



Pediatric Pandemic Network

From PPN Learn Curriculum: Pediatric Considerations in Disasters for Resource-Constrained and Rural Settings

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Module 2 Tutorial 1: Problem-Based Learning Exercise – Rapid Assessment of a Post-Disaster Situation

Transcript

This is the tutorial for Module 2: a problem-based learning exercise on rapid assessment in a post-disaster situation.

Scenario

You have just received a call from the Ministry of Health. They are activating your team to respond to the site of a major earthquake that has damaged a dam and caused extensive flooding in a remote mountainous region of your country. You have 24 hours to prepare for your visit.

Learning Objectives

- Identify the key elements needed to assess the population affected by the disaster.
- Determine the needs of the population affected by the disaster.
- Use existing monitoring and surveillance systems to obtain information that will help establish intervention priorities.
- Develop intervention strategies that will have a meaningful impact on the communities affected by the disaster.

You know that one of the most critical components of any disaster response is getting on the ground quickly and efficiently to perform a rapid needs assessment.

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The entire subsequent response — supplies, water, shelter, and other aid — depends on your team doing this job rapidly, efficiently, and correctly.

Step 1: Gather Information on the Affected Population

The first priority is to collect as much information as possible about the population in the affected area.

Key Elements to Assess

- Demographics of the population (pre-disaster and current)
- Pre-disaster healthcare conditions
- Post-disaster healthcare system status
- Community resources and current conditions in the community

Population Demographics (Information from the Ministry of Health)

- Total population in the zone: 1,009 people
- Males: 483
- Females: 526

Age and Gender Breakdown

- Children 0–4 years: 172 (82 male, 90 female)
- Children 5–15 years: 344 (165 male, 179 female)
- People older than 15 years: 493 (236 male, 257 female)

Vulnerable Groups

- Pregnant women: 36 (from prenatal clinic records)
- People older than 60 years: 63 (44 women, 19 men)
- Many injured children and children with burns and minor trauma have been reported.
- Number of unaccompanied minors is unknown.



Step 2: Assess Pre-Disaster and Post-Disaster Healthcare Conditions

Consult with the Ministry of Health and a public health officer familiar with the zone to learn:

Pre-Disaster Healthcare

- Access to primary, secondary, and hospital care
- Availability of community-based clinics, hospitals, subspecialty care, maternity care, and well-child clinics
- Malnutrition rates
- Vaccination coverage rates (reported as 80–90%)
- Prevalence of infectious diseases (dengue, malaria, measles, pneumonia, diarrhea-related deaths)
- Prevalence of chronic diseases (diabetes, asthma, cancer)

Post-Disaster Healthcare System

- Capacity for surgeries
- Status of hospitals and ability to care for inpatients
- Availability of clinics, laboratory equipment, X-ray machines, and microscopes
- Availability of basic medications (antibiotics, bronchodilators) and supplies (bandages)
- Status of the cold chain for vaccines and medications
- Presence of a functioning disease surveillance system

Step 3: Evaluate Community Resources and Conditions

Assess the current state of:

- **Security:** Has security broken down? Is the situation violent or dangerous? Are police or military available to assist?
- **Communications:** Are cell phone towers functioning? Are radios available? Can communication occur via radio channels?
- **Transportation:** Are roads passable? Have bridges been destroyed? Is travel possible by four-wheel-drive vehicle, regular car, helicopter, boats, or rubberized rafts in flooded areas?



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Summary

A rapid, systematic needs assessment is the foundation of an effective disaster response. In the next 24 hours, your team must gather the best available data on population demographics, healthcare infrastructure (pre- and post-disaster), vulnerable groups, and community resources. This information will directly guide intervention priorities and strategies.