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Introduction

Recurring disasters throughout the years have made Filipinos realize that these emergencies are an integral part of our lives. These are reinforced by occurrences of destructive typhoons, killer earthquakes, massive flooding, devastating volcanic eruptions, as well as recent sea tragedies and ongoing armed conflicts. Amidst these crises, human survival and health are among the common goals and measures of success of all humanitarian endeavors.

The goal of the Department of Health (DOH) through the Health Emergency Management Staff (HEMS) is to prevent or minimize the loss of lives and illnesses during emergencies and disasters in collaboration with government, business and civil society groups. The main purpose of this pocket tool is to help guide and prepare health sector professionals in the field in the event that an emergency occurs. For the third edition of the Pocket Emergency Tool, recent policies and procedures from the World Health Organization, Department of Health, National Disaster Coordinating Council and other local and international organizations involved in disasters and emergencies, as well as latest updates from the 8th National Training Course on Public Health and Emergency Management in Asia and Pacific (PHEMAP), have been added to make it more comprehensive and up-to-date for field users, volunteers and health professionals. This booklet also aims to provide essential pointers and recent
technical guidelines from emergency preparedness to response to recovery in a user-friendly format that will come in handy when faced with tragedy.

This pocket tool, however, neither provides nor claims to be the definite and only guideline to follow in emergencies. Thus, references to complementary documents and websites, where more details can be found, are provided in the booklet. Also, because every disaster is unique, some of the suggested procedures may need to be tailored to local conditions and particular situations.

In summary, the third edition of the Pocket Emergency Tool was conceived from lessons learned from recent disasters and emergencies that affected the country and the Western Pacific Region. Indeed, the success of this guide depends largely on the dynamics of its use and the tireless efforts of its users to improve it. It is our ultimate goal to impart lessons learned to every individual who at some point had experienced adversity and that health emergency preparedness had become a way of life.

“We prevent disasters if we manage emergencies.”
# Abbreviations and Acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
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<tbody>
<tr>
<td>AO</td>
<td>Administrative Order</td>
</tr>
<tr>
<td>BFAD</td>
<td>Bureau of Food and Drug</td>
</tr>
<tr>
<td>CD</td>
<td>Centers for Disease Control and Prevention (USA)</td>
</tr>
<tr>
<td>CHD</td>
<td>Center for Health Development</td>
</tr>
<tr>
<td>CMR</td>
<td>Crude Mortality Rate</td>
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<tr>
<td>CSR</td>
<td>Communicable disease Surveillance and Response</td>
</tr>
<tr>
<td>DFA</td>
<td>Department of Foreign Affairs</td>
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<tr>
<td>DN</td>
<td>Department of National Defense</td>
</tr>
<tr>
<td>DOH-HEMS</td>
<td>Department of Health-Health Emergency Management Staff</td>
</tr>
<tr>
<td>DOTC</td>
<td>Department of Transportation and Communication</td>
</tr>
<tr>
<td>DPWH</td>
<td>Department of Public Works and Highways</td>
</tr>
<tr>
<td>DSWD</td>
<td>Department of Social Works and Development</td>
</tr>
<tr>
<td>EHA</td>
<td>Emergency and Humanitarian Unit</td>
</tr>
<tr>
<td>EMS</td>
<td>Emergency Medical Services</td>
</tr>
<tr>
<td>EOC</td>
<td>Emergency Operations Center</td>
</tr>
<tr>
<td>EPI</td>
<td>Expanded Program of Immunization</td>
</tr>
<tr>
<td>ER</td>
<td>Emergency Room</td>
</tr>
<tr>
<td>IASC</td>
<td>Inter-Agency Standing Committee</td>
</tr>
<tr>
<td>IEC</td>
<td>Information, Education and Communication</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labor Organization</td>
</tr>
<tr>
<td>IOM</td>
<td>Internal Organization for Migration</td>
</tr>
<tr>
<td>ISDR</td>
<td>International Strategy for Disaster Reduction</td>
</tr>
<tr>
<td>HEICS</td>
<td>Hospital Emergency Incident Command System</td>
</tr>
<tr>
<td>LGU</td>
<td>Local Government Unit</td>
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</tbody>
</table>
Pocket EMERGENCY Tool

MCI  Mass Casualty Incident
MHPSS  Mental Health and Psychosocial Support
MUAC  Mid-Upper Arm Circumference
NBI  National Bureau of Investigation
NCDPC  National Center for Disease Prevention and Control
NCHFD  National Center for Health Facilities and Development
NCHP  National Center for Health Promotions
NDCC  National Disaster Coordinating Council
NEC  National Epidemiology Center
NEHK  New Emergency Health Kit
NGO  Nongovernmental organization
NNC  National Nutrition Council
NPDEP  Nutrition Preparedness in Disasters and Emergencies Plan
OCD  Office of Central Defense
OpCen  Operations Center
PHC  Primary Health Care
PNRC  Philippine National Red Cross
RDCC  Regional Disaster Coordinating Council
SARS  Severe Acute Respiratory Syndrome
UN  United Nations
UNDP  United Nations Development Program
WASH  Water, Sanitation and Hygiene Promotion
WHO  World Health Organization
WHO-WPRO  World Health Organization – Office for the Western Pacific Region
WFP  World Food Program
WMD  Weapons of Mass Destruction
Policies and Procedures
Overview of Health Emergency Management

Vision and Mission of the Health Emergency Management Staff (HEMS)

**Vision:** Asia’s model in health emergency management system

**Mission:** Ensure a comprehensive and integrated health sector emergency management system

General Functions of HEMS

1. To lead in the formulation of a comprehensive, integrated and coordinated health sector response to emergencies and disasters
2. To ensure the development of competent, dynamic, committed and compassionate health emergency professionals equipped with the most modern and state-of-the-art facilities comparable to world standard
3. To be the center of all health and health related information on emergencies and disasters
HEMS Preparedness Division

**Function**: To develop policies, guidelines, protocols and plans, as well as to conduct monitoring, evaluation, and research activities to improve disaster management operation.

