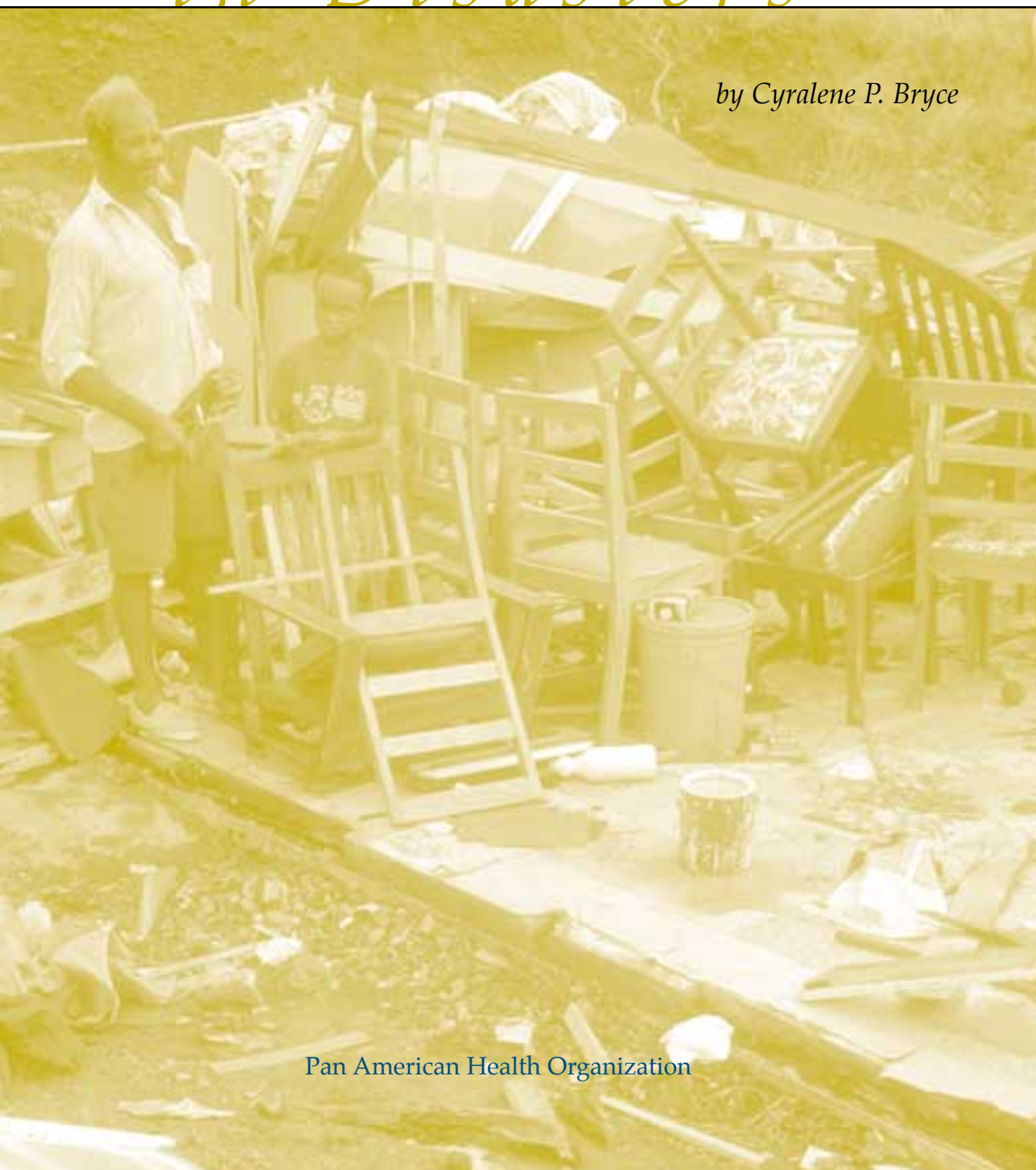


Stress Management in Disasters

by Cyralene P. Bryce



Pan American Health Organization

STRESS MANAGEMENT

in Disasters

by Cystalene P. Bryce



Emergency Preparedness and Disaster Relief Coordination Program
Pan American Health Organization
Regional Office of the
World Health Organization
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This workbook was developed by Dr. Cyralene P. Bryce for the Stress Management in Disasters in the Caribbean (SMID) course. It is intended to be used in conjunction with the *Insights into the Concept of Stress* workbook. It is not intended to be a complete text on the subject of stress.

