Health Aspects of Disaster Preparedness and Response
Panel Session 3: Industrial Accidents, Conflicts, and Other Emergencies

Southeast Asia Regional Office/World Health Organization

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Abbreviations:
DPRK = Democratic People's Republic of Korea
GPS = global positioning system
IFRC = International federation of the Red Cross
JICA = Japanese International Cooperation Agency
NEP = North Eastern Province
NGO = non-governmental organization
SOP = standard operating procedures
UNICEF = United Nations Children's Fund
UNOCHA = United Nations Office for the Coordination of Humanitarian Affairs
UNTAET = United Nations Transitional Authority of East Timor
WHO = World Health Organization
WPF = World Food Program

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Abstract
This Panel Session consisted of three country reports (Democratic People's Republic of Korea; Sri Lanka; and Timor-Leste) and the common issues identified during the Panel discussions relative to industrial accidents and conflicts in the Southeast Asia Region. Important issues identified included the needs for: (1) use of medical technology; (2) stockpiling of essential supplies; (3) human resource development; (4) surveillance systems for disease detection; (5) coordination; and (6) emergency funding.

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Summaries of Country Presentations

Democratic People's Republic of Korea (DPRK): The Ryongchon Train Explosion Incidence

Background Event

Ryongchon is a county in the northern part of the DPRK, with a population of 123,000, of whom 27,000 live within the city. On 22 April 2004, two train wagons containing ammonium nitrate and fuel oil exploded after contacting an electric wire from the train cables. This resulted in a massive explosion creating a large crater and leveling everything within a 500 m radius of the explosion. Two schools and one polyclinic were completely destroyed, while 1,850 houses either were destroyed or rendered unsafe, and 156 people died within the first 48 hours of the explosion, of which 76 were children who were inside of one of the schools that collapsed. More than 7,000 people were rendered homeless. Of the 1,300 people who were injured, 370 were evacuated to Sinuiju, 20 km from Ryongchon, where they were provided with emergency medical care. Most of the victims suffered burns and eye injuries.

What Was Done Well

Concerted efforts by the Government, along with large-scale international support, limited the devastating effects of this event. An immediate rescue operation was launched by local authorities, the army, and the National Red Cross Society. Medical equipment and supplies available in the country were relocated to the affected area, and further assistance was provided through international organizations and bilateral assistance. International assistance was coordinated by the WHO, Office of the Coordinator for Humanitarian Affairs (OCHA), the United Nations Children's Fund (UNICEF), the World Food Programme (WFP), and the International Federation of the Red Cross (IFRC). Essential emergency medicine was provided by international agencies, including emergency Health Kits supported by the Japanese International Cooperation Agency (JICA) and with the donations of some eye preparations and instruments, including a slit lamp. The International Federation of Red Cross (IFRC) and other non-governmental organizations (NGOs) also provided tents, blankets, buckets, first-aid kits, water purification tablets, etc.

For the long term, this paved the way for the reconstruction of a new county hospital, a polyclinic, and technical support for improved surveillance of food and water-borne diseases.

What Could Have Been Done Better

There was a shortage of certain essential commodities and medicines, such as different eye preparations, topical creams, sterile vaseline compresses, and broad-spectrum antibiotics. Technical assistance for the diagnosis and treatment of eye injuries was lacking. There was a need for follow-up of victims using counseling and community outreach programs.

Recommendations

1. A national health emergency preparedness plan should be developed that includes:
    a. Appointment of Flood Damage Rehabilitation Committee; and
    b. Developing a specific SOP or plan for other health emergencies;
2. Necessary items for emergency use should be stockpiled including:
    a. At least 15 WHO Emergency Health Kits; and IFRC; and
    b. Need for stronger donor support for the health and social sectors in the DPRK.

Sri Lanka: Health System Rehabilitation Initiatives (North-East region of Sri Lanka)

Background Events

During the past 20 years, ethnic conflict in the north-eastern region of Sri Lanka has resulted in 60,000 deaths, with >800,000 people displaced. Comparative health indicators reveal the grave impact that this long-running conflict has made on the health of the affected people.

What Has Been Done Well

There have been >200 health institutions mapped through the use of high-accuracy Global Positioning System (GPS) receivers in the eight districts of the NEP. The GPS mapping includes Healthcare Facility Mapping, Disease Trend Mapping, basic health statistics, and disease trends for eight major diseases. Basic laboratory support also has been improved, with 412 laboratory workers trained in five districts.

Due to the long-running conflict, mental illness is a problem in this region. To respond to the needs of the affected population, >20 outreach clinics have been established, and multidisciplicary teams are available in each district. District health planning also has been strengthened, with norms and standards for planning units identified. Medical professionals have been mobilized into the Region by the WHO. With the emphasis on enhancing human resources, five hospitals can now provide basic quality services, and another five can provide specialist services. Environmental health standards also have improved, with a total of 76 functional incinerators in hospitals throughout all of the districts.