- Policy Development
- Planning and Program Development
- Partnership and Coordination
- Advocacy and Human Resource Development
- Information and Management System
- Research and Best Practices

HEMS Response Division

**Function**: To monitor, integrate, and coordinate all health responses to emergencies and disasters, assist, augment and provide logistical support, report, document, and serve as the repository of all data.

- Operation Center
- Logistic Mobilization
- Information Management System
- Coordination and Networking
T.R.A.I.T of a Health Emergency Manager/Coordinator

Take the lead within the community in:

- Health coordination and networking
- Rapid health assessment
- Disease control and prevention
- Epidemiologic and nutrition surveillance
- Epidemic preparedness
- Essential medicines management
- Physical and psychosocial rehabilitation
- Health risk communication
- Forensic concerns and management of mass casualties

Record and re-evaluate lessons learned to improve preparedness in the future

Assess and monitor health and nutrition needs so that they are immediately dealt with

Improve health sector reform and capacity building by networking

Tend and protect the practice of humanitarian access, neutrality and protection of health systems in emergency situations
Role of Hospitals in Health Emergency Management

1. Observe all requirements and standards (hospital emergency plan, HEICS, Code Alert System, etc.) needed to respond to emergencies and disasters.
2. Ensure enhancement of their facilities to respond to the needs of the communities especially during emergencies.
3. Network with other hospitals in the area to optimize resources and coordinate transferring of victims to the appropriate facility.
4. Report all health emergencies to the Operation Center, and document all incidents responded.

Role of Centers for Health Development in Emergency Management

(Based on DOH Administrative Order 168, s.2004)

1. Serve as the DOH Coordinating in their region.
2. Maintain updates/hazard and vulnerability assessment of their catchment areas.
3. Observe all requirements and standards needed to respond to emergencies (Regional Emergency Plan).
4. Organize health sector in the region and provide mechanism for coordination and collaboration.
5. Maintain operation center as regional repository of events
for the health sector. Identify an official spokesperson to answer concerns by the public and the media.

6. Report to the Central DOH (HEMS) for all emergencies and disasters and any incident with the potential of becoming an emergency.

7. Document all health emergency events and conduct researches to support policies and program development.

At the Center for Health Development (CHD) level:

The following information should be readily available for reference and may be compiled in collaboration with other partners (government and non-government units). This information must be updated regularly:

- Disaster profile of the region
- Population size and distribution
- Topography and maps showing communication lines
- Epidemiologic profile of the region
- Location of health facilities and the services they provide
- Location of potential evacuation areas
- Location of stocks of food, medicine, health and water treatment and other sanitation supplies in government stores, commercial warehouses and international agencies and major NGOs
- Key people and organizations who would be responsible for/active relief (contact phone numbers and addresses)
• Individuals with special competencies and experience who may be mobilized on secondment from their institutions or as consultations in case of need (contact phone numbers and addresses)
• A roster of regular resource persons ready to translate technical information materials into local dialect (e.g. traditional healers, indigenous health workers, barangay captain, etc.)

The following resources should be readily available for use at all times:

1. Vehicles
2. Communications equipment
3. Back-up power supplies
4. Computer, printers, facsimile and photocopying machines
5. Water testing sets
6. Food supplements
7. Temporary shelter capacities
8. Funding requirements
9. Personal protective equipment
Cluster Approach

- The UN introduced the Cluster Approach in its Humanitarian Reform Agenda and is envisioned to “strengthen system-wide preparedness and technical capacity to respond to humanitarian emergencies by designating global Cluster Leads.

Aims of the Cluster Approach

- To improve the predictability, timeliness and effectiveness of humanitarian response
- To strengthen preparedness and capacity to respond to humanitarian emergencies by ensuring leadership and accountability in key areas
- At country level, the aim is to ensure a more coherent and effective response by mobilizing groups of agencies, organizations, and NGOs to coordinate, share information and respond in strategic manner

Levels of Operation

1. Global level
   - Strengthen system-wide preparedness and technical capacity to respond to humanitarian emergencies
   - Designate global cluster leads
   - Ensure predictable leadership and accountability in all
the main sectors or areas of activity

2. Country level
   ▶ Ensure more coherent and effective response
   ▶ Mobilize groups of agencies, organizations and NGOs to respond in strategic manner across all key sectors or areas of activity each sector having clearly a designated lead
   ▶ In support of existing government coordination structure and emergency response mechanisms

Current Work of the Global Health Cluster

1. Coordination and Management
   ▶ Stakeholders analysis, strategic planning, joint action plans, gap filling
   ▶ Health aspects of the recovery phase
   ▶ Advocacy
   ▶ Capacity Building of National Stakeholders

