the Gander tragedy will not be forgotten, but will be used to develop doctrine and techniques of intervention for community agencies, line and medical personnel in order to better prepare for the next time.

## CHAPTER I

### TROOP RESPONSE

#### Dover Air Force Base Mortuary Operations

The body identification process occurred at Dover Air Force Base, home of the largest post mortuary in the Department of Defense. More than one thousand people worked directly in the process, with the final identification completed nine and a half weeks after the Gander crash occurred.

#### Professionals

More than 120 professionals participated, assigned primarily from the Armed Forces Institute of Pathology. They were augmented by medical and graves registration personnel from various Army installations.

#### Volunteer Body Handlers

More than 900 individuals from the Dover Air Force Base community volunteered to assist in the identification process, of whom nearly 400 actually participated, many as body handlers. The majority of the body handlers were enlisted male Air Force volunteers. Their job was to work in the mortuary and help move remains from one station to another in the identification process. The body handler served as an escort for the dead, ensuring that records, personal effects and body parts were not lost as the identification proceeded.

The use of volunteers is in keeping with the Air Force tradition that a Squadron recovers its dead following flight accidents. Patriotism and a wish "to take care of our own" appeared to overcome fears of seeing the bodies and led people to volunteer at Dover, helping them to remain in the mortuary for long hours of exposure to unforgettable sights, sounds and smells.

#### The Mortuary

The majority of the dead were airlifted from the Gander crash site to Dover during a three day period, although body parts continued to be discovered and transported over the initial weeks following the crash. The sheer number of bodies and their mutilated, burned condition resulted in an extremely complex and lengthy identification process requiring intense hours of work over the course of months by those located at the mortuary. This process reflected the policy of one hundred percent identification of the dead.

After the initial arrival of relatively intact bodies, the rest arrived as body parts, further complicating the identification process. The condition of the bodies contributed significantly to the stress, especially for the volunteer participants. Some went into the mortuary, took one look, and left. Others lasted several days. The majority were able to escort a body through the entire identification process.

The mortuary was organized in a sequence of stations through which the body was escorted as the identification proceeded. The initial stations contained personal effects retrieved at the crash site. These were carefully gathered, sorted and tagged to be returned eventually to the dead soldier's family. Work areas in this location were congested and hectic, in sharp contrast to the adjacent enormous inner room of the mortuary where bodies or body parts waited in long rows prior to autopsy. Stations in the inner room included the cataloguing of body parts, fingerprinting, and x-ray and dental examinations.

The atmosphere in the inner room was subdued. There was little conversation. Professionals, as well as volunteers, appeared exhausted, ashen, and silent. Stations in the inner room were believed to be the most traumatic as the volunteer remained with the escorted body during the full examination and autopsy procedures.

In addition to the stress of exposure to burned and mutilated bodies, participants frequently reported personal identification with the dead soldiers and the tendency to think "it could have been me." Body postures of the dead were often seen with an arm across the head and facial expressions interpreted as terror. A story circulated that soot was found in the trachea of an autopsied body which meant that the soldier had survived the aircraft explosion and died in the ensuing fire.

After a body was identified, it was escorted through the last mortuary stations that included processing of service uniforms according to military tradition. Uniforms were arrayed with ribbons, awards and decorations for each dead soldier, and were either placed on the body or draped over the body part. The body was then accompanied in final escort to the casket, which was sealed, crated, and eventually shipped home to the family.

#### The Stress of Body Handling

The horror, difficulty, and sheer exhaustion involved in the mortuary work resulted in emotional and behavioral changes on the part of participants. Instances of anxiety reactions, zombie-like behaviors (e.g., blank stares, flattened affect, slowed movements, minimal speech), angry irritability, significantly increased alcohol intake, and appetite and sleep disturbances were described. Symptoms and reactions occurred in both professionals and inexperienced volunteers. No amount of training or experience could adequately prepare participants for the magnitude of so many dead bodies in one room.

Not surprisingly, available literature (Harris, 1986; Raphael, 1984; Jones, 1985; Frazer & Taylor, 1982; Hershiser & Quarantelli, 1976) indicates that those engaged in body handling and body recovery are at increased risk for signs and symptoms of post-traumatic stress disorders during the six months following exposure. Some reports indicate as high as 40% of body handlers may experience some signs and symptoms. Additionally, the lack of immediate, acute reactions cannot be interpreted as "all is well," since chronic and delayed stress reactions are frequently reported. The overall conclusion is that those participating in

body recovery and identification should have their level of ongoing exposure monitored, and be followed to identify any medical and/or psychiatric complications that may result from such exposure.

The following research summary evaluates the reactions of a medical and graves registration team from Fort Bragg after completion of their work at Gander and the Dover mortuary. The results of this research, in conjunction with observation and interviews conducted at the Dover mortuary site, form the basis for the recommendations discussed below.

#### Post-Traumatic Stress Disorder in Military Disaster Workers

Immediately following the crash at Gander, a team of medical and graves registration personnel from Ft. Bragg deployed to the Gander crash site and the Dover mortuary site to help recover and identify the bodies. The team included a medical element consisting of technicians who x-rayed the remains for dental and full-body data comparisons, and a graves registration element responsible for photographing bodies and collecting and cataloguing the personal effects of the dead. The graves registration element spent their time at the Gander crash site, often on hands and knees in the mud and melting snow, as they performed an exhaustive search of the large area strewn with body parts, wreckage and debris from the exploded aircraft.

The shock and media coverage surrounding the crash stirred a sense of urgency to complete the recovery and identification process. Both elements of the team worked extremely long hours, some of them over sixteen hours a day, in an effort to complete the work as soon as possible.

The medical personnel returned to Ft. Bragg from Dover just prior to release for Christmas leave. They began a psychological debriefing process nineteen days after their return. The graves registration element had a few days for Christmas leave, then departed for Gander to continue the body recovery process. They began a debriefing upon their return from Gander, 56 days after their initial deployment.

The team was offered a psychological debriefing program to evaluate and treat symptoms of post-traumatic stress disorders. Debriefing is the process of collecting from a group the cognitive history of their experience. It is a time to collect information so that all involved develop an overview of the entire experience throughout the installation or the group. The debriefing process provides the opportunity to enlarge one's cognitive framework and receive education about the normal responses to tragedies (Mitchell, 1986).

The soldiers who participated in this debriefing (Garrigan, 1986) presented clear, intense symptoms of stress disorders with two adjustment patterns noted as predictable and consistent over time: Intrusive psychological re-experiencing of events associated with their exposure to body recovery and identification, and/or diminished responsiveness to their current

environment with increased tendencies to isolate and to avoid family and friends.

In the first pattern, soldiers continued to suffer from intrusive thoughts, images and dreams about operations conducted at Gander and Dover. Often, common everyday experiences would evoke the intrusion. For example, a dental x-ray technician reported seeing skulls when he saw the teeth of smiling people. A young lieutenant could not enter a local fast food establishment because the smell of burning food elicited a vomiting response. Some intrusions did not require an external stimulus. Soldiers reported seeing bodies when they closed their eyes. Their dream content consisted of nightmarish horror shows where zombie-like bodies were coming to kill the dreamer. One soldier reported seeing himself in a dream where he searched through human body parts and found his own ID tag.

The most striking characteristic of those experiencing intrusive phenomena was their personal identification with the suffering of the victims and their families. During the time they worked with the bodies at Gander and Dover, and as they discussed their experiences through the process of debriefing, they reported wondering about the kind of life the victim had led, the effects of the death on the victim's family and friends, and whether the victim had suffered much in dying. This group reported that they had not minded the long hours of work on-site because, ironically, they wanted to get the victims home for Christmas.

In the avoidance pattern, soldiers tended to deny that the experience had any personal effect, avoided discussion about what they had done, and avoided other soldiers who had been with them at Gander or Dover. The most striking characteristic about this group was their matter of fact, emotionally flat manner of discussing their experiences. A number of soldiers in this group demonstrated increased disciplinary and/or substance abuse problems after their return to Ft. Bragg, a probable dysfunctional expression of internalized stress and tension.

The intensity of the symptoms described for this team appear related to the following factors. First, the pressure to complete the body recovery and identification as quickly as possible with limited resources resulted in intensified over-exposure; and second, the instituting of a psychological debriefing process was an afterthought.

### Recommendations

#### Intervention Strategies

1. A pre-work briefing and orientation for body handlers should be mandatory to explain the task and the policy governing the body identification process, to discuss the normal responses to tragedy and to the handling of bodies, and to provide the opportunity to opt out of participation.
2. A mandatory psychological debriefing of leaders, soldiers and their support teams should be conducted as soon as possible after

the mission is completed. Before returning to family and friends the soldier should know that experiences such as nightmares, intrusive thoughts, feelings of anger, fear or empty numbness are normal and expected for most disaster workers with similar exposure. Before being released the soldiers should know how to handle symptoms, how to respond to questions asked by his family and friends, and how to contact an appropriate referral source if symptoms persist.

3. Over the following six months, debriefing-rap groups should be available for those who wish to talk. The importance of debriefing individuals who engaged in the body handling task cannot be overemphasized. Likewise, spouses should be encouraged to attend informational meetings in order to learn more about the experiences of their loved ones and be better able to listen and understand them.

4. Volunteers, freed from routine duties, should continue to be used in the body handling process. Appropriate commendations should be given by the unit/command to recognize those who helped in the difficult task. Several months after the initial events, a "reunion of volunteers" allows the opportunity for further debriefing and strengthens social supports within this group.

5. Newspapers should be used to insure that the community knows what its members are doing and to provide information on the normal reactions to tragedy. In that way, the participants will not be seen as alien but rather be encouraged by others to discuss their experience. At the end of each newspaper article, a contact point should be mentioned where participants can receive help if they have difficulties.

6. Commanders should be briefed on the expected responses of their troops to such work. Health care personnel, both administrative and medical, particularly those at the clinic front door (e.g., family practice, emergency room, General Medical Officer) should be alert to somatic complaints which may represent the stress from such work. Post mental health teams should be adequately trained and prepared to offer counseling and support to all those involved in the body identification process.

7. Education in the community and in debriefing groups should emphasize that recovery from the stress of a disaster and/or body handling is normal and expected, but takes months rather than days.

#### Leadership Strategies

1. Body handlers should have limited exposure times with mandatory and frequent periods of respite and relief, preferably at rest areas away from the immediate site. Records should be kept of those who participated in the body handling experience, for how long, and what they did. In order to monitor health, measures of each participant's psychological well-being and social supports should be taken before, after, and at follow-up.

2. Supervisors should be alert to which body handlers need a respite, despite their wish to "keep working" (e.g., extreme



anxiety reactions, inappropriate affect, withdrawal, blank stares, "zombie-like" behavior). Prebriefings should emphasize this supervisory responsibility and the stress inherent in the supervisor's role under these conditions as they too tend to be overtaxed and intensely committed to the task.

3. Leaders should provide "grief leadership." Leaders who can express their sorrow, fear and sadness while continuing to function will provide a model for others to feel it acceptable to do the same. Their insistence on limited exposure and their permission for subordinates to express normal reactions to tragedy are important components in preventing stress reactions.

4. Individuals who have been trained in the human responses to death and tragedy (mental health workers, hospital staff, chaplains, and family services workers) should be available and actively involved at the site. Working in the community, around the base, and at the mortuary is necessary. Being available "at the office" does not provide required support or open the needed channels of referral.

5. The same mental health support recommended for subordinate participants should also be provided to their supervisors and commanders on site since they are exposed to the same experiences, as well as to increased organizational demands and pressures.

