

# Integrating Mental Health and Psychosocial Issues in Disaster Risk Reduction: The Example of Belize



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- Population: 291,800
- Size: 8867 mi<sup>2</sup>.
- Gained independence from Great Britain in 1981
- Primary Language: English (official), Spanish, Mayan, Garifuna, Creole
- Six districts: Corozal, Orange Walk, Belize, Cayo, Stann Creek and Toledo.



# Effects of Climate Change on Belize

- The Caribbean is vulnerable to the effects of climate change
- Natural hazards are predicted to increase
- Disasters can undermine the long-term functioning and well-being of the community
- ▶ **Preparedness is important at all levels including mental health**



# Belize Mental Health Disaster Preparedness Initiative:

## Strengthening Existing Structures and Promoting Resilience

- **Ongoing Collaboration** between the University of Louisville and the people of Belize
- **Key principles**: strengthening and building local capacities and resources, supporting self-help and fostering learning and collaboration
- **Guided by** the *Inter-Agency Standing Committee (IASC) Guidelines on Mental Health and Psychosocial Support in Emergency Settings*.
- **Focus on** the areas of
  - Coordination;
  - Assessment;
  - Monitoring and Evaluation;
  - Human Resources and Training



# Coordination

- Strengthening of coordination and communication around a comprehensive mental health disaster plan should occur among various agencies and groups.
- Our Project Team Interviewed the Following Agencies:
  - Ministry of Health and Psychiatrist; Director, Mental Health Division
  - National Emergency Management Organization (NEMO)
  - Ministry of Education Quality Assurance and Development Program
  - Health and Family Life Education Unit
  - Human Development Department
  - Relief and Supplies Management
  - Caribbean Community Climate Change Centre (CCCCC)

# Assessment

## 1. Mapping of Vulnerabilities and Resources



- One psychiatrist and 1-2 psychiatric nurse practitioners in each district.
- 20 trained counselors and 10 social workers
- Several community agencies and groups can serve as resources (e.g. teachers, volunteers)

## 2. Increasing local resources and strengthening families :

- A Clinical PhD-level psychologist is being trained at the University of Louisville and will return to Belize.
- We are conducting a needs assessment to partner with pre-school teachers to foster social cohesion and increase positive attachment.

# Monitoring and Evaluation

## Collecting and Analyzing Mental Health Indicators

- We developed a database to monitor indicators of mental health
- Ongoing epidemiologic reports and can aid assessments of vulnerabilities and risk factors.
- Psychological health before and following a disaster can be monitored.

The screenshot displays the 'Belize Psychiatric Database - [Patient Encounters]' application window. It features a standard menu bar (File, Edit, View, Insert, Format, Records, Tools, Window, Help) and a toolbar with various icons. The main form area is divided into several sections for data entry:

- Patient Information:** Fields for Patient ID, Height (Ht.), Weight (Wt.), Current Age, At Encounter, Chart Number, and Date / Time (6/24/2007 17:35).
- Treatment Plan:** Fields for Plan, Examined By (Cayetano, Clau), Recorded By (Cayetano, Clau), and District (Belmopan).
- Add Primary Problem:** A section with a 'Primary Problem' dropdown and a 'Severity' dropdown.
- Add DSM Diagnostic Code:** A section with a 'Primary DSM Diagnosis' dropdown and a 'Severity' dropdown.
- Add ICD9 Diagnostic Code:** A section with an 'ICD9 Diagnosis' dropdown and a 'Severity' dropdown.
- Record Medications Prescribed:** A section with a 'Filter by Class' dropdown and a 'No known drug allergies.' checkbox.
- Medications:** A table with columns for 'Generic Name' (with 'Generic' and 'Commercial' checkboxes), 'Medications', and 'Dose'.

The bottom status bar shows the user 'Claudina Cayetano' logged on 'Sunday, June 24, 2007 5:35 PM'. It also includes buttons for 'Print', 'Preview', 'Find', 'Discharge Report', 'This Encounter', 'All Encounters', 'New', and 'Exit'.