2. Information Management
   ▶ Inter-cluster rapid assessment tool with accompanying definitions and guidelines
   ▶ Comprehensive assessment tool with assessment, monitoring, and tracking systems
   ▶ Mainstreaming health information with larger humanitarian IM system

3. Rosters and Stockpiles
4. Capacity Building
   - Guidance to strengthen national capacity in emergency preparedness, response and recovery

5. Operational Support
   - Global working relations within the health cluster, between global clusters, and with country clusters
   - Advocacy, resource mobilization, trainings
   - Benchmarks/indicators for and evaluations of the impact of the cluster approach
   - A pocket book of simplified cluster guidance and tools with annexes of full cluster documents/findings
   - Library/database of emergency health documents
Cluster Approach in the Philippine Disaster Management System

In May 10, 2007, the National Disaster Coordinating Council issued Circular No. 05, s-2007 entitled “Institutionalization of the Cluster Approach in the Philippine Disaster Management System, Designation of Cluster Leads and their Terms of Reference at the National, Regional and Provincial Level”

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Government Lead</th>
<th>Country Team COUNTERPART</th>
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<tbody>
<tr>
<td>1. Nutrition</td>
<td>DOH</td>
<td>UNICEF</td>
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<tr>
<td>2. WASH</td>
<td>DOH</td>
<td>UNICEF</td>
</tr>
<tr>
<td>3. Health</td>
<td>DOH</td>
<td>WHO</td>
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<tr>
<td>4. Emergency Shelter</td>
<td>DSWD</td>
<td>IFRC/UN Habitat</td>
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<td>5. Camp Management</td>
<td>OCD/PDCC</td>
<td>IOM</td>
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<tr>
<td>6. Protection</td>
<td>DSWD</td>
<td>UNICEF</td>
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<td>7. Early Recovery</td>
<td>OCD</td>
<td>UNDP</td>
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<td>8. Logistics</td>
<td>OCD</td>
<td>WFP</td>
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<td>9. Food</td>
<td>DSWD</td>
<td>WFP</td>
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<tr>
<td>10. Agriculture</td>
<td>DA</td>
<td>FAO</td>
</tr>
<tr>
<td>11. Livelihood</td>
<td>DSWD</td>
<td>ILO</td>
</tr>
<tr>
<td>12. Psychosocial*</td>
<td>DOH/DSWD</td>
<td>IASC</td>
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</tbody>
</table>
* DSWD – evacuation centers  
  PNRC – community  
  DEPED – schools and children in evacuation centers  
  DOH – psychosocial assessment; referral system; local executives, military, responders, and victims; treatment of mental disorders
Roles and Functions of Government Cluster Lead Agencies

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Government Lead</th>
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<tbody>
<tr>
<td>Food and NFIs</td>
<td>Department of Social Welfare and Development (DSWD)</td>
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<tr>
<td>Camp/IDP Management, Emergency Shelter and Protection</td>
<td>DSWD</td>
</tr>
<tr>
<td>Permanent Shelter and Livelihood</td>
<td>DSWD</td>
</tr>
<tr>
<td>WASH, Health, Nutrition, and Psychosocial Services</td>
<td>Department of Health (DOH)</td>
</tr>
<tr>
<td>Logistics and Emergency Telecommunications</td>
<td>Office of Civil Defense/NDCC Operations Center</td>
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<td>Education</td>
<td>Department of Education</td>
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<tr>
<td>Agriculture</td>
<td>Department of Agriculture</td>
</tr>
<tr>
<td>Early Recovery</td>
<td>Office of Civil Defense</td>
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NDCC Memorandum No. 12, s. 2008 “Amendment to the NDCC Circular Nos. 5, s. 2007 and 4, s. 2008 re Institutionalization of the Cluster Approach in the Philippine Disaster Management System, Designation of Cluster Leads and their Terms of Reference at the National, Regional and Provincial Levels,” October 6, 2008
Roles and Responsibilities of Cluster Leads

1. National Level
   a. Inclusion of humanitarian partners in the cluster taking stock of their mandates and program priorities
   b. Establishment and maintenance of appropriate humanitarian coordination mechanisms at the national level
   c. Attention to priority cross-cutting issues
   d. Needs assessment and analysis
   e. Emergency preparedness
   f. Planning and strategy development
   g. Application of standards
   h. Monitoring and reporting
   i. Advocacy and resource mobilization
   j. Training and capacity building

The NDCC Executive Officer and Administrator, OCD shall function as Chair of all Cluster Leads and may call a meeting of all Cluster Leads at the national level as maybe necessary. Furthermore, the NDCC Executive Officer and Administrator shall represent the Government during the Inter-Agency Standing Committee (IASC) Country Team Cluster Leads’ Meeting.
2. Regional Level
   ▶ The first line of support to disaster-stricken provinces (technical or operational) should come from regional level offices, which reflect the roles and responsibilities of national level cluster leads and add value to the delivery of emergency humanitarian assistance to the affected areas.
   ▶ The OCD Regional Office, as the principal coordinating body at the regional level, should chair a regular cluster focal points meeting to discuss operational strategies and response plans based on guidance from the national level cluster leads.