#### Grief Leadership

The loneliness at the top is never more evident than among senior commanders in times of organizational tragedy. They suffer great pain and have the fewest external resources in bearing the sadness of their units. This is so because of their age, accumulated experience, position and on-going leadership responsibilities. With respect to their organizations they are simultaneously the principal mourners, orchestrators of solemn ceremony, and symbols that life must go on.

Several leaders at Ft. Campbell assumed key roles in this mourning process following the Gander crash:

oo The Brigade Commander who was a primary supporter of the battalion mission in the Sinai and a close friend of the deceased Battalion Commander;

oo The Battalion Executive Officer who was the senior surviving staff officer from the Task Force and the emotional leader of the battalion;

oo The Division/Post Commander whose major pre-tragedy concerns were soldier satisfaction and the prevention of the Division's overburdening by taskings; and

oo The President (and Commander-in-Chief) of the United States who was considered a friend of the military and the representative of the American people.

These leaders operated within a context of significant events that facilitated mourning in the Ft. Campbell community. For example, at the planned family reception in the Brigade gymnasium where families awaited the soldiers' homecoming on the morning of the crash, the Brigade Commander assumed a key role in grief leadership as he told the assembled families what had happened.

He made critical, emotionally-laden announcements about the crash, assuring families that information would be passed on to the community as soon as it became available. He focused on the importance of not being alone in grief and empathized with those who had lost friends and family. His capacity to express his own grief helped both families and troops to do the same. Those assembled in the gymnasium that morning were able to respond to him, and subsequently to one another.

The Presidential Memorial Service, four days later, was another significant event in the mourning process. Here, the Division Commander emphasized the importance of the President "sharing our sorrow" and joined the President in greeting the bereaved family members and expressing condolences. The President underscored that he represented the American people and that he had come to mourn with the community because the nation was grieving as well. He and the First Lady then proceeded to touch and to talk to each of the family members and many of the Task Force soldiers gathered at the Memorial Service.

The Division Memorial Service occurred in the week following the tragedy and was significant in the participation of the entire Ft. Campbell community, including adjacent towns people. At this service, the Division Commander remembered each "Fallen Eagle" by having his or her name, rank, and home state read, followed by a cannon shot.

Finally, a number of months later, a Silent Tribute Service occurred after the last victim was buried. Here, the Division Commander directed a one minute sounding of the Post sirens, followed by a two minute silent tribute honoring the 248 soldiers lost in the airline crash.

### Recommendations

#### Communication Strategies

oo The expression of openly shared grief should be encouraged by leaders who emphasize the normality of and necessity for grieving.

oo The use of social and family support systems should be stressed by leaders to allow sharing the pain of loss and to avoid isolation in grief.

oo The community in crisis should be kept informed by its leaders as completely and rapidly as possible in order to neutralize anxiety and uncertainty arising from rumors and unfounded half-truths.

oo The affirmation that bereavement is a painful but normal process requiring time to heal should be asserted by leaders in that it refocuses thinking toward the future.

### Training Strategies

oo Formal classes on grief leadership should be instituted at all appropriate leadership training courses. The focus should be on coping with death in Army units to include sharing experiences about what it is like to lose soldiers to death, how units react, how leaders restore cohesion and morale, how newcomers get integrated, how to counsel close buddies of the victims, and how to manage one's own sense of loss.

Similarly, classes should be offered at the Sergeants Major Academy, the First Sergeant Courses, and the Medical and Chaplain Schools. These classes should be aimed at teaching senior NCOs to help junior leaders anticipate their role in restoring unit morale following tragedy. The discussion focuses on the basics: What does a leader say, what does he or she do that soldiers find helpful, and what words or deeds fail, despite best intentions.

oo Each company level unit that suffers a loss should make sufficient time available on the training schedule within two weeks of the tragedy for:

oo Assessing the morale of the unit. The emphasis should be on how people are reacting, which words and acts are perceived as helpful and which not, and what else, if anything, might be done to speed unit recovery.

oo Training soldiers in grief management. NCOs should meet with their respective small groups to discuss personal reactions and to assess which interventions are perceived as helpful and which are resented. Retired NCOs and Officers with combat experience living in the surrounding area could be used as training resources. These veterans could be invited to share their knowledge and experience in managing grief within their units. The emphasis should be on learning from the garrison tragedy to better prepare for losses in combat.

oo A smaller group of participants should be assembled to review the effects of the discussions and to make recommendations for improving the process in the future.

The POC for these training activities should be the battalion Command Sergeant Major, in close collaboration with the battalion chaplain.

### Leadership Coping Strategies

oo Senior leaders should reserve time for physical exercise, sleep, and other restorative activities both during the tragedy and in its aftermath to maximize effective functioning over this

stressful period. In addition, reaching outside the organization to good friends, even if only by telephone, is important, even though senior leaders will be reluctant to share their anguish.

oo The temporary assignment of a consultant who is an expert in organizational tragedy can prove helpful to senior leaders both in terms of information and reassurance. The consultant might be a member of a consultation/research team deployed to assist the affected installation, or an appropriate mental health professional or chaplain located at the post. Local mental health professionals and chaplains should be adequately trained and prepared to offer consultation to senior leaders in mass casualty situations.

oo Senior leaders will have difficulty sharing what they have seen, heard, and thought with family members. Family members may be reluctant to participate in such obvious pain. Again, an expert consultant to the families could be helpful.

oo Senior leaders may have great difficulty "letting go" of the tragedy, setting limits to their involvement, and resisting becoming the permanent symbol of collective grief. In this regard, expert consultation could be helpful.

#### Unit Reconstitution

Of the 248 soldiers who died in the Gander crash, 189 were members of the 3/502 Infantry Battalion. Since the Battalion Commander was killed at Gander, his successor was tasked with the formidable responsibility of rebuilding a shattered and grieving battalion.

Despite the significant number of losses, reconstitution had to proceed as quickly as possible in order that the battalion resume mission capable status. The process of reforming the battalion from remaining core elements was orchestrated with exquisite attention to detail, and within a leadership context that considered the need for mourning the losses, as well as rebuilding the unit. Key leaders provided the model for grief and the permission to mourn. Their sensitivity and care in the design and implementation of the reconstitution plan appeared to facilitate the recovery of the battalion.

Observational and interview data from troops and leaders of the battalion were collected over the six month period following the crash. These data indicate distinct recovery phases in the process of reconstitution, as well as suggesting the importance of grief leadership as the context facilitating this process.

#### The Plan

Most of the Gander losses were sustained by A Company, 3/502 Infantry Battalion, which was virtually destroyed. From a personnel management perspective, the most expedient plan to reconstitute the unit was to re-create Company A with all new soldiers. In fact, some argued forcefully for this solution.

However, there were overriding concerns that a unit reconstituted according to this plan might become the "bastard" or "jinxed" company, avoided or ostracized by the other companies. Integration within the battalion could be compromised since the company might never overcome the stigma of being replacements for those lost. Therefore, in the interest of facilitating rapid assimilation and integration of the new company into the larger unit culture, a reconstitution plan was implemented that intermixed veterans with replacements.

The objectives of the plan were to:

- oo Preserve battalion/company cohesion and cultural integrity;
- oo Speed the socialization and integration of replacements.

Implementation of the plan included the following:

- oo Officer and senior NCO leadership positions in the affected companies were filled by drawing upon available and qualified personnel from sister battalions and sister brigades. Remaining shortages were replaced from outside the 101st Division by the U. S. Army Military Personnel Center.
- oo Three intact rifle squads and one weapons squad were taken from B and C companies of the battalion to form the new core of A company in order to spread out the inexperienced new soldiers within the battalion.
- oo Remaining shortages in all three companies were filled by bringing in available soldiers with appropriate military occupational specialties from sister battalions and brigades, as well as through the Army personnel system, and distributing them throughout the battalion as needed.

After an initial period of disruption, the reconstituted companies coalesced rather quickly (Bartone, 1987). Four general phases of recovery within the battalion were observed:

1. "Numb Dedication" (approximately weeks 1-6): Soldiers were shocked, unbelieving, and emotionally numb. Still, they carried on with the mission in a purposeful and dedicated manner.
2. "Angry Betrayal" (approximately weeks 6-10): By week 6 the initial grief and shock had worn off for most soldiers. The predominant reaction had turned to anger, fueled by media reports of airline negligence. They believed that poor maintenance and operational practices contributed to the deaths of their fellow soldiers, and they blamed both the charter airline and the Army. They felt that the Army had betrayed their trust by allowing an irresponsible carrier to transport troops.

3. "Stoic Determination" (approximately weeks 10-20): After the last victim was identified and buried, soldiers in the 3/502 ceased talking about the crash. They focused instead on training and the recovery of unit effectiveness. A major field training exercise reinforced this attitude.

4. "Integration/Cohesion" (approximately weeks 21-30): At this point, a climate of trust and cohesion had become firmly established in the unit. Replacements worked effectively alongside veterans, and cohesion within the companies appeared strong. A watershed event was the successful training exercise in which the replacements proved their commitment and cemented their integration to the unit. The crash itself was incorporated into the history of the Battalion and Division in the form of memorial displays.

The 3/502 Battalion, with the successful reintegration of Company A, was returned to a readiness posture in approximately six months. This recovery was facilitated by a reconstitution plan that interleaved replacements with veterans, and by a major training exercise in month 4 that tested the unit's knowledge, skills, and teamwork in a realistic field environment. However, these particular phases and their timelines may be specific to this event. Further research will indicate whether or not they can be generalized to other events and organizations.

#### Recommendations

It is likely that the reconstitution and recovery process for units facing similar losses could be enhanced by the following procedures.

1. Interleave groups of unit veterans (survivors) with groups of replacements (cross-leveling) within platoons and companies, preserving maximum stability in key leadership/combat power positions. Though somewhat disruptive at first to companies/batteries that lose the veterans, this process of moving groups rather than individuals contributes to the rapid overall psychological recovery of the unit.

2. Keep replacements new to the unit in at least buddy pairs when they are first assigned. The recovery of squad and platoon cohesion is faster when individuals know each other and share similar experiences.

3. Group debriefings of surviving soldiers and replacements help individuals manage their grief and distress. Such debriefings should be conducted as soon as possible after the event and could be led by medics, chaplains, mental health specialists, or unit leaders with sensitivity and expertise. Additionally, all debriefing leaders should be adequately trained and prepared to organize and conduct debriefing sessions for soldiers experiencing grief reactions to traumatic loss.

Group debriefings provide a time to develop an overview of the entire experience and to receive education about the normal responses to tragedies. Soldiers are encouraged to talk about

their experiences and feelings. This accomplishes four important objectives:

- oo Establishes contact between soldiers and support providers;
- oo Permits soldiers an opportunity to grieve;
- oo Allows extremely distraught soldiers to be identified for further assistance;
- oo Helps soldiers to focus on the event as an opportunity to learn about loss and recovery. This salvages a positive benefit from what is an overwhelmingly negative experience.

4. A major and demanding challenge to the unit, scheduled at the appropriate phase of reconstitution, speeds the integration of replacements and recovery of cohesion. A realistic and successful field exercise gives old and new soldiers a chance to get to know and trust each other. This challenge should be timed to coincide with the "Stoic Determination" phase, when most individuals have placed the traumatic event in the past and have resolved to "drive on." If an exercise has been scheduled prior to the traumatic event which interferes with the burial and mourning process, then serious consideration should be given to postponement of this exercise.