The compilation of this book benefitted from the input of too many persons for them to be mentioned individually. We would, however, like to express our deepest gratitude to everyone for their invaluable contributions and criticisms.

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“When things go wrong and they sometimes will, just pick up the pieces and keep moving, never stand still.” –CPB

M O T T O :

Take control and move on.

“ You need to be at peace with yourself before you can be at peace with others.” –CPB

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C O U R S E O B J E C T I V E S

1. Define a disaster.
2. Understand the characteristics of disasters.
3. Appreciate the possible impact of a disaster.
4. Describe the psychological profile of the emergency response worker.
5. List the possible occupational stressors encountered by emergency response personnel.
6. Outline the psychological syndromes associated with traumatic stressors.
7. Recognize the common signs and symptoms of post-traumatic stress syndromes.
8. Understand the principles of preventing and managing critical incident stress.
9. Outline the components of the SMID program.
10. Demonstrate crisis intervention and counseling skills in simulated exercises.
11. Demonstrate defusing and debriefing skills in simulated exercises.
12. Be able to plan and implement a SMID program in an organization or in the wider community.

P R E F A C E

It is universally accepted that optimum levels of stress can act as a creative, motivational force that can drive people to achieve incredible feats (eustress). Chronic or traumatic stress (distress) on the other hand, is potentially very destructive and can deprive people of physical and mental health, and at times even of life itself.

Emergency response personnel are unique in that they dedicate their time and energy in assisting persons during stressful times of their lives, for example, after disasters such as hurricanes, volcanic eruptions, earthquakes, etc. By doing this however, they are themselves repeatedly exposed to very stressful situations. Even though their training prepares them to deal with such situations, the reality is that they have a higher than normal risk for developing post-traumatic stress syndromes, including post-traumatic stress disorder (PTSD). Hence, it must be deduced that the repeated exposure of emergency response personnel to critical incident stress does have a potentially deleterious effect on their well-being. It has also been found that the psychological well-being of emergency response personnel dealing with emergency situations can greatly affect the overall outcome of such situations, including the prognosis of the primary victims of the event.

Despite all of this having been well documented and the repeated exposure of the Caribbean and Latin America to natural disasters, the vast majority of countries do not have a comprehensive stress management program in place to preserve the psychological well-being of their emergency response and disaster workers. The Program on Emergency Preparedness and Disaster Relief of the Pan American Health Organization, Regional Office for the Americas of the World Health Organization, took the initiative of bringing resource persons from throughout the region together in late 1998 to develop the Stress Management in Disasters in the Caribbean (SMID) Program.

The SMID Program is a comprehensive, peer-driven, multi-component stress management program which is administered on a volunteer basis and was designed to prevent and to mitigate the psychological dysfunction which exposure to traumatic situations like disasters may cause in emergency response personnel. The program is based on the principles of crisis intervention and critical incident stress management and it is not intended to take the place of professional therapy. Instead, it seeks to provide persons with the knowledge and skills to better understand, recognize and manage their emotional responses to traumatic situations. While the SMID Program was developed with emergency response personnel and disaster workers as its primary target group, the principles of the program, with appropriate modification, can be readily extended for use in the broader community, including with children and adolescents, to prevent and mitigate traumatic stress.

This workbook, *Stress Management in Disasters* and the companion workbook *Insights into the Concept of Stress* were designed to provide the basic training material for persons who will be providing such a service.

SECTION 1: OVERVIEW OF DISASTERS

What is a disaster?

In this workbook, a disaster will be defined as a serious disruption of the functioning of a society, causing widespread human, material or environmental losses which exceed the ability of the affected society to cope using only its own resources (WHO, 1972).

The typical result is significant disruption of normal living patterns, economic activity and communication systems. Extraordinary needs for shelter, food, clothing, medical assistance and other essential care services may follow.

What is a mass casualty incident?