3. Provincial Level
   ▶ The national level cluster leads should serve as a guide to Provincial Disaster Coordinating Council (PDCC) Chairpersons on how to organize provincial clusters and manage an impending or potential disaster situation.
   ▶ PDCCs should develop baseline databases of provincial demography, sectoral data and other basic information to facilitate rapid needs assessments of affected areas, timely mobilization of needed resources, and delivery of urgent assistance to the right beneficiaries through the clusters.
Program Guidelines and Technical Notes
EMERGENCY PREPAREDNESS

Health Emergency Management Planning

Components of the Health Emergency Preparedness, Response, Recovery Plan

A. Background
B. Plan Description/Definition
C. Goals and Objectives
D. Planning Group
E. Risk Reduction Plan
   ▶ Hazards prevention plan
   ▶ Vulnerabilities reduction plan
   ▶ Emergency preparedness plan
F. Management Structures
G. Roles and Responsibilities
H. Emergency Response Plan
   ▶ Policies, guidelines, protocols for the developed systems
   ▶ Plan of action on the first 2 hours, 2 to 12 hours, and after 24 hours from the time of emergency
I. Recovery and Reconstruction Plan
J. Annexes
   ▶ Glossary
Pocket EMERGENCY Tool

- Abbreviations
- Directory of contact persons
- Inventory of resources/assets of the CHD and partner agencies

Emergency Preparedness (10 P’s)

1. Policy Formulation and Development
   - Policy statement/implementing rules
   - Systems development (logistics management system, information management system and communications system)
   - Guidelines, protocols, procedures
   - Organizational structure
   - Roles and functions
   - Resource mobilization

2. People’s Capability Building
   - Training needs assessment
   - Human resource development
   - Training of trainers
   - Database of experts
   - Tabletop drills and exercises

3. Physical Facilities Development
   - Establishment of Emergency Operations Centers (infrastructure, manpower, technology)
   - Standardization/improvement/upgrading of ER,
ambulance, operation center, hospitals

- Procurements of supplies, communications and equipment

4. Partnership Building
- Organization of the health sector
- Coordination and planning
- Memorandum of agreement with stakeholders
- Networking activities

5. Plan development
- Vulnerability and hazard assessment
- All-hazards emergency operations plan
- Specialized planning for uncommon incidents (e.g. SARS, WMD)
- Communication plans
- Hospital preparedness and response plans

6. Public Information and Health Promotion
- Advocacy activities
- Development of IEC’s
- Mass media management

7. Performance Response Operation
- Monitoring and evaluation activities
- Postmodern evaluation
- Drills
- Technical assistance
8. Program Development
   ▶ Nutrition in Emergencies
   ▶ WASH in Emergencies
   ▶ MHPSS in Emergencies
   ▶ Chemical Emergency Program
   ▶ Other programs

9. Peso and Logistics
   ▶ Fund allocation for emergency management operations
   ▶ Prepositioning of logistics
   ▶ Resource inventory and mapping

10. Proper Documentation and Research
    ▶ Publications
    ▶ Databanking
    ▶ Accomplishment reports
    ▶ Research studies
    ▶ Lessons learned
Emergency Planning Process

1. Define the plan
   - Aim, objectives, and scope
   - Tasks to be performed
   - Resources to be needed
   - Framework which emergencies will be managed

2. Review planning group
   - Key people and organizations
   - Appropriateness of existing group (authority, representation, sufficient expertise, cooperation of local experts and other sectors)

3. Analyze potential problem
   - Hazards (causes, preventive strategies, trigger events)
   - Vulnerabilities
   - Risks

4. Analyze resources
   - Resources required for response and recovery
   - Variation between requirement and availability
   - Person/organization responsible for the resources

5. Describe roles and responsibilities

6. Describe management structure
- Command of individual organizations and control across organizations

7. Develop strategies and systems
   - Specific response and recovery strategies and systems that will support strategies

For further details, please refer to:

Coordinating with Other Agencies

Prepare internal arrangements within DOH and with other public health related government entities, UN agencies, NGOs, and other institutions in the country whose expertise and/or services may be called upon during emergencies (DND, NDCC, DSWD, DPWH, DOTC, PNRC, etc.)

Establishing Good Working Relationships with Other Groups

1. Have a common goal
2. Have a good and strong facilitator
3. Define parameters. With consensus on objectives, strategies and plans
4. Discuss needs and lines of action
5. Identify strengths and capabilities before dividing work and responsibilities
6. Encourage member participation
7. Clear range of services each agency can provide
8. Document agreements and arrangements with memoranda of understanding
9. Build trust among members. Fix issues early on
10. Regular communication among members
11. Have operating guidelines
12. Respect organizational mandates.
13. Establish and maintain effective communications.
14. Take final decisions in plenary
15. Provide mechanisms for timely action, especially during crises.
16. Priority to the whole group. Each agency is vital
17. Clear and attainable mission statements
18. Support from top management
19. Awareness of partners on policies and protocols
20. Adopt responsibilities of what was agreed upon
21. Be flexible and adjust to changes
22. Adequate incentives
23. Have a product showing team’s efforts and share to have sense of accomplishment. Celebrate.

5 P’s of Facilitation

1. Purpose
   ▶ Explains the overall aim of the session
   ▶ Have ground rules, a clear agenda, and desired outcomes

2. Product
   ▶ Describes the session’s deliverables in specific outputs
   ▶ Discuss needs and lines of action
   ▶ Reach a consensus on objectives, strategies and plans

3. Participants
   ▶ Push the issues
   ▶ Know their perspectives and concerns
Designated experienced chairperson should practice facilitative behavior such as listening, encouraging participation, not defensive, asking open-ended questions, and optimistic yet realistic.