5. Once the "Stoic Determination" phase is entered, a healthy resolve to move forward with life and with the mission and respectfully "forget" about the traumatic event occurs for most individuals. From this point on, extended memorial services only serve as disturbing and intrusive reminders for soldiers, detracting from individual and unit recovery. Commanders should resist the urge to hold memorial services beyond this phase.

6. Continual, close monitoring of the process of unit reconstitution should occur, using either surveys or experienced observers. In war, especially, units may be so severely disrupted that unit replacement would be preferable to attempts at reconstituting an existing unit.

## CHAPTER II

### COMMUNITY RESPONSE

#### Community Agencies

#### The Family Assistance Center

##### Response

The Family Assistance Center was a unique, ad hoc, phenomenon, materializing at Ft. Campbell in response to a crisis situation that could not be handled independently by existing facilities. As soon as news of the Gander crash reached the post, personnel and resources were organized and assembled at the Eagle Conference Center. This white frame building was located centrally and provided convenient access for bereaved families.

Various support facilities and offices on post were requested to send representatives to the Family Assistance Center to coordinate available resources. The Chaplains Office, the Mortuary Affairs Office, the Veterans Administration, the Red Cross, Army Mutual Aid, Army Community Service, the Judge Advocate General's Office, and the Mental Health Services all provided hand-picked teams to staff the Center.

There was little time for planning meetings and few questions about what to do as the staff assumed initiative in response to the crisis. The immediate priority was to install telephone hot lines in order to verify the flight manifest, locate and inform the next of kin, and provide accurate status reports to those calling the Center.

The pace increased over the course of that morning as relevant agencies became established at the Center amidst a crescendo of telephone calls and the arrival of bereaved families. Activity moved to the Family Assistance Center from the Brigade gymnasium where families had received official word of the airliner crash as they assembled for a planned homecoming celebration.

Scores of military and civilian personnel, many of them volunteers, staffed the Center around the clock, giving information, advice, and comfort to grieving and distraught family members. Upstairs, a private room was available with a Mental Health specialist who provided on-site private counseling and support for families in grief, as well as for exhausted staff as the situation became progressively more hectic over the first few days. Even though the magnitude of the event stunned the community, an immediate response was required. There was little time for involved staff to deal with their own grief and anguish as they comforted the bereaved survivors.

The response initiated at Ft. Campbell and centralized in the Family Assistance Center was physically and emotionally draining for all those who participated. Several recommendations



result from observations and interviews conducted at the Center in the immediate aftermath of the crash.

### Recommendations

1. Representatives from support agencies should be located in an easily identified, centralized area, other than the emergency operations center. The designated location should have ready access to professional support providers, such as chaplains and mental health personnel, available for immediate on-site interventions as necessary. Support providers should be trained and prepared to offer counseling and support to bereaved families.
2. Support services should be provided for staff at the central location. A full-time mental health specialist, trained in crisis intervention, should be highly visible at the site, since the mere presence of someone with relevant expertise can be a stabilizing force for involved staff working with bereaved families. The mental health specialist should have direct referral access to the Mental Health Clinic and the availability of a private area on-site for immediate counseling requirements.
3. A hot-line for incoming calls and toll-free lines for outgoing calls should be provided for family members' use at the center. Staff should be prepared for "hate calls" and harassment on the hot line number provided to the public.
4. Control of media and access to this Center by well-meaning but not essential visitors must be the primary responsibility of the public affairs and the security personnel.

### Volunteer Services

#### Response

At Ft. Campbell, the Army Community Service was responsible for handling volunteer and other offers of assistance (e.g., food, money, housing) from both the Ft. Campbell community and the community at large. Volunteers were essential due to the magnitude of the event. However, during the crisis offers from volunteers became overwhelming and resulted in coordination and planning problems. Additionally, many volunteers who wanted to help had great difficulty talking with and providing comfort to grieving families.

#### Recommendations

1. A mental health specialist should provide outreach consultation and education to community agencies' staff and volunteers. Prebriefings should focus on describing expectable grief and stress reactions for bereaved families, and on specific interventions that may be helpful (or not helpful) when interacting with these families. Outreach consultation and prebriefing sessions should be organized and conducted by mental health professionals who are adequately trained and prepared to offer these services.

2. One centralized location should be designated the main site for offers of volunteer assistance and donations. At Ft. Campbell, for example, Army Community Service established an effective computer system of communication and coordination for volunteers, donations, and families requiring help.

3. Financial donations should be handled directly by the designated volunteer service, in coordination with appropriate agencies, by means of a separate finance account. This facilitates ease of access to funds, as well as accountability for their use.

### Family Support Groups

#### Response

A key function of a family support group is to provide an information network. At Ft. Campbell, the Sinai Battalion Family Support Group mechanisms had been in place prior to the Sinai departure six months before the tragedy occurred (e.g., telephone chain, newsletters, packets with membership rosters, and telephone numbers of helping agencies on post). Waiting wives had been given the opportunity to meet at social and informational events. Women who never attended these events had been contacted by telephone and been provided lists of emergency telephone numbers.

Those waiting wives not already at the planned homecoming on the morning of the Gander crash were contacted after word of the tragedy reached Ft. Campbell. They were advised to join the other wives at the Brigade Gymnasium where a full announcement would be made. After the announcement, and in the days to come, the Family Support Group provided a significant base of support for surviving family members.

#### Recommendations

1. Family support group volunteers, especially those who are active participants in the group and who may play key leadership roles in crisis situations, should have the opportunity to attend prebriefing sessions. These sessions should be organized and conducted by adequately trained and prepared mental health professionals. Prebriefings should include workshops or lectures to provide education about grief and stress reactions, and to teach the participants what to say and do (and what not to say and do) when interacting with bereaved families.

2. Family support group members should be given the option to volunteer their assistance to the formal death notification teams. This includes accompanying the team as it makes the initial visit to the newly bereaved family, along with continuing presence in the immediate hours and days following notification. Coordination of this intervention should be the responsibility of the Casualty Affairs Office in conjunction with the affected Family Support Group leader. Again, prebriefing sessions should be offered these volunteers.

3. Other family support groups in the community should be available to the affected family support group for consultation and support, given their own experiences. For example, Ft. Campbell aviators' wives and widows had more exposure to death due to experiences with flight training accidents. These experiences of loss were shared with wives and widows in the more immediately affected family support group.

4. The Family Support Group is one organization among many that becomes activated in times of crisis. Command emphasis should be on coordination of efforts across agencies, rather than on an unrealistic expectation that the Family Support Group, or any other single agency, can assume the majority of responsibilities for families in crisis situations. Members of the Family Support Group must receive command backing for their efforts.

• Bereavement Groups: The Widow Support Center

Response

Six weeks after the Gander crash, a post-disaster workshop was attended by many of the helping professionals and paraprofessionals who assisted bereaved families. Widows representing the Army Widow Support Center from Ft. Huachuca recommended establishing a Widow Support Center at Ft. Campbell. This recommendation was approved and a building was designated on post.

The existing literature (O'Beirne, 1985) and the experience at Ft. Campbell suggest the supportive value of establishing a Widow Support Center after mass casualty situations. For example, survivor guilt was an issue for some women in the waiting wives' group who did not lose their husbands, resulting in their feeling guilty and awkward around the widows. Correspondingly, there was a tendency for the widows to draw together for support and, over time, to break off from the larger support group. Establishing the support center and locating it on post proved helpful for those who wanted to "do something" for the widows, as well as for the widows themselves. It served a protective, buffering function in addition to being a source of emotional support.

Additionally, self-help groups led by paraprofessionals were the preferred mode of treatment by the widows at Ft. Campbell. They tended to gravitate toward those who had had the same experience, finding it easier to relate to other widows through paraprofessional organizations. In these situations professionals may seem removed and intimidating, and not all newly bereaved widows need professional help. However, self-help groups should serve as a referral source for professional treatment as necessary.

Finally, the later absorption of the Widow Support Center into established widows groups should be interpreted as a success, not a failure. It is needed early, but must not take on a life of its own and function to isolate its participants from the rest of the community.

## Recommendations

1. A mental health professional, with adequate training in grief reactions and bereavement groups, should serve as liaison between the professional and the paraprofessional therapeutic agencies.
2. The Red Cross has access to names and locations of bereavement groups. Leaders of Widow Support Groups should become acquainted with these options for their members in the event that they relocate. Established bereavement groups can also provide information and consultation to a newly developing center.
3. Not all self-appointed helpers of widows necessarily possess natural wisdom about the most constructive ways of helping. For example, poorly timed interventions can prevent the development of coping skills and constrain problem-solving. A mental health professional should provide careful assessment of the expertise and prior experience of the paraprofessional who will function as group leader. The assessment should include an evaluation of the adequacy of training in grief stages and reactions and life stage developmental issues related to running a support group for widows. Establishing a Widow Support Center in the affected community provides some control over the selection process.
4. Close communication between the Casualty Affairs Office and the Widow Support Center should be maintained since the support group can provide a valuable established resource in the future for newly bereaved widows.
5. Awareness of "survivor guilt" as a normal reaction is essential in the weeks and months following a tragic event. Survivor guilt reactions should be discussed in the prebriefing sessions provided to all those involved with bereaved families.

## Schools

### Response

For the 36 children at Ft. Campbell who lost their fathers, there were unusual aspects surrounding the event that warranted consideration. For example, there had been a six month separation between the children and their fathers prior to the crash, and there was a prolonged body identification process prior to release for burial. These factors, in conjunction with the developmental stage of the child, may have resulted in increased confusion about the event and in the tendency to maintain a "magical" belief that their fathers were alive and would one day return home.

School staff at Ft. Campbell concluded that supportive leadership in the schools, open communication and planned interventions regarding the Gander crash, and ready access to Mental Health Services for both referral and consultation were important features in their post-disaster response.

## Recommendations

1. Other than the home, the school is the child's major environment. In a mass casualty situation, the school provides a significant setting for preventive interventions. Interventions and outreach work should be conducted by adequately trained mental health workers and crisis consultants in collaboration with school personnel. Clear mechanisms for referral should be elaborated.

2. School counselors should consider the following groups of children at risk:

- oo Surviving family members
- oo Children whose mothers are having excessive difficulty coping. If the mother's reaction to the loss of her husband is maladaptive, then the child may respond to that reaction in addition to the death of the parent.
- oo Children who had psychiatric problems or difficult living situations prior to the crisis.
- oo Close friends of victims' families.
- oo Children whose fathers are deploying in the near future.

3. Teachers, counselors, and school officials should be aware of the tendency to deny death and of the difficulty for staff in conducting preventive education and discussions for children on death-related issues. This is particularly difficult in a situation with children whose parents have died. Staff support groups and consultation from mental health professionals should be routine and readily available.

4. On-going education and training in a school-sponsored workshop forum should be provided to staff, especially guidance counselors, in order to teach them how to handle the topic of death with children. Training workshops should be organized and conducted by those trained and prepared to address the following topics: The effects of developmental stage and age of children on their reactions to death; how death can be misunderstood by children; and which types of interventions may be helpful or not helpful in resolving their anxieties. In crisis situations children need to be able to ask questions, verbalize their feelings, and receive reassurance from adults who are receptive, supportive and known to them.

5. Augmentation of mental health staff for outreach and consultation to the schools should be anticipated in a mass casualty situation.