A mass casualty incident is any incident where the resulting number of casualties exceed the resources of the emergency services to manage them and hence the actual number of persons affected will vary from situation to situation. A mass casualty incident may also qualify as a disaster and produce a scene of carnage so devastating that no description can adequately convey what it was like to have witnessed it. Most persons exposed to such a mass casualty incident experience some psychological dysfunction and a high percentage of such persons need help in coping.

What are the characteristics of disasters?

1. Type of event
2. Familiarity of population with the hazard
3. Predictability of event
4. Avoidability of hazards
5. Suddenness of onset
6. Intensity of the impact
7. Severity of the consequences
8. Duration
9. Course
10. Threat of recurrence

What are the phases of a disaster?

PRE-IMPACT PHASE	CONSOLIDATION PHASE:	The period during which the disaster is known to be threatening.
	WARNING PHASE:	The period when a disaster is imminent and warnings have been announced.
IMPACT PHASE	The period during which the disaster event occurs.	
POST-DISASTER	CONSOLIDATION PHASE:	The period immediately following a disaster when individuals are taking stock of the situation.
	REBUILDING PHASE:	The period during which people rebuild their lives and try to bring something positive out of the ruins.

The duration of each of these phases is dependent on the type of disaster, its severity, the pre-disaster standard of socioeconomic development and level of preparedness, the availability of resources to rebuild and the stress tolerance of those affected.

What are some of the possible consequences of disasters?

1 Morbidity & Mortality	<ul style="list-style-type: none"> • Injury • Suffering • Disease • Starvation • Death
2 Material Losses	<ul style="list-style-type: none"> • Damage • Destruction • Pollution • Economic loss • Resource depletion
3 Social Disruption	<ul style="list-style-type: none"> • Disruption of normal activities • Homelessness • Unemployment • Antisocial behavior • Civil unrest
4 Psychological Distress	<ul style="list-style-type: none"> • Helplessness • Hopelessness • Grief • Guilt • Stress

What factors determine the stressfulness of a disaster?

Features of the disaster:

- Familiarity with the event,
- Avoidability of the event,
- Suddenness of its onset,
- Intensity of its impact,
- Course and duration of the event,
- Degree to which it could be controlled.

Community or societal factors:

- The pre-existing level of resources,
- The community's level of preparedness,
- The community's past experiences with such an event,
- Extent and nature of the damage done,
- Consequent social and/or political unrest,
- Availability of resources to rebuild.

Characteristics of the individual involved:

- Previous experiences with similar events,
- Potential and actual losses,
- Physical or psychological closeness with the event,
- Level of background stress in one's life,
- Effectiveness of one's coping mechanisms,
- Nature and extent of available social support.

The realities of disasters

Although almost every segment of a population will be touched by a disaster, the poor (especially women, children and the elderly) are much more vulnerable to its devastating consequences.

Poverty usually implies sub-standard housing in areas most naturally prone to catastrophes, overcrowding, poor levels of sanitation, a shortage of basic medical services, inadequate levels of preparedness and a lack of resources with which to rebuild.

The key to preventing epidemics after a disaster is to improve sanitary conditions and educate the public.

When healthy persons die in a disaster, their bodies can be left in the open for up to three days. Admittedly, this will lower the morale of survivors, cause odors and attract flies, but will not cause the transmission of disease. Hence, one needs to deal with the injured first and bury the dead after.

Even though isolated cases of antisocial behavior do occur, studies have consistently shown that disaster situations bring out the best in people.

The majority of persons affected by a disaster tend to respond spontaneously and generously to help each other.

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Disasters have a way of accentuating social inequality.

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Epidemics and plagues are not inevitable after every disaster.

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Disasters do not invariably bring out the worst in human behavior.

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Disasters do not invariably result in food shortages.

Each disaster has its own unique effects on food supply. For example, floods may destroy crops and food stores while earthquakes hamper the distribution of such supplies.

Relief agencies are now more cognizant of the fact that excessive food donations can result in a dependence syndrome. Consequently, they are more careful to also invest in long-term solutions to food-shortages by donating agricultural supplies such as seeds and tools to ensure a new crop and to help rebuild the local economy.

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Assisting people to rebuild while they remain within their neighborhood and close to their neighbors is economically and emotionally cheaper than relocation to temporary settlements.

Persons at risk and those rendered homeless by disaster situations are usually taken in by relatives and friends with livable dwellings long before shelters can be mobilized to house them.