# Human Resources and Training I

## Efforts to increase knowledge among specialized staff

- We distributed handout on disaster mental health to psychiatric nurses
- Belize has no specialized treatment for substance use and such problems often increase following disasters
- Two psychiatric nurses from Belize are currently being trained in substance use and alcohol abuse treatment in Louisville

### A Guideline for Disaster and Recovery For Psychiatric Health Practitioners

**Reactions to Disaster** Everyone reacts to disaster in a different way. When these reactions become problematic, it is important to remember the signs and symptoms and know when an individual may need help.

**Children** Research suggests that children are more severely impacted by disaster than adults. Because they are rapidly developing in the areas of mental, social and physical health, children are uniquely vulnerable to the impact of disaster. Children as young as five years are capable of understanding the effects of disaster and are therefore likely to be impacted. In children, short-term responses to disaster may include developmental regression, clinging behavior, aggressiveness, inattentiveness, bed-wetting, somatic complaints, irritability, social withdrawal and crying.

**PTSD** Community studies suggest that more than a third of children and adolescents exposed to trauma (such as community violence or a natural disaster) meet criteria for a PTSD diagnosis in the following weeks or months. Sub-clinical levels of PTSD are reported among more than 50% of exposed children within three to four months after an event.

Features	Symptoms (adults)	Symptoms (children)	Treatment options
PTSD follows a traumatic event which causes intense fear and/or helplessness in an individual. Typically the symptoms develop shortly after the event, but may take years. The duration for symptoms is at least one month.	<ul style="list-style-type: none"> <li>Re-experiencing the trauma through nightmares</li> <li>Obsessive thought</li> <li>Flashbacks</li> <li>Avoiding situations or people which remind the person about the event</li> <li>Increased anxiety (e.g., very jumpy, startle easily)</li> </ul>	<ul style="list-style-type: none"> <li>Same as adults</li> <li>Traumatic play (i.e., reenacting the event)</li> <li>Nightmares</li> <li>Complaints of stomachaches and headaches</li> </ul>	Psychological treatment can help recovery from PTSD, and some medications (such as anti-anxiety medications) can disturb symptoms.

**Anxiety** Children's reactions following disaster are not limited to PTSD. Children and adolescents may experience persistent levels of anxiety and fear independent of PTSD symptoms that have been linked with the nature of disaster. For example, fears of water, thunder, and rain storms have been reported following hurricanes.

Features	Symptoms (adults)	Symptoms (children)	Treatment options
The primary feature is abnormal or inappropriate anxiety. Feelings of panic or persistent worry are present for at least six months. These features are indicative of a disorder when they interfere with daily activities or functioning.	<ul style="list-style-type: none"> <li>Heart palpitations</li> <li>Dizziness</li> <li>Excessive worry</li> </ul>	<ul style="list-style-type: none"> <li>Same as adults</li> <li>Crying</li> <li>Tantrums</li> <li>Clinging behavior</li> </ul>	Medication and/or psychotherapy have been found to be helpful, especially therapy aimed at teaching the individual how to gain control over the symptoms.

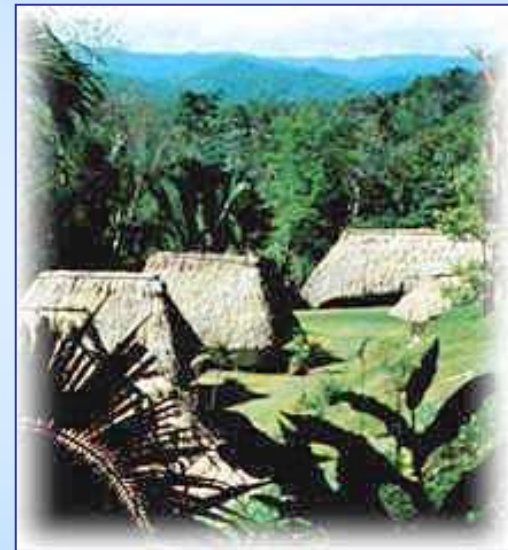
**Depression** Exposed children may be at high risk for depression. One study discovered that 17.6% of children met criteria for Major Depressive Disorder and 12% met criteria for Generalized Anxiety Disorder after disaster.