## Casualty Affairs and Survivor Assistance Officers

### Tasks

The Survivor Assistance Officers appointed to help bereaved families after the crash filled an unusual and ambiguous role, one that crossed the boundaries between military and civilian society. This role ambiguity or confusion is implicated as a major source of stress, related to decrements in psychological well-being and increases in psychiatric symptoms for these officers. In a very real sense, they were boundary-crossers, emissaries of good will under tragic circumstances. They were the official representatives of the military establishment to families at various degrees of remove from the Army.

Questionnaire, interview and observational data were collected from Survivor Assistance Officers at two time points in the year following the air disaster. Examination of these data indicates three major task areas associated with the role of Survivor Assistance Officer: (1) Practical/Administrative; (2) Emotional/Psychological; and (3) Ambassadorial/Political. Unfortunately, current preparation by the Army emphasizes only the first area: that of providing practical assistance to families in administrative matters. Survivor Assistance Officers are briefed on responsibilities such as arranging death benefits and military funerals, disposing of personal effects, providing transportation, and so forth.

The second task, that of providing emotional or psychological support to grieving relatives, has been ignored in most briefing or training provided. Many of the Survivor Assistance Officers associated with the Gander crash had little or no experience or expertise along these lines, and received no special training, guidance or useful information over the course of their duties.

Evidence from the civilian literature (Raphael, 1986) indicates that those who provide emotional support to grieving relatives of disaster victims are at risk for a variety of stress-related health problems. Roles that are ambiguously defined and confusing in crisis situations tend to increase the risk since the organization itself becomes an additional source of stress, rather than providing support in an already stressful situation.

The third important task area, that of serving as an ambassador or emissary for the Army, is also unrecognized by the organization. Survivor Assistance Officers assumed the role of peace-maker between the Army and those families who had permitted their sons and daughters to take up a military occupation, and who now had to accept the permanent loss of those loved ones. Death is not expected to occur in a peacetime, job-oriented Army, but in this case it did. Survivor Assistance Officers struggled to reconcile families to this loss and tried to help them derive some meaning from it. To the extent that they succeeded, anger, resentment, and bitterness toward the Army was avoided or diminished.

The data indicate once again that little or no guidance was provided on how to proceed with this task. Gander Survivor Assistance Officers operated primarily on their own. In order to be effective, they had to develop relationships of trust with their clients over time. However, this also had its costs, since many Survivor Assistance Officers reported extreme difficulty disengaging from families once their support duties were completed.

### Stress

Over 250 Survivor Assistance Officers, of whom 79 were at Fort Campbell, helped surviving family members around the country. Many were young officers performing this duty for the first time. They identified four major components of stress associated with their task:

oo The family's grief: Survivor Assistance Officers dealt intimately with grieving and distraught family members.

oo The Army's confusion: Survivor Assistance Officers provided the interface between the family and the Army. They confronted the Army's bureaucracies in trying to obtain accurate and relevant information for the family, and they attended to various practical matters of concern (funeral arrangements, transportation, etc.).

oo The slow body identification process: In cases such as the Gander crash where bodies were badly disfigured, the body identification process was slow, painful, and laborious. During this difficult period, the Survivor Assistance Officer was powerless to provide the family with what they wanted most--the body of their loved one for burial.

oo Proximity to sudden, violent, horrible death: Survivor Assistance Officers were in close contact with death through the personal belongings, family members, and records of the dead. Since the Survivor Assistance Officer was assigned to the family of only one victim, it was easy to personalize the experience. The assigned officer got to know the victim very well, albeit posthumously. Since they shared similar jobs and circumstances, a psychological identification with the victim was easily made. Fears and concerns about one's own mortality often resulted when the officer realized: "I know more about him (the victim) than I know about my brother."

### Recommendations

1. Experienced Survivor Assistance Officers are an invaluable resource. Those who have functioned as Survivor Assistance Officers at some time in the past know what to expect and cope more effectively with the stress of related tasks and responsibilities. Asking them to share these experiences with newly designated Survivor Assistance Officers in a briefing could facilitate more effective functioning through the transfer of experience and insights. It is also important to have these

veteran Survivor Assistance Officers available for follow-up consultation.

2. The sharing of veteran Survivor Assistance Officer experiences could be accomplished through the use of training modules. For routine Survivor Assistance Officer assignments, the modules could include a TV video cassette or interactive video presentation. In the event of a mass casualty, the modules could be presented to a group of newly designated Survivor Assistance Officers, supplemented by group discussion. A summary pamphlet should be provided as a hand-out to all participants.

3. Survivor Assistance Officers should receive enough training and information to honestly and sensitively best answer bereaved families on such issues as length of time for body identification, etc.

4. Commitment helps protect Survivor Assistance Officers from the stresses of their jobs. Those who believed their work was important and meaningful were better off than those who believed they were just performing a duty.

5. Volunteering for this difficult duty helped Survivor Assistance Officers cope with the tasks. Those who volunteered fared better than those who were assigned. Volunteers also tended to be more committed to the task.

6. Survivor Assistance Officers should be encouraged to keep a log or diary. Many officers kept a written account of their experiences. Writing about these experiences served as a coping strategy and provided a constructive outlet for frustrations.

7. Support from friends and family is helpful for the officer performing this task. Some had friends who were serving or had served in this capacity. Talking with them about one's experiences helped in coping more effectively with their stress. Having supportive and understanding family members (primarily spouses) also helped.

8. Casualty Affairs Offices that were very effective at briefing, supporting, providing relevant and timely information, and general troubleshooting for their Survivor Assistance Officers decreased their stress levels. Those that were slow, disorganized, and unresponsive added stress to an already difficult job.

9. Supportive commanders are essential to minimize stress-related problems for Survivor Assistance Officers. Since this assignment is an additional duty, commanders should be patient when responsibilities extend beyond a few weeks. Survivor Assistance Officers with unsupportive commanders suffered more stress-related problems.



## The Role of Chaplains

### Response

After news of the Gander crash reached Ft. Campbell, chaplains joined the death notification teams to begin the very difficult task of visiting the bereaved families. While no one would deny that chaplains had their "finest hour" in helping to bring the post through the crisis, chaplains had to remind themselves that their extensive training and unquestionable dedication did not allow them to mend every heart every time. They too had to admit that they were neither invincible nor inexhaustible before death and its consequences. Those chaplains who recognized that they neither could nor had to do it all and, just as importantly, that they could receive ministering as well as give it, generally were more effective over the time of the crisis.

The crash tested the faith of both the families and the chaplains. Chaplains seemed less well-equipped to defuse or contain the anger resulting from the perception of the Army's or the airline's negligence. That there were no survivors further added to chaplains' frustration in conveying a message of hope.

Additionally, chaplains had to contend with families whose prior differences surfaced in disagreements over the handling of personal effects or funeral arrangements. These disagreements were often compounded by the fact that Army regulations provide for the spouse to the exclusion of other relatives, and that those who are not legally tied to the service member (e.g., stepparents or grandparents) are ineligible for any benefits, no matter how deserving they might be.

Clearly the pressure and pain surrounding the tragedy were greatest for those chaplains closest to the 3/502nd, those specializing in family life affairs, and those associated with the battalion reconstitution. Even here, however, despite the tendency to maintain a hectic pace, most chaplains avoided burnout by trusting others in helping roles to take over for them, scheduling time for rest, and sharing feelings and experiences with other chaplains. The latter was especially important for those chaplains without wives in whom they could similarly confide.

The scheduling of the presidential Memorial Service (4 days after the crash), the Division Memorial Service (8 days after), and the closing of the Family Assistance Center (10 days after) coincided well with the changing intensity of chaplains' role pressures and emotional levels. The Christmas holiday period was weathered quietly, if somberly. While there was much for chaplains to do in the way of continuing family follow-up visits, responding to delayed grief or stress reactions on the part of fellow helpers and their spouses, answering mail related to the tragedy, and attending funerals (protracted due to the extended body identification process), the Easter Memorial Service effectively brought closure to chaplains' responsive role in the tragedy.

## Scope Of Ministry and Recommendations

The fact that chaplains must be dispatched not only throughout the affected community, the mortuary site, and the funeral locations, but to the disaster and hospital sites when there are survivors, means that personnel resources may be stretched beyond capacity. Reinforcements should be requested early on in the crisis from the respective command, the Office of the Chief of Chaplains, and local civilian clergy, if only in a standby capacity. The senior chaplain must allot personnel resources to minister to the following groups during a mass casualty situation:

### The Dead

To give a presence of dignity and compassion during the identification process and to conduct proper military funerals/burials.

oo Since mortuary operations and funerals will often take place away from the home post, a set of uniforms with proper insignia should be available in a constant state of readiness.

oo At least one junior and senior chaplain should serve at the center designated for family assistance established at the mortuary post location. Visiting chaplains from the affected post, as well as local chaplains, should rotate visitations at the airfield with body escorts, the mortuary stations, the Headquarters or Army Control Center, and anywhere the dead are physically handled or identified. Four-hour shifts are recommended.

oo Chaplains should be aware of and attempt to honor any special religious prescriptions surrounding the handling of the dead, especially the remains of non-Christians (notably Jews and Muslims).

### The Military Unit

For the injured; to administer last rites as appropriate, offer spiritual and moral encouragement, and help ensure personal visits by others; for the uninjured; to offer consolation, clarify possible confusion about what happened and address any guilt over why they were spared (especially leaders), share grief over lost friends, and make referrals as needed to other helping professionals; for the replacements; to make them sensitive to the legacy of those who went before them and to have them understand that their own lives hold deep value and significance for the Army and the United States.

oo The visibility and availability of chaplains should be increased where soldiers congregate (e.g., pool/mess hall, Post Exchange, military clubs) for a few weeks following the tragedy.

oo In addition to the post-wide memorial service, separate memorial services should be conducted for each unit that lost soldiers.

oo Orientation sessions/prebriefings for replacement or newly-recruited soldiers should include a chaplain.

#### Family Members

For families whose soldier member is in serious/critical condition or not yet accounted for, to give a presence of prayerful hope; for families of the dead, to provide personal counseling and referral advice at the center designated for family assistance, arrange for escorts home, funerals, follow-up calls, and home visits, promote a good working relationship between family members and the Survival Assistance Officer/Casualty Affairs Office, and assist in establishing family/widow support groups.

oo The staff chaplain's office should expect a deluge of telephone inquiries consequent to the first reports of a disaster involving local military personnel. Many individuals are more likely to trust information from the chaplains office than that from the media or other Army offices. Staff members must be provided with officially sanctioned accurate information. Referrals may be made to the Family Assistance Center, if available, or wherever chaplains can be found ministering to those awaiting news. An inquiry log should be kept for callbacks.

oo Ongoing grief management training for chaplains is essential so that they can manage the process of grieving in the affected community. The annual refresher training on drill and ceremony accompanying military memorial services is also recommended.

oo Chaplain teams are most effective when they include a senior officer with one who has less experience. Chaplains and Survival Assistance Officers should work together as a team with at least one joint home visit to an affected family. A chaplain's presence is especially important at the initial, formal death notification visit.

oo Chaplains should have desks with access to private counseling rooms at the center designated for family assistance to do on-the-spot counseling, arrange home visits, and document families' needs. Chaplains should also be present wherever family members or soldiers from affected units may be waiting (for official word, for arrival of survivors, etc.).

oo Sometimes family members who do not step forward for consolation or assistance are nonetheless experiencing pain and denial. All affected families should be contacted personally by a chaplain. Additional attention should be given to family members who are alone or have no support network, as well as those bereaved individuals who are not parents, spouses, or siblings, but who have functioned as such in the soldier's life. The children of single parent soldier casualties should be identified for special ministering. Chaplains and other clergy who speak Korean, German, and Spanish will be in demand for family counseling.

oo Mail expressing grief, concern, and remembrance should be expected at the chaplains' office for at least three weeks following the tragedy. Most letters can be answered after the crisis period. The letters tend to seek assurance of the soldiers valor, the healing power of God's grace, and the importance of communal response.