Those with damaged dwellings tend to prefer assistance in salvaging such dwellings to render them habitable, over relocation to emergency shelters.

“Tent cities” should only be established as a last resort. Instead, many donor agencies are now opting to use the funds that would normally have been spent on tents to purchase building materials, tools, etc., for the affected country. This not only allows affected persons to rebuild but it also serves to stimulate the affected country’s economy.

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Only foreign volunteers who possess the specific skills required by the affected territories should go there after a disaster.

It is a myth that populations affected by disasters are too shocked and helpless to take responsibility for their own survival.

For example, one of the realities of any disaster is that local people come to the assistance of those who have been affected.

Foreign volunteers possessing skills already available locally serve only to deplete already scarce resources.

It is imperative that post-disaster assistance to affected communities be governed by the confirmed needs of such communities.

Every gift to a disaster-affected community has a cost to the recipient country, whether it is the cost of receiving it and transporting it or the cost of its disposal if it proves to be inappropriate.

Disaster affected countries tend to deplete the majority of their resources in the immediate post-impact phase of a disaster. Hence, their major needs for external assistance should be geared towards the restoration of normal housing, primary health care services, water systems, waste disposal systems and income-generating employment.

Consequently, effective post-disaster relief programs are those which take into consideration the fact that international interest wanes as needs and shortages become more pressing.

After a disaster, international organizations providing assistance to affected communities need to work closely with local agencies and members of the community to ensure effective and efficient operations. Local expertise needs to be utilized wherever possible.

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After a disaster, international assistance needs to be tailored to the needs of the affected community. Cash is the most flexible donation.

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International assistance which does not complement the national effort can result in chaos.

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The effects of a disaster are long-lasting and do not just fade away within a few weeks like international interest usually does.

After a disaster has struck, things do not return to normal in a few weeks. In fact, the economic, psychosocial and environmental consequences may become long-term disasters in their own right and their effects may last for years.

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The psychological consequences of disasters tend to be far more pervasive and long-lasting than their physical ones.

“Years have now passed but it seems like yesterday. I feel lost and empty. I can’t get rid of the horrifying memories and the vivid images that remain in my mind. These memories, some of which are very patchy indeed, seem to haunt me all the time and I become very distressed whenever anything - a sound, a smell or a sight - remind me of my ordeal.”

The following fictional accounts of natural and man-made disasters can be used as a basis for discussion about the impact of disasters on communities and emergency response personnel.



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Volcanic Eruption

“Despite several drills that were carried out in anticipation of the eruption, no one was prepared for the ferocity of the blast when it finally occurred. Previously dormant Mount Piedre in the center of the tiny Caribbean island of Guanay, which has a population of 20,000 persons, exploded with such fury that the entire island shook and the sky turned eerie red with the glow of molten lava.

“The death toll has so far reached 25 and 9 people remain missing. In the aftermath of the eruption, the majority of the island has been covered with a two-foot cloud of ash, the sky has turned to a foreboding grey as volcanic dust occludes the sun and there are reports of severe respiratory problems among the population. Survivors on the island are now being housed in a 30 square mile area on the eastern coast and the Government is pleading for international assistance. Volcanologists are predicting another major eruption within the next 72 hours.”



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Hurricane

“Hurricane Lanada, packing winds of up to 160 miles per hour, swept over the hilly Caribbean Island of Toon yesterday leaving a trail of death and destruction. The initial death toll stands at 64 persons, including at least 35 children, but these figures are expected to rise sharply over the next few days as rescue and clean up operations intensify. Rescue teams are working around the clock but their efforts have been severely hampered by on-going floods and mud slides.

“The island’s 500-bed General Hospital was totally destroyed. Emergency medical services are being provided at Hopes Private Hospital on the south of the Island which was also severely damaged.

“Officials from international disaster relief agencies arrived on the Island early this morning and they are now sending out an urgent appeal for tents, blankets, canned food and emergency medical supplies.”