4. Probable Issues
   - Give an idea of the potential roadblocks
   - Sort issues by categories and types
   - Approve agenda before starting the meeting

5. Process
   - Detailed set of steps that will be taken to create the product
   - Circulate information among partners
   - Preliminary word clarification and definition, brainstorming, rank order of issues according to importance to the group
   - Have group memory by using flip charts or handouts

Organizing Response Teams

1. Time of occurrence of the emergency
   - Immediately after the emergency
   - After 24 hour or 72 hours, etc

2. Assessment/situation report is of significance as basis of creating teams
   - Data about the incident
3. Health impact
   - Direct impact (causes/rates of morbidity, mortality, malnutrition, etc.)
   - Other reasons (trauma, burn, disease outbreak, etc)
   - Projected evolution of health situation

4. Expressed needs from the affected area

5. Other impacts in the community
   - Lack of safe water
   - Environmental sanitation
   - Health facilities and services

6. Magnitude and size of affected population

7. Existing response capacities

- NOI (causative and additional hazards, projected evolution)
- Affected area
- Affected population
Response Teams for Immediate Deployment
Further Deployment of Response Teams

1. Need to establish health system
2. Need to support the treatment of injuries
3. Need to support the medical cases
4. Provision of public health services to include disease surveillance
5. Support for resource management
6. Support risk communication
7. Provide protection and safety of victims and responders
Response Teams for Further Deployment

For further details, please refer to:

Safe Hospitals

Hospitals Safe from Disasters:
“Reduce Risk, Protect Health Facilities, Save Lives”

Objectives

The World Disaster Reduction Campaign on Hospitals Safe from Disasters aims to raise awareness and effect change that will:

- Protect the lives of patients and health workers by ensuring the structural resilience of health facilities;
- Make sure health facilities and health services are able to function in the aftermath of emergencies and disasters, when they are most needed, and
- Improve the risk reduction capacity of health workers and institutions, including emergency management

Basic Facts

1. Many factors put hospitals and health facilities at risk: buildings, patients, the health workforce, equipment, and basic lifelines and services.
2. Components of a hospital or health facility are typically
divided into two categories: Structural elements and non-structural elements.

3. Functional collapse, not structural damage, is the usual reason for hospitals being put out of service during emergencies.

4. Hospitals and health facilities can be built to different levels of protection: life safety, investment protection and operations protection.

5. Making new hospitals and health facilities safe from disasters is not costly. It has been estimated that the incorporation of mitigation measures into the design and construction of a new hospital will account for less than 4% of the total initial investment.

6. Field hospitals are extremely expensive and not necessarily the best solution to compensate for the loss of a hospital or health facility.

7. A check consultant is vital for ensuring the disaster safety of critical facilities such as hospitals.

8. Building codes are of utmost importance.

9. Creating safe hospitals is as much about having vision and commitment as it is about actual resources.

10. The most costly hospital is the one that fails!
For further details, please refer to:

- Hospitals Safe from Disaster Information Kit, World Disaster Reduction Campaign 2008-2009, UN/ISDR/WHO
- www.who.int/hac/techguidance/safehospitals
EMERGENCY RESPONSE

Response Phase

Steps In Responding To Emergencies

(Adapted from CDC’s Public Health Emergency Response Guide)

Hours 0-2

Immediate Response:

1. Assess the situation
2. Contact key health personnel
3. Develop initial health response objectives and establish an action plan
4. Establish communication and maintain close coordination with the EOC
5. Ensure that the site safety and health plan is established, reviewed, and followed
6. Establish communication with other key health and medical organizations.
7. Assign and deploy resources and assets to achieve established initial health response objectives
8. Address health-related requests for assistance and information from other agencies, organization and the public
9. Initiate risk communications activities
10. Document all response activities
**Hours 2-12**

**Immediate Response:**
1. Verify that health surveillance systems are operational
2. Ensure that laboratories likely to be used during the response are operational and verify their analytical capacity
3. Ensure that the needs of special populations (e.g., children, disabled persons, elderly, etc.) are being addressed
4. Manage health-related volunteers and donations
5. Update emergency risk communications messages
6. Collect and analyze data that are becoming available through health surveillance and laboratory systems
7. Periodically assess health resource needs and acquire as necessary

**Hours 12-24**

**Extended Response:**
1. Address psychosocial and mental health concerns
2. Prepare for transition to extended operations or response disengagement
3. Address risks related to the environment
4. Continue health surveillance/epidemiologic services
5. Ensure that local health systems are preserved and access to health care, including essential drugs and vaccines, is guaranteed
Response Plan

A. Activation of Code Alert System
B. Activation of the Plan
C. Activation of the ICS
D. Activation of the Operation Center
E. Implementation of the RESPONSE Standard Operating Procedures/Protocols for Emergencies
F. Implementation of existing Standard Operating Procedures/Guidelines for systems developed
G. Initiation and Maintenance of Coordination and networking for referrals of cases
H. Initiation and Maintenance of Mental Health and Psychosocial Support Services for casualties, patients, hospital staff and other responders, and bereaved
I. Management of Information
J. Activation of plan in the event of complete isolation of hospital/CHD/community for auxiliary power, water and food rationing, medication/dressing rationing, waste and garbage disposal, staff and patient morale
K. Provision of the Public Health Services
L. Management of the Dead
Emergency Operations Center