#### Others in Helping Roles

To keep a watchful and supportive eye to the emotional and physical needs of Survival Assistance Officers, mortuary personnel and body handlers/escorts, casualty affairs and graves registration personnel, family assistance and Army Community Service workers/volunteers, commanders, Military Police and Honor Guard members, Red Cross representatives, medical and mental health workers, chapel community volunteers, and fellow chaplains. Delayed grief and/or stress reactions are common for these groups and their members' spouses.

oo A chaplain should attend crisis workshops, prebriefing sessions, and organizational meetings for professional and volunteer groups to demonstrate the availability of chaplains' services.

oo Local chaplains should ensure that bereaved families, Survival Assistance Officers and visiting chaplains have their basic physical needs met, including transportation to ceremony locations and chapels. The conventions and desires of local chaplains must be taken into consideration at the visited site.

oo The Post Chaplain, assisted by the Division Chaplain, should assume the role of media point of contact for chaplains in coordination with the Commanding General and the Public Affairs Office at the post. The media point of contact should be prepared to provide advice and information to chaplains organizing memorial services throughout the Army. Other chaplains should be spared media inquiries and interviews until after the crisis.

oo Chapel services should also be conducted for those in the different helping roles (Chaplains, Military Police, and Survival Assistance Officers, etc.). Chaplains should continue to be aware that those in service provider roles are not immune to stress and grief reactions.

#### The Military Community

To offer words of spiritual strength and resolution both at memorial services and informally so that the dead will be honorably remembered, and so the community will make the transition from the shock of unexplainable death and the confrontation with members' own mortality to a focus on life and the living.

oo Unsolicited monetary donations to meet families' needs will begin to come in to the chaplain's office both by mail and in person. The existing chaplains fund may be used as a

temporary site for these contributions, but money should be transferred daily to the Judge Advocate-designated site for disbursement. A chaplain should sit on the post command-appointed committee to review requests for financial assistance. Nonmonetary donations (food, toys, magazines, etc.) and offers of volunteer support should be recorded and immediately directed to the designated center for family assistance so that all agents, including chaplains, may access them for those in need.

oo Adequate copies of Biblical readings, prayer books, and other literature of spiritual reconciliation and comfort should be available. Division memorabilia (e.g., coins, medallions, ribbons, or other simple mementos with local crests) should also be available from chaplains. Chaplains should have quick access to basic medical/personal supplies at all times (aspirin, antacids, ammonia ampules, tissues, coffee/tea, etc.).

oo One chapel should remain open 24 hours a day, and daily prayer services should be held until the installation-wide memorial service.

#### Augmentation of Community Resources

In a disaster the natural tendency is for the organization to exclude outsiders (Raphael, 1986). Much help is offered, but little should be accepted. Visitors, no matter how well-intentioned, require time and resources better directed internally. Outside assistance should be discouraged unless there is a discrete, well-defined requirement. Identified requirements at Ft. Campbell included augmentation of the following community resources.

oo Mental health workers: To support mental health requirements for hospital/clinic coverage and outreach interventions during the crisis; to assist with follow-up care in the aftermath; to provide adequate training and preparation for those agencies and individuals who become actively involved with the grieving community.

oo Chaplains: To support local chaplains at all disaster sites (e.g., affected community, crash and mortuary sites, funeral locations); to participate in the conducting of funerals, the comforting of survivors and community, and the support of those others in service provider roles.

oo Honor personnel: To participate in memorial services and ceremonies; to provide body escort and burial details; to serve as escorts for bereaved families.

oo Security Police: To ensure installation or community security during the time of crisis; to escort distinguished visitors and media representatives; to provide security throughout memorial ceremonies and services.

oo Casualty Affairs specialists: To brief Survival Assistance and Casualty Affairs Officers.

oo Public Affairs experts: To serve as escort officers for media representatives.

oo Administrative personnel: To sustain normal operations at various affected community agencies in addition to increased workload demands from the crisis.

oo Graves Registration personnel: To support those engaged in body recovery and body identification. Planning for augmentation of these personnel requires consideration of the unique stressors of the tasks involved and the necessity for special management of these resources, to include limiting shifts, mandatory breaks, and the availability of a mental health/chaplain support team.

oo Transportation (personnel and vehicles): To support requirements of bereaved family members and distinguished visitors; to provide transportation for bodies and their escorts between the crash, mortuary, and home base sites.

oo Equipment and facilities: To support the conduct of memorial services and ceremonies; to augment mortuary and airfield operations.

oo Auxiliary consultation/research team: To document lessons learned for the future; to assist with research design and data collection after the crisis.

Several additional organizational procedures proved effective in coordinating Ft. Campbell's response to the tragedy.

oo The activation of a Casualty Coordinating Team located at the installation or community. This team was "activated" at the time of the event rather than initially established. Prior organization of such a team is required since there is not time to do so during a crisis. The purpose of the team is to coordinate installation and community staff actions associated with the crisis. Its prior establishment should focus on working procedures, to be broadened in the event of emergency. The team should represent key community and organization leaders.

oo During a crisis event, single points of contact with routine times established for updates should be used for coordination and communication between agencies and organizations. The more levels involved in communication, the more confused and confusing the messages become.

## CHAPTER III

### MENTAL HEALTH RESPONSE

Mental Health staff professionals were not immune to feelings of shock, anguish, and grief after news of the tragedy reached Ft. Campbell. Additionally, they had the formidable responsibility of organizing post-disaster interventions required to cover the multitude of individuals and groups affected by the crisis.

The magnitude of loss and the requirement to launch an immediate mental health response resulted in confusion and intense anxiety as staff met to begin planning outreach efforts. Initial staff expectations centered on the probability of being overwhelmed by large numbers of stressed and bereaved families, and planning focused on organizing and staffing the clinic in preparation. However, consistent with civilian experience (Quarantelli, 1985), this expected reaction never materialized and subsequent planning shifted to extensive community outreach efforts with a focus on consultation, support, and education about grief to affected groups.

Despite the pressure, anxiety, and related concerns about mounting an extensive and immediate outreach program, the tragedy provided an opportunity for the development of close working relationships among the mental health staff. Territorial boundaries that typically exist in a multidisciplinary staff and between troop and hospital elements dissolved in the face of pressing community needs. With the dawning realization that bereaved families would not be flooding the clinic, a move out of the clinic was planned by a united staff. Together, their focus shifted to community directed efforts. The primary interventions centered on consultation and liaison to community agencies and affected units, coordinated through the Division Psychiatrist. Mental health teams were deployed throughout the community and maintained contact with multiple daily debriefings and planning sessions, led by the Division Psychiatrist, over the course of the initial response to the crash in Gander.

Offers of help and support poured into Ft. Campbell from other military installations in the first days following the tragedy. The offers were appreciated, but generally went unaccepted since the inclusion of "outsiders" (those outside the 101st Airborne Division) was perceived as possibly contributing to the confusion and uncertainty evident in the first days after the crash. The reaction of closing ranks and forming a protective barrier around the affected community is consistent with observations from the civilian disaster literature (Raphael, 1986). Extreme ambivalence typically is found concerning off-site participants: There is a need for their support and for their augmentation of stressed and exhausted service-provider resources, combined with a fear that "outsiders" will assume control and only serve to make a bad situation worse.

## Outside Observers

Two groups of observers, one invited and one uninvited, did manage to gain access to the Post. A research group from Walter Reed Army Institute of Research (WRAIR), Washington, DC, invited by the Division Psychiatrist, was to observe and document the community's response to the tragedy. An observation team from Eisenhower Medical Center, Ft. Gordon, Georgia, arrived uninvited with the intention of consulting to the mental health professionals at Ft. Campbell.

Initially the mental health professionals were resistant to any outside interference because of their own uncertainty about how to approach the disaster and because of a fear that the consultants would "take over the show."

No problems arose between the invited WRAIR research group and the mental health professionals. However, tensions occurred between the mental health professionals and the Eisenhower observation team in that the team came uninvited and after the mental health response was well underway. Over time, this team developed a positive working relationship with all components of the post mental health organization.

The following services were provided by the observers:

- oo Both groups of observers represented a source of manpower if the post mental health personnel required augmentation in responding to the disaster.
- oo The WRAIR observers were invited to participate, from the onset, in numerous brainstorming sessions and team debriefings. The Eisenhower observers were ultimately involved in "brainstorming" ideas and in formulating disaster response strategies.
- oo Administratively, the Eisenhower observers were able to focus the mental health professionals on proper documentation of the response plan.
- oo Both groups of observers provided a major source of support to the mental health personnel, especially those unfamiliar with consultation/liaison activities.
- oo Both groups of observers also provided the opportunity for frequent staff discussions that helped eliminate feelings of inadequacy and fears of incompetence as mental health personnel assumed changing roles over the course of the crisis.

## The Ft. Campbell Mental Health Response Plan

The mental health response in the immediate aftermath of the Gander crash was coordinated by a three member team: the Division Psychiatrist acted as the primary available consultant and liaison to the community; the Chief of the Psychology Service focused on mental health clinic readiness; and the Chief of Child



and Adolescent Services worked with the school officials and social work service to aid the affected children.

The immediate response focused on preventive interventions, and mental health teams were sent to the following high-risk settings: the Brigade gymnasium where the families were awaiting the return of the service members; the hospital's general medicine clinic to help with triage; and the newly established Family Assistance Center.

After the immediate response, a three phase mental health plan was developed by the coordinating team based on the phases of grief: Numbness, protest, and apathy. The objectives of the plan included prevention and early supportive interventions, with particular attention to the families of the victims, soldiers who were their friends and comrades, and the service providers (Survival Assistance Officers, Family Assistance Staff, Chaplains, etc.). The principal interventions included: consultation/liaison, education, group therapy, and the identification and treatment of high risk individuals and groups. The phases of grief provided a framework for organizing different outreach interventions in the aftermath of the tragedy.

The first phase of the plan was devised for the initial five days following the tragedy and focused on the grief phase of numbness. The following interventions were made:

- oo The mental health clinic name was changed to the Multinational Force and Observers (MFO) Grief Counseling Center to avoid the stigma of "mental health".

- oo Staffing for the clinic was provided on a 24 hour basis by teams of behavioral science specialists backed up by mental health officers from psychiatry, psychology, and social work.

- oo A behavioral science specialist was stationed at the Family Assistance Center around the clock.

- oo A behavioral science specialist was placed in each Troop Medical Clinic during the day.

- oo Consultation and liaison to the community was maintained through the Division Psychiatrist.

The intermediate phase of the plan was designed to cover the next four weeks of grief generally characterized by yearning and protest. The intermediate phase included the following interventions:

- oo Each unit that lost a soldier was assigned a two person grief counseling team to provide education and consultation emphasizing the normal process of grief. High risk units (i.e., those losing many soldiers) were also identified by these teams, who made themselves available for more intensive interventions as necessary. The teams expected to deal primarily with grief, rage, and survivor guilt reactions, as well as increased incidents of substance abuse and acting-out behaviors.

oo Referrals for bereaved families were made primarily through the chaplains and Family Assistance Center.