Features	Symptoms (adults)	Symptoms (children)	Treatment options
Influenced by both biological and environmental factors. People with a history of depression in their family have a higher incidence. Children can exacerbate a depressive disorder in significant ways. Examples include lack of support system, less illness in effort to avoid one and job problems.	<ul style="list-style-type: none"> <li>Depressed mood (i.e., sadness or emptiness)</li> <li>Reduced interest in activities that used to be enjoyed</li> <li>Sleep disturbances (too little or too much)</li> <li>Significant reduction in energy</li> <li>Difficulty concentrating, holding a conversation, paying attention, or making decisions that used to be made fairly easily</li> <li>Suicidal thought</li> </ul>	<ul style="list-style-type: none"> <li>Same as adults</li> <li>Irritability</li> <li>Somatic complaints</li> <li>Social withdrawal</li> </ul>	Combination of both pharmacotherapy and psychotherapy, or one individually. Personal factors may include a history of abuse. Environmental factors include a poor social support system and difficulties related to finances or employment.

# Human Resources and Training II

Efforts to increase knowledge among non-specialized staff


- Belize is currently training teachers in recognizing signs of PTSD and in helping children process traumatic events.
- We are planning on providing training in psychological first aid and referral mechanisms for staff such as volunteers and shelter workers.



# Knowledge and Education

## Efforts to increase Public Awareness

### A Guideline for Disaster and Recovery




**What is disaster?**  
Disaster is a situation that is dangerous for a group of people and can cause great damage to buildings and communities. Disaster can be natural or man-made. Natural disasters occur all over the world. Disasters can be scary for children and adults, who can be worse if no preventive actions are taken or a community is not prepared.

Natural:	Man-made:
• Hurricanes	• Mass transit problems
• Floods	• Accidents
• Earthquakes	• Wars and civil unrest
• Landslides	

**Preparing for disaster**  
Disasters may not be just a storm or accident. They are often followed by many smaller events, the taking to leave the area or rebuild damaged homes after a storm. Being prepared for a disaster will:

- Save lives and reduce injuries
- Prevent or reduce damage to buildings
- Reduce economic losses
- Keep people from having to move because of damage
- Lessen stress
- Maintain records of important places like hospitals
- Protect the community




**How to prepare**  
• Understand which disasters might happen, the land slides from mountains or hills that are close by, rivers that might flood, or hurricanes.  
• Design community and family disaster plans for each type of disaster, such as where to go in the case of an evacuation, and how to find each other if separated (for a list of evacuation sites: GO to 8-222054)  
• Educate children and adults about disasters and what to do when disaster strikes

**In the event of a disaster**  
During disaster, some things are essential. These can last for a long time after the disaster. They can be lost. Shelter from weather is prepared. Changes in behavior in the weeks following a disaster are normal. These changes multiply with time, and last for the rest of the life of the person. Remember, everyone responds to disaster in their own way.

Short-term effects for children and teenagers:	Short-term effects for adults:
• Loss of home and personal belongings	• Loss of home and personal belongings
• Changing schools	• Upset, angry and distressed
• Loss of friends and support	• Unable to communicate or locate family members
• Changes in playtime activities	• Family and community losses
• Family and community losses	• Moving because of disaster
• Moving because of disaster	

### How do people respond to disaster?



**Short-term reactions:**

- Feeling lost, sad or confused
- Shock, not believing what happened
- Intensity of anger
- Misunderstandings between friends, family or neighbors
- Followed by
- Feeling very sad or upset, crying, finally
- Accepting what happened

**Possible long-term problems:**

- Sadness
- Trouble sleeping
- Depression
- Anxiety
- Problems at home or school
- Physical health problems
- Substance abuse


It's important to understand that some people may need help during the recovery process. Different kinds of actions are needed at each stage of disaster.