- An emergency operations center (EOC) is a central command and control facility which function to collect, gather and analyze data; make decisions that protect life and property, maintain the continuity of the organization within the scope of applicable laws; and disseminate those decisions to all concerned agencies and individuals, with the emergency manager as in-charge.
- At the national level, there should be a permanent Operation Center
- At the lower levels, the Centers for Health Development and Hospitals should have an Operation Center with two options, a permanent or a non-permanent type

General Attributes

1. Safe from hazards
2. Adequate electrical, water and sewage systems
3. Sufficient space for all functions (a mix of open and closed work spaces)
   - Secured storage area
   - Secured space for staging materials and human resources pending deployment (optional)
   - Open work space for management, operations, logistics, and planning functions
   - Closed work space available for teleconferences,
break-out groups, policy group meeting (can be located in nearby rooms)

- Controllable space for media briefings (nearby or off-site)
- Staff rest area with food preparation and storage, clean-up and eating areas

4. Data telephone and electrical connections
5. Adequate wall space for big whiteboards or its equivalent
6. Adequate lighting, ventilation, heating and cooling capacity
7. Equipped with:
   - Floor plans, mapping the work stations and wiring
   - Well posted fire evacuation plans and assembly areas
   - With available EOC protocol plans/flowcharts (hard and soft copies)
   - Staff roles and Standard Operating Procedures

8. Toilet/personal hygiene area
9. Appropriate location
   - Accessible by public transportation
   - Reasonably close to partners, supporting and cooperating agencies
   - Has adequate parking
   - Has access to all entrances, exits, and windows easily secured
Pocket EMERGENCY Tool

EOC Minimum Requirements:

- At least tw(2) TV sets
- Telephone; fax machine
- Computer with printer and internet connection
- Maps
- Whiteboard
- Transistor radio
- Directories
- Tables and chairs
- Office supplies and equipment
- Conference area for briefing

Functions of HEMS-OPCEN

1. Operates on 24/7 to monitor all national events, mass gatherings and other events which may have impact on health resulting in a mass casualty incident.
2. Serves as the center of command, control and coordination for the Department of Health and the Health Sector during emergencies and disasters.
3. Issues appropriate warning advisories and facilitate its dissemination to the DOH Regional Offices and Hospitals, other health facilities and stakeholders in anticipation of impending hazards.
4. Mobilizes technical experts and medical teams needed during emergencies and disasters both locally and internationally.
5. Mobilizes all logistical requirement of the Department of
Health needed in the affected regions.

6. Coordinates and network with all agencies of the NDCC family, other partners in health emergencies, members of the Health Sector and the Health Clusters responding to emergencies/disasters as well as to facilitate movement of all resources.

7. Prepares reports needed and disseminate to all concerned offices and agencies.

8. Document all emergencies and disasters responded to by the DOH.

For further details, please refer to:

Integrated Code Alert System

In July 7, 2008, the Department of Health released Administrative Order No. 2008-0024 which is the “Adoption and Institutionalization of an Integrated Code Alert System within the Health Sector.”

General Guidelines

<table>
<thead>
<tr>
<th>Code Declaration/Suspension</th>
<th>Dissemination</th>
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<tbody>
<tr>
<td>External Emergencies</td>
<td>Internal Emergencies</td>
</tr>
<tr>
<td>HEMS Central Office</td>
<td>HEMS Director or Division Chief (Response/Preparedness)</td>
</tr>
<tr>
<td></td>
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<tr>
<td>DOH Hospitals</td>
<td>• Secretary of Health</td>
</tr>
<tr>
<td></td>
<td>• HEMS Director</td>
</tr>
<tr>
<td></td>
<td>• Chief of Hospitals/ Medical Center Chiefs*</td>
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<tr>
<td></td>
<td>• HHEMS Coordinator</td>
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<td></td>
<td>• Head of the Disaster Committee</td>
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<tr>
<td>Center for Health Development</td>
<td>• Regional Director*</td>
</tr>
<tr>
<td></td>
<td>• RHEMS Coordinator</td>
</tr>
<tr>
<td>DOH Central Offices</td>
<td>DOH Sec upon recommendation of HEMS Director (for national emergencies) OR Directors of NEC and NCDPC (for epidemics/reemerging diseases)</td>
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</table>
*Automatic declaration of Code White during national events, especially with potential of a mass casualty incident (MCI)