The final phase of the plan focused on reactions typically associated with the next six months of grief: Disorganization, apathy and aimlessness. The following interventions were planned:

oo Evaluation of community needs would continue through the liaison efforts of the Division Psychiatrist.

oo Education of commanders, noncommissioned officers, troop medical clinic personnel and Survival Assistance Officers would be made available, with grief process, stress identification, and suicide prevention as the topics of concern.

oo Upcoming division deployment activities would be monitored in order to intervene as needed.

oo Assistance with the planning and implementation of unit reconstitution for the 3/502 Battalion would be coordinated through the Division Social Worker.

#### Recommendations

##### Front-Line Intervention Teams

1. Strong support from the senior leadership of the affected community is necessary to facilitate the mental health intervention.
2. The mental health teams' response should be based on previous knowledge of, and training in, consultation/liaison, crisis intervention, and preventive psychiatry. Mental health plans designed on the basis of phases of grief should use the phases as guidelines only and remain flexible to evaluate and respond to individual and group differences over time.
3. Entry into the community by mental health teams should not be delayed waiting for cases to arrive at the mental health clinic. Vigorous, immediate outreach to identified high-risk settings and groups is critical. Previously established lines of communication provide a significant in-road into the community.
4. Involvement of paraprofessional and lay helpers should be carefully orchestrated given the large number of volunteers participating in various community efforts. Coordination between the community resources should focus on organizing these efforts and providing support to the helpers as needed.

##### Consultation/Research Support Team

1. An Army-wide protocol should be established to organize and dispatch a consultation/research team to assist the affected

military community in providing support services. This team might also be available to civilian agencies as needed.

2. The consultation/research team should include a multi-disciplinary group of professionals chosen on the basis of requirements suggested by the particular crisis event.

3. Consultation should provide support, encouragement and expertise in the development of an outreach plan to the disaster community, assisting mental health workers and others providing support services. Under these circumstances the development of a contract between the consultants and front-line intervention teams should be based upon an awareness of the following:

oo Issues of trust must be resolved quickly in a disaster setting. This may be accomplished by the consultants arriving as soon as possible after the event occurs (the same day would be best), and allowing them time to establish relationships with the front-line teams.

oo The contract should allow for modification of the working relationship as circumstances evolve in the aftermath of the crisis event.

oo Consultants are better accepted when they announce upon arrival, "we are here to help if needed" but will otherwise "only observe."

## CONCLUSIONS

Before the Gander tragedy, the U.S. Army had not seen either combat or accident mass casualties for well over a decade. At the level of an Army company, for instance, only senior NCOs had personally experienced significant loss to their organizations. In addition to this lack of experience, the predominant military reaction to tragedy is to minimize its effect on unit task accomplishment. When the members of an affected unit are in significant emotional turmoil, they perceive such command reactions as unfeeling, insensitive, and disrespectful. Thus attention must be given to possible negative consequences of resuming normal activities too quickly. The repercussions from ignoring potential stress and grief reactions are serious, not only in terms of organizational effectiveness, but also in long-term individual and group or unit consequences.

Throughout this report, a key emphasis has been that grief and stress reactions to traumatic events are normal and to be expected. However, in addition to an awareness of these normative reactions coupled with the good intentions of leaders, reassurance, support, and expert advice often will be required in order to implement appropriate interventions under crisis conditions. This is due to the situation-specific nature of the particular traumatic event, operating in conjunction with the unique features of an affected community. Additionally, each stage of the community response to a traumatic event must be considered. For example, interventions and responses appropriate in the immediate aftermath of the event may not be so later on. Consequently, flexible responding is required, along with the knowledge and ability to shift strategies over time as needed.

A cookbook application of the recommendations proposed in this report will not address the shifting requirements of a community in crisis. Even though a good deal has been written about human responses to disasters and tragedies, this information is not widely known nor long held in consciousness. This is so because disasters occur infrequently and generally to people other than ourselves. The complex nature implied in the design of an integrated response to trauma suggests that expert advice and consultation be sought. If the Army is to be prepared for tragedy, it must have an institutional memory, a designated Consultation/Research Team. In this regard, the availability of such a team, formed in order to provide these services to leaders, may be a useful adjunct to currently existing community resources. The objective of the team would be to use their knowledge and experience to help guide the leadership responsible for handling the human response to the crisis.

In addition to providing a consultation service to an affected community, a consultation/research team serves another important function. The team becomes a source of outside validation for the community, increasing the confidence of leaders and caregivers in the design of interventions. This validation also decreases the stress and increases the effectiveness of those functioning as front-line caregivers and strategy implementers. While it is apparent that such a team can

be of value during a crisis event, there are additional long-term functions it can serve:

- oo Keeping abreast of the literature with an eye toward applications in military and civilian environments;
- oo Training service providers regarding useful outreach techniques;
- oo Documenting military and civilian responses to tragedy to preserve lessons learned for next time;
- oo Pointing out the neglected, unseen psychological costs of managing the aftermath of tragedy; and
- oo Assisting in planning and executing long-term follow-up research to determine effective interventions in military and civilian environments.

An important outcome of this long-term agenda is the development of an adequate conceptual model of tragedy. Such a model does not exist currently. However, as a result of information gathered in the aftermath of Gander, there is some intimation of the degree of complexity that will be required. This model, at the very least, must consider:

oo TIME. Reactions and appropriate/inappropriate responses will vary across time. For example, a leader in tears can symbolize strength at first, but be viewed as weak later on. Memorial services are useful to a point, after which people find them wearing and no longer helpful.

oo LEVEL. Military and civilian tragedies involve individuals, groups, and formal organizations. Individuals may do well while small groups fall apart, or small groups may save the day when organizations fail and individuals seem frail. Conversely, in some instances it may be only the formal organization that holds individuals and groups together at a time of intense pain.

oo LOCATION. Military tragedies are likely to involve more than one community due to the nature of military operations and organizational structures. Therefore the potential for unseen and unsuspected stress reactions is multiplied in military settings.

oo GROUPS AT RISK. Those likely to experience extended stress over time include: Survivor families and close friends of victims; senior leaders; Survivor Assistance Officers and casualty affairs personnel; volunteer workers at the disaster site and morgue personnel; and Chaplains and others who come into direct contact with bereaved families or the disaster site.

This model will continue to evolve over time as other tragedies happen and as knowledge derived from these events becomes incorporated into the existing framework. The model is a

tool to be used, along with other assets, such as the consultation/research team, community resources and leaders, to respond as well as possible to tragedy. It is important not to lose sight of the fact that these assets will not provide a solution to every stressful or difficult situation that arises in the course of responding to these events. As knowledge accumulates from experience, however, it will be possible to further elaborate strategies of intervention, prediction and understanding in order to prepare for next time.

Gander participants and observers might prefer to forget the horror and sorrow of their experiences. However, to use what was learned during these long months will lessen the suffering and pain for others when the next tragedy occurs. If the lessons learned from Gander are remembered, then the soldiers from the 3-502nd Task Force will not have died in vain.

## REFERENCES

- Bartone, P. (1987). Boundary crossers: The role of Army family assistance officers in the Gander disaster. Manuscript submitted for publication.
- Frazer, D. C. J., & Taylor, A. J. W. (1982, December). The stress of post-disaster body handling and victim identification work. Journal of Human Stress, 8(4), 5-12.
- Garrigan, J. L. (1986). Post-traumatic stress disorder in military disaster workers. Unpublished manuscript, Department of Military Psychiatry, Walter Reed Army Institute of Research, Washington, DC.
- Harris, S. L. (1986, September). The impact of the Gander air crash on the RCMP (Royal Canadian Mounted Police). (Available from Health Services Officer, R.C.M.P. "K" Division, P.O. Box 1774, Edmonton, Alberta, T5J 2P1.)
- Hershiser, M. R., & Quarantelli, E. L. (1976). The handling of the dead in a disaster. Omega--The Journal of Death and Dying, 7(3), 195-209.
- Jones, D. R. (1985, March). Secondary disaster victims: The emotional effects of recovering and identifying human remains. American Journal of Psychiatry, 142(3), 303-307.
- Mitchell, J. T. (1986, September/October). Critical incident stress management. Response!, 5(5), 24-25.
- O'Beirne, K. (1985, March). Thanatos: Military wives deal with their husband's deaths. Family, 10-11.
- Quarantelli, B. B. (1985). An assessment of conflicting views on mental health: The consequences of traumatic events. Trauma and its wake (pp. 173-215). New York: Brunner/Mazel.
- Raphael, B. (1984, June). Rescue workers: stress and their management. Emergency Response, 1(10), 27-30.
- Raphael, B. (1986). When disaster strikes. New York: Basic Books.

## RECOMMENDED READINGS

### Psychological Effects in Disaster Victims

- Abe, K. (1976). The behavior of survivors and victims in a Japanese nightclub fire: A descriptive research note. Mass Emergencies, 1, 119-124.
- Ahearn, F. L., & Cohen, R. E. (Eds.). (1984). Disasters and mental health: An annotated bibliography (DHHS Publication No. ADM 84-1311). Washington, DC: U.S. Government Printing Office.
- Anderson, R. (1977). Locus of control, coping behaviors, and performance in stress setting: A longitudinal study. Journal of Applied Psychology, 62(4), 446-451.
- Bartone, P., Saczynski, K., Ingraham, L., & Ursano, R. (1987). Psychological issues in the recovery of an Army unit after traumatic loss. Manuscript submitted for publication.
- Boman, B. (1979). Behavioural observations on the Granville train disaster and the significance of stress for psychiatry. Social Science & Medicine, 13A, 463-471.
- Boyd, S. T. (1981). Psychological reactions of disaster victims. SA Medical Journal, 7, 744-748.
- Brenton, M. (1975, May). Studies in the aftermath. Human Behavior, 56-61.
- Chamberlin, B. C. (1980). Mayo seminars in psychiatry: The psychological aftermath of disaster. Journal of Clinical Psychiatry, 41(7), 238-244.
- Ciacco, A., & Thompson, D. J. (1961). A follow-up of Donora ten years after: Methodology and findings. American Journal of Public Health, 51(2), 155-164.
- Dillon, H., & Leopold, R. (1963, April). Psycho-anatomy of a disaster: A long term study of post-traumatic neuroses in survivors of a marine explosion. The American Journal of Psychiatry, 913-921.
- Dollinger, S. J. (1986, September). The need for meaning following disaster: Attributions and emotional upset. Personality and Social Psychology Bulletin, 12(3), 300-310.
- Duffy, J. C. (1979, September). Disaster at sea: Problems and prospects. Military Medicine, 144(9), 616-618.
- Figley, C. R. (Ed.). (1985). Trauma & its wake. New York: Brunner/Mazel.
- Frederick, C. J. (Ed.). (1981). Aircraft Accidents: Emergency Mental Health Problems (DHHS Publication No. ADM 81-956). Rockville, MD: National Institute of Mental Health.