What Could Be Done Better

Health support is not uniformly distributed across the region. There is an urgent need to develop human resources, as there is a severe lack of trained and skilled health personnel. Inadequate attention has been given to strengthen outreach services except psychosocial and mental health. There also has been inadequate utilization of available manpower in the absence of access to appropriate technical tool.

Recommendations

1. Health facilities in the North-east should be improved;
2. Outreach services should be expanded in 300 clinics with available trained human resources;
3. The quality of health-care in 10 divisional and seven district hospitals should be improved;
4. Prevention, early warning, and communication systems for diseases with epidemic potential should be further strengthened;
5. Human resources for disaster and emergency management, e.g., recruitment, placement, and training should be better managed; and
6. Planning, monitoring, and implementation processes should be streamlined and strengthened.

Recovery and Rehabilitation of the Health System in Post-Conflict Timor-Leste

Background Events

On 30 August 1999, following 24 years of struggle during which 250,000 people died, the majority of people in Timor-Leste voted for independence. When the results were announced, violence by pro-integration supporters left 1,500 people dead, and 80% of houses and buildings destroyed, including 70% of health facilities. Another 400,000 people were locally displaced. By 20 September 1999, the Indonesian authorities agreed to international assistance, and a multi-national military force was deployed. On 25 October 1999, the United Nations Transitional Authority of East Timor (UNTAET) was formed. However, the health of the affected people remained poor. Maternal mortality was as high as 890 per 100,000 population. Death from diarrheal diseases due to contaminated food, poor water, and sanitation was common as were respiratory diseases, tuberculosis, and malaria.

What Was Done Well

International agencies like WHO, UNICEF, IFRC, and other organizations provided curative services. The WHO Timor-Leste and UNICEF acted as the "Temporary Ministry of Health". Essential drugs and medical supplies were provided, and health screening of the internally displaced people was established. Timor-Leste nationals were involved in Health Sector Planning. By 2000, an Interim Health Authority (IHA) was established. In April 2000, the first phase of the Health Sector Rehabilitation and Development Program (HSRDP), the framework for rebuilding a sustainable health sector, was launched.

During the emergency, a disease surveillance system was established. The national tuberculosis program was re-established, and standard treatment guidelines were provided for malaria and other infectious diseases. More than 56,000 children were immunized against measles.

What Could Have Been Done Better

Procurement of goods, supplies, and consultants services were slower than expected, and there was a lack of logistical expertise. Sufficient numbers of vehicles and the available quantities of other resources also were not available and consequently, it was not possible for the health sector to reach the majority of the affected people. A relatively large percentage of the available public health expertise was diverted away from addressing urgent public health issues, e.g., dealing with the asbestos issue at a time of much more urgent matters.

There were political issues with competing objectives and expectations held by national political leaders, UNTAET, international donors, and many of the international NGOs (INGOs). Most of the INGOs are very effective in providing emergency responses, only a few have a sense of long-term development. Consequently, promises of long-term support were not fulfilled. There also was some reluctance by some INGOs to be coordinated by the Government, UNTAET, and/or the WHO. There were no standard instructions for communication, priority actions, or reporting among UN agencies, nor was there adequate allocation of funds for the emergency. In the field, coordination was insufficient, and knowledge and guidance regarding transition from emergency to development phase was limited.

Recommendations

1. Establish advance agreements between UN Agencies and INGOs for logistical arrangements;
2. Involve logistic and operations specialists in emergency response;
3. Develop and implement policies and strategies regarding transition from the emergency to development phase;
4. Develop plans for the transition of the emergency phase to the development phase;
5. Implement standards for communication, setting priorities and reporting;
6. Develop and implement petty cash arrangement and delegation of authority;
7. Ensure that flexibility and innovation are supported in emergency response actions for agencies/offices in the field; and
8. Involve the local authorities as soon as possible.

Discussion and Key Issues

1. **Use of technology (GIS, telecom)**—From the health perspective, technology plays a vital role in disaster preparedness and responses. For example, Sri Lanka, has used technology to map the health institutions in the conflict zone. Technology also is vital for communication after a disaster, when regular modes of communication are often cut off.
2. **Stockpiling of essential supplies**—Experiences that could happen anywhere, like the Ryongchon blast, highlight the importance of stockpiling essential items in every community.
3. **Human resources**—Conflict zones as in Northeast Sri Lanka and Timor-Leste have reported a severe shortage of trained and skilled health personnel. There must be greater investment in developing human health resources in such areas.
4. **Good surveillance systems**—These are as important in routine healthcare as in emergencies. Both in NE Sri Lanka and Timor-Leste, which have communities with limited access to health resources, good surveillance systems are necessary to help to prevent outbreaks of disease.
5. **Importance of coordination**—No single agency can fulfill all of the complex demands of an emergency. Yet, as experience in Timor-Leste shows that conflicting agendas can seriously impede the response and development efforts.
6. **Emergency funds**—Availability of emergency funds is necessary particularly for unexpected events like industrial accidents which can lead to serious injuries unless there is an immediate response.