**Conditions for Code Alert Activation**

<table>
<thead>
<tr>
<th></th>
<th>Code White</th>
<th>Code Blue</th>
<th>Code Red</th>
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</thead>
</table>
| HEMS Central Office | • Strong possibility of military operation (e.g., coup attempt, armed conflict)  
• Mass action or demonstration  
• Forecast typhoons (signal 2 up)  
• National or local elections  
• National event/holidays with potential for MCI  
• Emergency w/ potential 10-50 casualties  
• Terrorist attack  
• Unconfirmed report of reemerging diseases (SARS/bird flu)  
• Any hazard that may result to emergency | Any condition in Code White plus 2 below:  
• Mobilization of DOH resources  
• 30-50% health facilities affected  
• Incapability of LGU to respond  
• Geographic coverage and affected population >30%  
• MCI with 50-100 casualties  
• High case fatality rate for epidemics  
• Confirmed human-human transmission of Avian flu/SARS | Any natural, manmade, technological or societal disorder, with all present:  
• Declaration of disaster in area  
• ≥100 casualties in 1 area  
• Regional health personnel incapable of handling entire operation  
• Mobilization of health sector needed  
• Mobilization of DOH key offices  
• Uncontrolled human-human transmission of Avian flu/SARS |
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<th></th>
<th>Code White</th>
<th>Code Blue</th>
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</thead>
<tbody>
<tr>
<td><strong>DOH Hospitals</strong></td>
<td></td>
<td>Conditions similar to HEMS Central Office plus:</td>
<td>Conditions similar to HEMS Central Office plus:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 20-50 casualties (red tags) brought to the hospital</td>
<td>• &gt;50% (red tag) casualties brought to the hospital</td>
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<tr>
<td></td>
<td></td>
<td>• Internal emergency in hospital bringing down operating capacity to 50%</td>
<td>• Hosp services paralyzed due to 50% manpower are victims</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and evacuation of patients to a Field Hospital</td>
<td>• Hosp damaged structurally requiring patient evacuation</td>
</tr>
<tr>
<td><strong>Center for Health Development</strong></td>
<td></td>
<td>Conditions similar to HEMS Central Office plus:</td>
<td>Conditions similar to DOH Hospitals plus:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Presence of evacuation centers &gt;1 week w/ public health implications</td>
<td>• Event resulting to mass dead and missing</td>
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<tr>
<td></td>
<td></td>
<td>• Condition requiring mobilization of entire region</td>
<td>• Disaster declared in ≥ 2 provinces or 30% of Metro Manila cities</td>
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<td></td>
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<td></td>
<td>• Uncontrolled epidemic or outbreak</td>
</tr>
<tr>
<td><strong>DOH Central Offices</strong></td>
<td></td>
<td>Conditions similar to HEMS Central Office</td>
<td>Conditions similar to HEMS Central Office</td>
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</table>
## Human Resource Requirements for Code Response

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<tr>
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<th>Code White</th>
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<tbody>
<tr>
<td><strong>HEMS Central Office</strong></td>
<td>• Emergency Officer on Duty (EOD) 1 &amp; 2</td>
<td>• HEMS Director or Response Div Chief present at OpCen</td>
<td>HEMS divided into 3 teams going 24 hr duty every 3 days.</td>
</tr>
<tr>
<td></td>
<td>• Driver and security guard to assist at OpCen</td>
<td>• EOD 1 and 2</td>
<td>• Each team with:</td>
</tr>
<tr>
<td></td>
<td>• Reliever of EODs 1 and 2 on stand by</td>
<td>• Driver and security guard assist at OpCen</td>
<td>• Team leader</td>
</tr>
<tr>
<td></td>
<td>• Response Division Chief (to serve as MCI Medical Controller)</td>
<td>• Incoming EOD on call</td>
<td>• 2 Data Collector/Encoder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Logistics</td>
<td>• Logistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ≥1 DOH rep to go on duty at NDCC if requested</td>
<td>• Communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Admin Officer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Support staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Driver</td>
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<td></td>
<td></td>
<td></td>
<td>• ≥1 staff on 24 hr duty OCD OpCen</td>
</tr>
<tr>
<td>Code White</td>
<td>Code Blue</td>
<td>Code Red</td>
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<tr>
<td><strong>DOH Hospitals</strong></td>
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</tr>
<tr>
<td>1st Response Team (ready for dispatch):</td>
<td>• HEMS Coordinator present at hospital</td>
<td>• All personnel enumerated under Code Blue</td>
<td></td>
</tr>
<tr>
<td>• 2 Doctors (pref. Surgeon, Internist, Anes)</td>
<td>• On-scene response team</td>
<td>• All medical interns and clerks</td>
<td></td>
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<tr>
<td>• 2 Nurses</td>
<td>• ER and OR officer in charge</td>
<td>• All nurses</td>
<td></td>
</tr>
<tr>
<td>• First aider/ EMT</td>
<td>• All Ortho &amp; Anes residents</td>
<td>• All nursing attendants</td>
<td></td>
</tr>
<tr>
<td>• Driver</td>
<td>• All 3rd &amp; 4th year residents</td>
<td>• All institutional workers</td>
<td></td>
</tr>
<tr>
<td>2nd Response Team (on call)</td>
<td>• Post duty &amp; on duty surgical team</td>
<td>• All personnel on duty</td>
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<tr>
<td>• On stand-by:</td>
<td>• Mental health professionals</td>
<td></td>
<td></td>
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<tr>
<td>• Gen surgeons</td>
<td>• Toxicologists &amp; chem. experts for poisoning</td>
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</tr>
<tr>
<td>• Orthopedic</td>
<td>• Admin Officer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Anes</td>
<td>• Nursing supervisor</td>
<td></td>
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<tr>
<td>• Internists</td>
<td>• All OR Nurses</td>
<td></td>
<td></td>
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<tr>
<td>• OR nurses</td>
<td>• Social workers</td>
<td></td>
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<tr>
<td>• Ophtha</td>
<td>• Dietary</td>
<td></td>
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<tr>
<td>• ENT</td>
<td>• CSR supplies officer</td>
<td></td>
<td></td>
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<tr>
<td>• Infectious specialists</td>
<td>• Entire security force</td>
<td></td>
<td></td>
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<tr>
<td>ER, Nursing &amp; Admin staff residing at hosp dorm on call</td>
<td>• Institutional workers on duty</td>
<td></td>
<td></td>
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<tr>
<td>Code White</td>
<td>Code Blue</td>
<td>Code Red</td>
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<tr>
<td><strong>Center For Health Development</strong></td>
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<tr>
<td>• 2 EODs</td>
<td>• RHEMS Coordinator present at OpCen</td>
<td>• Mobilize all regional staff as needed on rotation basis</td>
<td></td>
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<tr>
<td>• Driver</td>
<td>• RAT</td>
<td>Establish surveillance system in all evacuation centers</td>
<td></td>
</tr>
<tr>
<td>• Regional HEMS Coordinator on call</td>
<td>• 3 Teams on standby:</td>
<td>• All other teams deployed in affected area</td>
<td></td>
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<tr>
<td>• 1 Rapid Assessment Team (RAT) ready for dispatch:</td>
<td>▶ environmental</td>
<td></td>
<td></td>
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<tr>
<td>▶ DOH rep</td>
<td>▶ surveillance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▶ Nurse</td>
<td>▶ medical</td>
<td></td>
<td></td>
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<tr>
<td>▶ Driver</td>
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</tr>
</tbody>
</table>