- Glass, D. C., & Singer, J. E. (1972, July/August). Behavioral aftereffects of unpredictable and uncontrollable aversive events. American Scientist, 6(4), 457-465.
- Green-Lepper, B. (1982). Assessing levels of psychological impairment following disaster: Consideration of actual and methodological dimensions. Journal of Nervous and Mental Disease, 170(9), 544-552.
- Greenson, R., & Mintz, T. (1972). California earthquake 1971: Some psychoanalytic observations. International Journal of Psychoanalytic Psychotherapy, 1(2), 7-23.
- Hoiberg, A., & McCaughey, B. G. (1984). The traumatic aftereffects of collision at sea. American Journal of Psychiatry, 141(1), 70-73.
- Horowitz, M. (1978). Stress response syndromes. New Jersey: J. Aronson.
- Ingraham, L. H., & Manning, F. J. (1981). Cohesion in the US Army: Who needs it, what is it anyway, and how do we get it to them? Military Review, 61(6), 2-12.
- Klein, H. (1974). Delayed effects and after-effects of severe traumatization. Israel Annals of Psychiatry and Related Disciplines, 12(4), 293-303.
- Kobasa, S. C., Maddi, S. R., & Courington, S. (1981). Personality and constitution as mediators in the stress-illness relationship. Journal of Health and Social Behavior, 22, 368-378.
- Kobasa, S. C., Maddi, S. R., & Kahn, S. (1982). Hardiness and health: A prospective study. Journal of Personality and Social Psychology, 42(1), 168-177.
- Krystal, H. (1985). Trauma and the stimulus barrier. Psychoanalytic Inquiry, 5(1), 131-160.
- Krystal, H. (1968). Massive psychic trauma. New York: International Universal Press.
- Laube, J., Murphy, S. A., & Popkin, R. (1985). Perspectives on disaster recovery. Norwalk, CT: Appleton-Century-Crofts.
- Lystad, H. M. (1985). Human response to mass emergencies: A review of mental health research. Emotional First Aid, 2(1), 5-18.
- Marlowe, D. H. (1987, September). Human endurance on the nuclear battlefield: Thoughts on prediction and prophecy. Department of Military Psychiatry, Walter Reed Army Institute of Research, Washington, DC.
- McCaffrey, R. J., & Fairbank, J. A. (1985). Case studies and clinical replication series: Behavioral assessment and

treatment of accident-related posttraumatic stress disorder: Two case studies. Behavior Therapy, 16, 406-416.

McFarlane, A. C. (1984, December). Life events, disasters and psychological distress. Mental Health in Australia, 4-6.

McFarlane, A. C. (1986). Posttraumatic morbidity of disaster: A study of cases presenting for psychiatric treatment. Journal of Nervous and Mental Disease, 174(1), 4-14.

Melton, C. (1985, December). The days after: Coping with the after-effects of the Delta L-1011 crash. Firehouse, 49, 59, 89.

Milne, G. (1977). Cyclone Tracy: Some consequences of the evacuation for adult victims. Australian Psychologist, 12(1), 39-54.

Murphy, S. A. (1984). Stress levels and health status of victims of a natural disaster. Research in Nursing and Health, 7, 205-215.

Neiderland, W. G. (1980, August). The survivor syndrome: Further observations and dimensions. Paper presented at a meeting of the Swiss Psychoanalytic Society, Zurich, Switzerland.

New Manning System Technical Report Number 1. (1985, November). Department of Military Psychiatry, Walter Reed Army Institute of Research, Washington, DC.

Pennebaker, J. W., & Newton, D. (1983). Observation of a unique event: The psychological impact of the Mount Saint Helens Volcano. New Directions for Methodology of Social and Behavioral Science, 15, 93-109.

Perry, R. W. (1979). Detecting psychopathological reactions to natural disaster: A methodological note. Social Behavior and Personality, 7(2), 173-177.

Quarantelli, B. B. (1985). An assessment of conflicting views on mental health: The consequences of traumatic events. Trauma and its Wake (pp. 173-215). New York: Brunner/Mazel.

Rabkin, J. G., & Struening, E. L. (1976). Life events, stress, and illness. Science, 194, 1013-1020.

Raphael, B. (1984). The victims of disaster: Stress responses and their management. Emergency Response, 1(9), 37-39.

Raphael, B. (1986). When disaster strikes. New York: Basic Books.

Schneider, R. J., Bartone, P., Waz, T., McGee, M., & Hoopengardner, D. (1986, November). Package Replacements in a Wartime Scenario. Department of Military Psychiatry, Walter Reed Army Institute of Research, Washington, DC.

- Shore, J. H. (Ed.). (1986). Disaster stress studies: New methods and findings. Washington, DC: American Psychiatric Press.
- Simenauer, F. (1968). Late psychic sequelae of man-made disasters. International Journal of Psychoanalysis, 49, 306-309.
- Solomon, S. D. (in press). Evaluation and research issues in assessing disaster's effects. In R. Gist & B. Lubin (Eds.), Psychosocial aspects of disaster. New York: Wiley & Sons.
- Tierney, K. J. (1986, October 5-10). Disasters and mental health: A critical look at knowledge and practice. University of Delaware, 1-33.
- Webber, D. L. (1976). Darwin cyclone: An exploration of disaster behaviour. Australian Journal of Social Issues, 11(1), 54-63.
- Weinberg, S. B. (1978, April). A predictive model of group panic behavior. Journal of Applied Communications Research, 6(1), 1-9.

#### Crisis Intervention Services in Disasters

- Adams, D. S. (1969). Emergency actions & disaster reactions: An analysis of the Anchorage Public Works Dept. in the 1964 Alaskan Earthquake. Office of Civil Defense, Monograph.
- Baisden, B., & Quarantelli, E. L. (1981). The delivery of mental health services in community disasters: An outline of research findings. Journal of Community Psychology, 9, 195-203.
- Best, R. (1979, February). San Diego air crash. Fire Command. NFPA-Fire Investigations Department, 27-30.
- Bloom, B. (1985). Stressful life event theory and research: Implications for primary prevention (DHHS Publication No. ADM 85-B85). Washington, DC: U.S. Government Printing Office.
- Brandt, E. N., Jr., Mayer, W. N., Mason, J. O., Brown, D. E., Jr., & Mahoney, L. E. (1985). Designing a national disaster medical system. Public Health Reports, 100(5), 455-461.
- Buerk, C. A., Batdorf, J. W., Cammack, K. V., & Ravenholt, O. (1982, May). The MGM Grand Hotel Fire: Lessons learned from a major disaster. Archives of Surgery, 117, 641-644.
- Butcher, J. N. (1980, November). Medical management in a disaster-Mohler et al: The role of crisis intervention in an airport disaster plan. Aviation, Space, and Environmental Medicine, 1260-1262.

- Carlton, T. G., (1980, February). Early psychiatric intervention following a maritime disaster. Military Medicine, 145(2), 114-116.
- Cohen, R. E. (1982). Intervening with disaster victims. In H. C. Schulberg & M. Killilca (Eds.), The modern practice of community mental health (pp. 397-418). San Francisco: Jossey-Bass.
- Darbonne, A. (1967, May). Crisis: A review of theory, practice and Research. Psychotherapy: Theory, Research and Practice, 4(2), 49-56.
- Duffy, J. C. (1978, August). Clinical medicine: Emergency mental health services during and after a major aircraft accident. Aviation, Space, and Environmental Medicine, 1004-1008.
- Duffy, J. C. (1979, September). Disaster at sea: Problem and prospects. Military Medicine, 144(9), 616-618.
- Gilliland, M. G. F., McDonough, E. T., Fossum, R. M., Dowling, G. P., Besant-Matthews, P. E., & Petty, C. S. (1986). Disaster planning for air crashes: A retrospective analysis of Delta Airlines Flight 191. The American Journal of Forensic Medicine and Pathology, 7(4), 308-316.
- Jacobson, G. F., Morley, W. E., & Strickler, M. (1968, February). Generic and individual approaches to crisis intervention. Use of Mental Health Personnel, A.J.P.J., 58(2), 338-343.
- Leitko, T. A., Rudy, D. R., & Peterson, S. A. (1980, September). Loss not need: The ethics of relief giving in natural disasters. Journal of Sociology and Social Welfare, 7(5), 730-741.
- Lieb, J., Lipsitch, I. I., & Slaby, A. E. (1973). The crisis team: A handbook for the mental health professional (pp. 1-60). Hagerstown, MD: Harper & Row.
- Mitchell, J. T. (1986, September/October). Critical incident stress management. Response!, 5(5), 24-25.
- Moses, R. (1977, September). Community mental health services in times of an emergency. Israel Annals of Psychiatry and Related Disciplines, 15(3), 277-288.
- Orr, S. M., & Robinson, W. A. (1982, January/February). The Hyatt disaster: Two physicians' perspectives. Journal of Emergency Nursing, 1, 6-11.
- Raphael, B. (1975, August). Crisis and loss: Counselling following a disaster. Mental Health in Australia, 1(4), 118-122.
- Rapoport, L. (1967). Crisis oriented short term casework. Social Service Review, 41(1), 31-43.

- Rioch, D. Mck. (1968). Prevention, the major task of Military psychiatry. Psychotherapy and Psychosomatics, 16, 55-63.
- Shaw, R. (1979, May). Health services in a disaster: Lessons from the 1975 Vietnamese evacuation. Military Medicine, 144(5), 307-311.
- Sporty, L., Breslin, L., & Lizza, P. (1979). The emergency evacuation of a psychiatric hospital. Journal of Social Psychology, 107(1), 117-123.
- Stern, E. M. (Ed). (1985). Psychotherapy and the grieving patient. New York: Haworth Press.
- Stoddard, E. R. (1968). Organizational structure and victim reaction to disaster relief: A comparative analysis of the Salvation Army and the American Red Cross. Proceedings of the Southwestern Sociological Association, 19, 29-33.
- Strickler, M., & Allgeyer, J. (1967, July). The crisis group: A new application of crisis theory. Social Work: Journal of the National Association of Social Workers, 12(3), 28-32.
- Tierney, K. J., & Baisden, B. (1983). Crisis intervention programs for disaster victims in smaller communities (DHHS Publication No. ADM 83-675). Washington, DC: U.S. Government Printing Office.
- United States Department of Health, Education, and Welfare; National Institute of Mental Health (1978). Field manual for human service workers in major disasters (DHEW Publication No. ADM 78-537). Washington, DC: U.S. Government Printing Office.
- Ursano, R., & Holloway, H. (1983). Military psychiatry. In H. Kaplan & B. Sadock (Eds.), Comprehensive textbook of psychiatry I. Vol. 2 (4th ed.) (pp. 1900-1909). Baltimore: Williams and Wilkins.
- Worden, W. J. (1982). Grief counseling and grief therapy. New York: Springer.
- Xenakis, S. N., Tarcum, J. M., Maury, J. L., & Duffy, J. C. (1987, May). Consultation in the aftermath of an air tragedy. Paper presented at the 140th Annual Meetings of the American Psychiatric Association, Chicago, IL.

#### Impact of Disaster on Service Providers

- Bartone, P. (1987). Boundary crossers: The role of Army family assistance officers in the Gander disaster. Manuscript submitted for publication.
- Bartone, P., Saczynski, K., Ingraham, L., & Ursano, R. (1987). The impact of a military air disaster on the health of family assistance workers. Manuscript submitted for publication.