### Stages of Disaster

Warning before the Disaster	During the Disaster	After the Disaster
<b>Obstacles:</b> <ul style="list-style-type: none"> <li>• Preparing for evacuation</li> <li>• Transportation problems</li> <li>• Communication problems</li> <li>• Unready social support</li> <li>• Unready community support</li> </ul>	<b>Effects:</b> <ul style="list-style-type: none"> <li>• Mental health:</li> <li>• Worry and anxiety</li> <li>• Feeling depressed and sad</li> </ul>	<b>Factors that impact people:</b> <ul style="list-style-type: none"> <li>• Problems coping with events</li> <li>• Social support</li> <li>• Time help is available</li> <li>• Problems from before the disaster (anxiety, depression, illness)</li> </ul>

**What to do:**

- Be prepared: have first aid kit, ready-made bags, plans to go, maps, flashlights or lanterns, radio, batteries, keep back of clothes
- Know the different types of disasters and what to do for each one
- Create response and evacuation plans with families and neighbors: decide what to do when you might go to and how you will get there

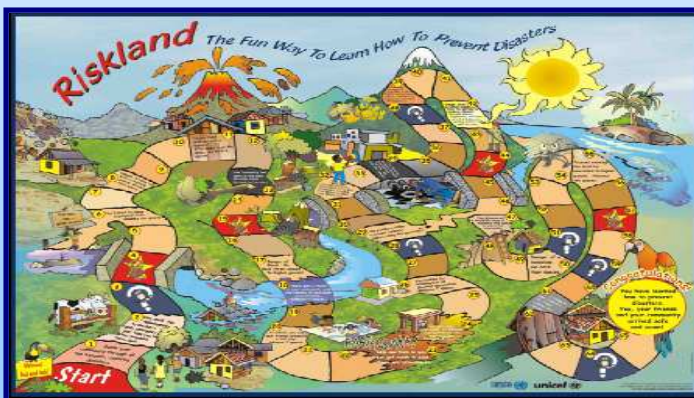


During and Immediately After the Disaster	After the Disaster
<b>Obstacles:</b> <ul style="list-style-type: none"> <li>• Crime or theft</li> <li>• Closures</li> <li>• Problems from the event</li> <li>• Getting medications</li> </ul>	<b>Effects:</b> <ul style="list-style-type: none"> <li>• Feeling lost or confused</li> <li>• Shock</li> <li>• Not believing what happened</li> <li>• Sadness</li> <li>• Learning to accept what happened</li> <li>• Trouble sleeping</li> <li>• Bad dreams</li> </ul>

**Factors that impact people:**

- Scale of the event
- How close people are to the event
- Neighborhood loss or damage
- Changes in normal life and routines
- Experiences at the event
- Uncomfortable or better experiences
- Social support (friends and family)

- We distributed handouts on disaster preparedness and coping methods for the general public



- We gave educational materials for children to schools.

# Belize Mental Health Disaster Preparedness Initiative

We are planning to pursue further projects and funding in collaboration with the country of Belize.

## Current Partners and Collaborators

### University of Louisville

- **Department of Psychological and Brain Sciences.** Sandra Sephton, PhD, Barbara Burns, PhD, Paulette Flores, BA, and Liz Lush, BA,
- **Center for Hazards Research and Policy Development.** Dave Simpson, PhD,
- **International Service Learning Program.** Henry Cunningham, PhD,
- Bernard Strenecky, EdD

### Belize

- **Ministry of Health.** Claudina Cayetano, M.D., Psychiatrist,, Belize
- **Caricom Caribbean Climate Change Center.** Kenrick Leslie, PhD
- Sarah Acland, M.D. Psychiatrist, Louisville, KY