Hurricane Categories and Wind Speeds:

- | | |
|--------------------------|-------------|
| (a) Tropical depression: | 35 mph |
| (b) Tropical storm: | 39-73 mph |
| (c) Hurricane 1: | 74-95 mph |
| (d) Hurricane 2: | 96-110 mph |
| (e) Hurricane 3: | 111-130 mph |
| (f) Hurricane 4: | 131-155 mph |
| (g) Hurricane 5: | >155 mph |



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Floods

“It has been 2 weeks now since heavy rains caused the River Mama in the Zesta Valley to overflow its banks. For days the densely populated village of Perva on either side of the river’s banks was under as much as 20 feet of water at one time.

“Two elderly gentlemen who refused to be evacuated lost their lives in the floods. All of the village’s crops were destroyed and thousands of domestic animals drowned in the floods. The proper disposal of the carcasses of these animals is proving difficult and there has been an outbreak of salmonella in two nearby villages.

“Most of the houses in the village, which were made of pine, were washed away as well. An estimated 8,000 adults and 6,000 children have been left homeless. A number of these Perva villagers who are being housed in emergency shelters in nearby villages have come down with gastroenteritis and influenza.

“An interview of persons in the emergency shelters revealed a sense of helplessness and hopelessness and a middle-aged villager summed up his feelings nicely by stating that he didn’t know if he was standing on his feet or on his head!”



PAHO/WHO

Oil Spill

“The romantic Caribbean island of Ailam has a population of 1.5 million persons and is well known internationally for its beautiful beaches, its exquisite cuisine and its water sports. Tourism is the island’s major foreign exchange earner. Its west coast is home to 12 of the Island’s 14 five-star hotels e.g., Heaven Bay Luxury Resort where the Oscar Award winning movie, “Dreamers’ Paradise” was filmed late last year. During the height of the tourist season this year, hoteliers recorded occupancy rates as high as 106%.

“But all that has now changed. Early one morning, residents of Ailam flocked from all parts of the Island in disbelief to see for themselves the damage which had been done to the west coast of their Island. Not even the oldest people on the Island had ever seen anything like this.

“Late the evening before, it had been noted for the first time that the majority of the west coast seas were covered with large ‘islands’ of what appeared to be crude oil. As the waves bashed against the previously golden beaches they became a greasy, ghostly black. Masses of seriously injured or dead fish, crabs, turtles and birds could be seen all along the coast line. Authorities speculated that a tanker which had passed in the Island’s waters two days before might have been the cause of the disaster.

“With exactly one month now having passed since this very tragic incident, thousands of persons in Ailam are now out of work as over 75% of the island’s west coast hotels and ancillary businesses have had to close their doors. The Prime Minister has estimated the loss in revenue so far to be well over 50 million U.S. dollars and things are expected to get much worse as potential visitors to the island are now being deterred by overseas travel agents from travelling to Ailam at this time. Elements of social unrest are already evident on the Island and yesterday, the Minister of Finance increased consumption tax from 8% to 12% in a desperate attempt to assist those who have found themselves without a job.”



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Ferry Accident

“It was now the 2nd week of the Regional Young Explorers Summer Camp which was being held this year in eastern Seraino. Earlier that morning, a party of 138 Young Explorers and camp officials had set off in a ferry up the River Louda for a scenic tour of the rain forest.

“The river was calm and the weather was enjoyable. Crocodiles basked on the river’s edge and monkeys of all descriptions dashed from tree to tree. Herds of healthy buffalo and goats grazed the lush pastures that punctuated the river’s banks. Ducks, geese, flamingos and egrets were to be seen everywhere and they intermingled freely.

“Without warning, the River Louda became turbulent and, as if in a rage, it dashed the ferry in which the Young Explorers were travelling. The ferry was tossed against an island of rocks downstream and it sank quickly.

“Rescue divers responsible for the area arrived on the scene quickly but they had to proceed with extreme caution since the waters in which the ferry sank were crocodile infested. Six hours after this very tragic incident, 36 persons were rescued having received only minor injuries and 18 persons who almost drowned are in critical condition in the Intensive Care Unit of the San Viesta Hospital. Thirteen other persons drowned and 8 were mauled by the crocodiles. The remaining 59 persons have not yet been found but a high percentage of them are feared dead at this time. Additional rescue divers are being flown in from all over the region to assist with this operation.”



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Airplane Crash

“It was an unusually quiet day at the Seajet International Airport on the Caribbean Island of Uesta. At 17:35 hours an A.L.D. Airlines Boeing 747 jet with 312 passengers and crew destined to Beckdon, South Campden, taxied down the runway.