- Berach, E. F., Jones, H. J., & Valent, P. (1984). The experience of a mental health team involved in the early phase of a disaster. Australian and New Zealand Journal of Psychiatry, 18, 354-358.
- Blake, R. H., & Christiansen, J. R. (1986, April). Prevention and control of stress among disaster workers. A survey of research citations. Paper presented at the Western Social Science Association, Reno, Nevada.
- Drabek, T. E., & Haas, J. E. (1986, March). The study of man: How police confront disaster. Trans-action, 7, 33-39.
- Durham, T. W., McCammon, S. L., & Allison, E. J., Jr., (1985, July). The psychological impact of disaster on rescue personnel. Annals of Emergency Medicine, 14(7), 73-77.
- Durham, T. W., McCammon, S. L., Allison, E. J., & Williamson, J. E. (1987, March). Psychological adjustment of rescue workers following two disasters. Paper presented at the National Meeting of The Academy of Criminal Justice Sciences, St. Louis, Missouri.
- Dyregrov, A., Thyholdt, R., & Mitchell, J. T. (1986, February). Rescue workers' emotional reactions following a disaster. Manuscript submitted for publication.
- Frazer, D. C. J., & Taylor, A. J. W. (1982, December). The stress of post-disaster body handling and victim identification work. Journal of Human Stress, 8(4), 5-12.
- Garrigan, J. L. (1986). Post-traumatic stress disorder in military disaster workers. Unpublished manuscript, Department of Military Psychiatry, Walter Reed Army Institute of Research, Washington, DC.
- Harris, S. L. (1986, September). The impact of the Gander air crash on the RCMP (Royal Canadian Mounted Police). (Available from Health Services Officer, R.C.M.P. "K" Division, P.O. Box 1774, Edmonton, Alberta, T5J 2P1.)
- Hartmann, K. & Allison, J. (1981, May). Expected psychological reactions to disaster in medical rescue teams. Military Medicine, 146(5), 323-327.
- Hartsough, D. H., & Myers, D. G. (1985). Disaster Work and Mental Health: Prevention and Control of Stress Among Workers (DHHS Publication No. ADM 87-1422). Rockville, MD: U.S. Department of Health and Human Services; Public Health Service; Alcohol, Drug Abuse, and Mental Health Administration, National Institute of Mental Health.
- Hershiser, M. R., & Quarantelli, E. L. (1976). The handling of the dead in a disaster. Omega--The Journal of Death and Dying, 7(3), 195-209.

- Jones, D. R. (1985, March). Secondary disaster victims: The emotional effects of recovering and identifying human remains. American Journal of Psychiatry, 142(3), 303-307.
- McFarlane, A. C. (1984, March). Ash Wednesday and C.F.S. Firefighters. Emergency Response, 1(9), 34-35.
- McMillen, L. (1985, August 22). Critical incident stress debriefing (CISD) team. Fort Worth Fire Department, SOP 205.3, 1-5.
- Miles, M. S., Demi, A. S., & Mostyn-Aker, P. (1984). Rescue workers' reactions following the Hyatt Hotel Disaster. Death Education, 8(5-6), 315-331.
- Mitchell, J. T. (1983, January). When disaster strikes...The critical incident stress debriefing process. Journal of Emergency Medical Services, 8, 36-39.
- Mitchell, J. T. (1984, September). Strategies for coping in a charged environment, High tension: Keeping stress under control. Firehouse, 86-89.
- Mitchell, J. T. (1986, August). Living dangerously: Why some firefighters take risks on the job. Firehouse, 50-52.
- Mitchell, J. T. (1986, December 4). Teaming up against critical incident stress. Chief Fire Executive, 24, 26, 84.
- Pine, V. R. (1969, July). A funeral director on the scene analyzes the aftermath of an airplane crash. The Director, 2-5.
- Pine, V. R. (1974). Grief work and dirty work: The aftermath of an aircrash. OMEGA--The Journal of Death and Dying, 5(4), 281-287.
- Raphael, B. (1984, June). Rescue workers: stress and their management. Emergency Response, 1(10), 27-30.
- Sanner, P. H., & Wolcott, B. W. (1983, July). Stress reactions among participants in mass casualty simulations. Annals of Emergency Medicine, 12(7), 29-31.
- Stauffer, E. (1985). C.I.S.D. (Critical Incident Stress Debriefing), abstract 4.
- Taylor, A. J. W., & Frazer, A. J. (1982, December). The stress of post-disaster body handling and victim identification work. Journal of Human Stress, 8(4), 5-12.
- Ursano, R., Ingraham, L., Saczynski, K., Russell, C., Bartone, P., & Cervantes, R. (1987, May). Psychiatric aspects of a tragedy. Paper presented at the 140th Annual Meeting of the American Psychiatric Association, Chicago, IL.

## Social Support in Disasters

- Andrews, G., Hewson, D. M., Tennant, C., & Vaillant, G. E. (1978, May). Life event stress, social support, coping style, and risk of psychological impairment. The Journal of Nervous and Mental Disease, 166(5), 307-315.
- Baum, A., Fleming, R., Gatchel, R. J., Gisriel, M. M. (1983, September). Mediating influences of social support on stress at Three Mile Island. Journal of Human Stress, 1(3), 14-22.
- Bell, B. D. (1978, December). Disaster impact and response: Overcoming the Thousand Natural Shocks. Gerontologist, 18(6), 531-540.
- Caplan, G. (1978, June 21). Social support and mastery of stress. Second International Conference/Jerusalem, 1-37.
- Chisholm, R. F., Kasl, S. V., & Mueller, L. (1986). The effects of social support on nuclear worker responses to the Three Mile Island accident. Journal of Occupational Behaviour, 7, 179-193.
- Davidson, S. (1979). Massive psychic traumatization and social support. Journal of Psychosomatic Research, 23, 395-402.
- Fowlkes, M. R., & Miller, P. Y. (1982). Love canal: The social construction of a disaster. Washington, DC: Federal Emergency Management Agency.
- Solomon, S. D., Smith, E. M., Robins, L. N., & Fischbach, R. L. (in press). Social involvement as a mediator of disaster-induced stress. Journal of Applied Social Psychology.

## Family Response in Disasters

- Bolin, R. (1982). Long term family recovery from disaster. Washington, DC: National Science Foundation. (NTIS No. PB82-229428)
- Clason, C. (1983, March). The family as a life-saver in disaster. International Journal of Mass Emergencies & Disasters, 1, 43-62.
- Crowe, J. L., Drabek, T. E., Erickson, P. E., & Key, W. H. (1976). Families in disaster: Patterns of recovery. Mass Emergencies, 1, 203-216.
- Ekker, K., Gifford G. A., Leik, R. K., & Leik, S. A. (1982). Under the threat of Mt. St. Helens: A study of chronic family stress. Washington, DC: Federal Emergency Management Agency.
- Figley, C. R., & McCubbin, H. A. (Eds.) (1983). Stress and the family, Vol II Coping with catastrophe. NY: Brunner/Mazel.



- Goldberg, S. B. (1973, July). Family tasks and reactions in the crisis of death. Social Casework, 398-405.
- Hill, R. (1958). Generic features of families under stress. Social Casework, 39(2-3).
- Holahan, C. J., & Moos, R. H. (1986). Personality, coping, and family resources in stress resistance: A longitudinal analysis. Journal of Personality and Social Psychology, 51(2), 389-395.
- Hultaker, O., & Trost, J. (1983, March). Family and disasters. International Journal of Mass Emergencies and Disasters, 1(1), 43-61.
- Murphy, S. A. (1986). Stress, coping, and mental health outcomes following a natural disaster: Bereaved family members and friends compared. Death Studies, 1(10), 411-429.

#### Children's Response in Disasters

- Black, D. (1982). Children and disaster. Medical Journal, 285(6347), 989-990.
- Blom, G. E. (1986). A school disaster---Intervention and research aspects. American Academy of Child Psychiatry, 25(3), 336-345.
- Burke, J. D., Borus, J. F., Burns, B. J., Millstein, H. K., & Beasley, M. C. (1984, August). Changes in children's behavior after a natural disaster. American Journal of Psychiatry, 139(8), 1010-1014.
- Crabbs, M. A. (1981, March). School mental health services following an environmental disaster. The Journal of School Health, 51(3), 165-167.
- Crabbs, M. A. (1982, February). Children and environmental disasters: The counselor's responsibility. Elementary School Guidance & Counseling, 16(3), 228-234.
- Farberow, N. L., & Gordon, N. S. (1981). Manual for child health workers in major disasters (DHHS Publication No. ADM 81-1070). Washington, DC: U.S. Government Printing Office.
- Klingman, A. (1978, September). Children in stress: Anticipatory guidance in the framework of the educational system. Personnel and Guidance Journal, 57(1), 22-26.
- Lystad, M. (1985, January/February). Innovative mental health services for child disaster victims. Children Today, 13-17.
- Milne, G. (1977, March). Cyclone Tracey: II The effects on darwin children. Australian Psychologist, 12(1), 55-62.

Newman, J. C. (1976, March). Part II: Development issues, 8, Children of disaster: Clinical observations at Buffalo Creek. American Journal of Psychiatry, 133(3), 306-312.

Piotrowski, C., & Dunham, F. Y. (1983). Locus of control orientation and perception of "hurricane" in fifth graders. The Journal of General Psychology, 109, 119-127.

Raab, R. A. (1978). Coping with death (1st ed.). New York: Richards Rosen Press.

Silber, E., Perry, S. E., & Bloch, D. A. (1958). Patterns of parent-child interaction in a disaster. Psychiatry, 21, 159-167.

#### Death and Bereavement

Aries, P. (1974). Western attitudes toward death: From the Middle Ages to the present. Baltimore, MD: Johns Hopkins University Press.

Blauner, R. (1966). Death and social structure. Psychiatry, 29, 378-394.

Chang, H. H. B., & Chang, C. K. (1980, September). The denying of death: A social psychological study. Journal of Sociology & Social Welfare, 7(5), 742-754.

Feifel, H. (1977). New meanings of death. New York: McGraw-Hill.

Goldberg, S. B. (1973, July). Family tasks and reactions in the crisis of death. Social Casework, 398-405.

Habenstein, R. W. (1968). The social organization of death. International Encyclopedia of the Social Science, 40.A2(I61), 26-28.

Kubler-Ross, E. (1969). On death and dying. New York: Macmillan.

Kubler-Ross, E. (1975). Death: The final stage of growth. Englewood Cliffs, NJ: Prentice-Hall.

Lifton, R. J. (1963). On death and death symbolism: The Hiroshima Disaster. Thought reform and the psychology of totalism (pp. 191-210). New York: Norton.

Lindemann, E. (1944, September). Symptomatology and management of acute grief. American Journal of Psychiatry, 141-148.

Littlefield, C. H. (1984). When a child dies: The sociobiology of bereavement. Unpublished Doctoral Thesis, York University, Toronto, Ontario, Canada.

O'Beirne, K. (1985, March). Thanatos: Military wives deal with their husband's deaths. Family, 10-11.

- Osis, K., & Haraldsson, E. (1977). At the hour of death. New York: Avon.
- Riley, J. W., Jr. (1968). Death: Death and bereavement. International Encyclopedia of the Social Science, 40.A2(I61), 19-26.
- Schneidman, E. S. (1981, Winter). Postvention: The care of the bereaved. Suicide and Life-Threatening Behavior, 11(4), 349-359.
- Schwartz, H. J. (Ed.). (1984). Fear of the dead: The role of social ritual in neutralizing fantasies from combat. Psychotherapy of the combat veteran (pp. 253-267). New York: Spectrum Publications.
- Stern, E. M. (Ed.). (1985). Psychotherapy and the grieving patient. New York: Haworth Press.
- Stillman, F. (1987, August). Line-of-duty deaths: Special needs of survivors. Paper presented at the 95th Annual Convention of the American Psychological Association, New York City.
- Stillman, F. A. (1986, December). Line-of-duty deaths: Survivor and departmental responses. National Institute of Justice Research in Brief. Rockville, MD: U.S. Department of Justice, National Institute of Justice.
- Worden, W. J. (1982). Grief counseling and grief therapy. New York: Springer.

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