“Soon after its take off, a loud noise was heard and the rear of the aircraft burst into flames. The fire soon consumed the entire aircraft and the burning wreckage dived into the nearby, heavily populated village of Hillford Terrace and exploded. The charred remains of humans could be seen everywhere.

“Emergency response personnel arrived on the scene quickly and have worked around the clock in this very hilly village to locate survivors of the disaster; 48 hours after the crash, its cause remains unknown.

“Hundreds of injured persons are being treated in the island’s two general hospitals. Four emergency medical tents have also been set up near the site of the incident. The bodies of 168 adults and 64 children have been recovered so far but they are so badly disfigured that identification is proving to be very difficult. The death toll is expected to escalate as rescue operations continue.”



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Riots

“For three consecutive days, riots have disrupted the usually peaceful Island of Botha. The streets erupted with uncontrolled violence following the Government’s announcement of its austerity program in which salaries would be cut and basic food prices hiked by at least 15%. Extensive looting and property damage has been reported throughout the capital, Peace Town.

“Initial estimates have put the death toll at 123 persons including at least 12 children and 20 law enforcement personnel. Police were taken completely by surprise at the severity of the violent outbreak. Although the situation is now somewhat under control, the Prime Minister in his national emergency address today indicated that schools and businesses would remain closed until the end of the month. Peace-keeping troops from neighboring countries are expected to arrive on the island by the end of the week by which time the state of emergency should be relaxed.”



PAHO/WHO

School Bus Accident

“Yesterday afternoon on East Park Road, during a bout of heavy rain, a bus carrying 30 school children collided with two cars and overturned just feet from the Boulevard Bridge. Loud screams could be heard coming from the bus and there was blood everywhere. Scores of people gathered quickly at the scene making it very difficult for emergency response personnel to function.”

“Three of the children travelling on the bus and the bus-driver were pronounced dead at the scene of the accident and six of the children were seriously injured and had to be admitted to the nearby Lakes Field Hospital. Twelve other children suffered only minor injuries and were treated and discharged. The others escaped injury but were understandably very distressed.”

“The three occupants of one car escaped with only minor injuries but both occupants of the second car had to be cut free by fire service personnel. The driver of this car was pronounced dead on his way to the hospital. His wife, the passenger in the car, is now stable but in critical condition in the Surgical Intensive Care Unit at Lakes Field Hospital having suffered major head and chest injuries.”



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House Fire

“Mrs. Asta had left 4 year old Brittany and 6 year old Percival at home to go to a nearby shop to purchase some vegetables to finish preparing Mr. Asta’s lunch by mid-day. On her way back home, she heard people screaming and saw smoke coming from her street.

“By the time Mrs. Asta turned the corner she realized that a whole stretch of houses on her side of the street were on fire—her little wooden house was flat. Mrs. Asta fainted. Brittany and Percival were nowhere to be seen.

“A neighbor stated that a blaze had started in the back of Mrs. Asta’s house which was soon completely burned; the blaze spread rapidly to nearby houses. Attempts to rescue the screaming children were futile.

“Fire officials arrived on the scene quickly but the most that they could do was to contain the blaze from spreading any further. The fire claimed the lives of the two children and three elderly, hand-capped ladies. Seven houses were destroyed and over 50 persons are now homeless.”

End of Section Quiz

Please circle the correct answer.

- | | | |
|--|---|---|
| 1. The consolidation phase of a disaster is the period during which the disaster is known to be threatening. | T | F |
| 2. Mass hunger is inevitable after every disaster. | T | F |
| 3. Disasters only cause physical damage, not psychological instability. | T | F |
| 4. Civil unrest is very common after disasters. | T | F |
| 5. Disasters have a way of accentuating social inequality. | T | F |
| 6. Relocating disaster victims in temporary settlements is the best alternative once people's homes have been damaged. | T | F |
| 7. A community's level of preparedness can affect the stressfulness of a disaster. | T | F |
| 8. In most disasters, the local population deals with the immediate life-saving needs of that population. | T | F |
| 9. The threat of recurrence of a disaster makes it particularly stressful. | T | F |
| 10. International organizations must direct all relief activities in disaster stricken countries. | T | F |

Note: Answers to questions are on page 128.