- EOD 1 & 2 |
- Finance officer Logistics |
- Health promotions |
- Driver |
- All regional staff on standby |
- All DOH reps in affected area standby at LGU |
<table>
<thead>
<tr>
<th>DOH Central Offices</th>
<th>Code White</th>
<th>Code Blue</th>
<th>Code Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concerned directors or designates on stand by (for code white) or present at respective offices (for code blue):</td>
<td>Material Management Division</td>
<td>Finance Service</td>
<td>All services should ensure the availability of staff for 24 hours to address all requests for technical and logistical support</td>
</tr>
<tr>
<td></td>
<td>Administrative Service</td>
<td>Procurement and Logistics</td>
<td></td>
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<tr>
<td></td>
<td>NEC</td>
<td>NCHP</td>
<td></td>
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<td></td>
<td>Media Relations Unit</td>
<td>NCDPC</td>
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</tr>
<tr>
<td></td>
<td>NCHFD</td>
<td>Bureau of Quarantine &amp; International Health Surveillance</td>
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<td>BFAD</td>
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</tr>
</tbody>
</table>

*If there is a strong possibility that there would be a need to change the alert status from code white to blue to red, the Chief of Hospital is authorized to:*

1. Cancel all leaves of personnel and for them to report to the hospital.
2. Put back-up teams on stand-by within the hospital for rapid deployment.
3. Take other steps necessary to respond to the emergency situation (e.g. cancel elective surgeries, etc.)

For further details, please refer to:

Rapid Health Assessment

The following critical information required should be made available for reference within 24 hours from the event.

Key Questions

Is there an emergency or not? (If so, indicate type, date, time and place of emergency, magnitude and size of affected area and population)

What is the main health problem?

What health facilities or services have been/may be affected?

What is the existing response capacity? (actions taken by the local authorities, by DOH-HEMS)

What decisions need to be made?

What information is needed to make these decisions?

Situation Report Outline

A. Executive Summary
B. Main Issue
   1. Nature of the emergency (causative and additional
hazards, projected evolution)
2. Affected area (administrative division, access)
3. Affected health facilities
4. Affected population (sex/age breakdown)

C. Health Impact
1. Direct impact: reasons for alert (3 main causes of morbidity/mortality, CMR, under-5 mortality rate, acute malnutrition rate)
2. Other reasons for concern (e.g., trauma, reports/rumors of outbreak)
3. Indirect health impact (e.g., damage to critical infrastructures/lifelines)
4. Pre-emergency baseline morbidity and mortality (when available)
5. Projected evolution of health situation: main causes of concern if the emergency will be protracted

D. Vital Needs: current situation
1. Water
2. Waste disposal
3. Food
4. Shelter and environment on site
5. Fuel, electricity, and communication
6. Other vital needs (e.g., clothing and blankets)

E. Critical Constraints
1. Security: coordinate with the safety officer to identify
hazards or unsafe conditions associated with the incident
2. Transport and logistics
3. Social/political and geographical limits
4. Other constraints

F. Response Capacity: functioning resources
1. Activities already underway
2. National protocols, contingency plans
3. Operational support (command post, regional unit and referral system, external assistance, state of communications)
4. Operational coordination (lead agencies, mechanisms, flow of information)
5. Strategic coordination (local/international relationships)

G. Conclusions
1. Are the current levels of mortality and morbidity above-average for this area and this time of the year?
2. Are the current levels or morbidity, mortality, nutrition, water, sanitation, shelter and health care acceptable by international standards?
3. Is a further increase in mortality expected in the next 2 weeks?

H. Recommendations for Immediate Action
1. What must be put in place as soon as possible to
reduce avoidable mortality and morbidity?
2. Which activities must be implemented for this to happen?
3. What are the risks to be monitored?
4. How can they be monitored?
5. Which inputs are needed to implement all these?
6. Who will be doing what?

I. Emergency Contacts: local donor representatives, DOH counterparts and neighboring regional directors.

J. Annexes: include all detailed information that are relevant

Be honest in the conclusions and practical in the recommendations. Recommendations that cannot be put into practice quickly are useless. Prioritize the health problems (in terms of magnitude and severity and of feasibility of health interventions.

For further details, please refer to:

- Page 192 for sample of Rapid Health Assessment Forms
Epidemiology and Surveillance

Epidemiologic Methods of Emergency Management

Objectives

- Assess the urgent needs of human populations
- Match available resources to needs
- Prevent further adverse health effects
- Monitor and evaluate program effectiveness
- Improve contingency planning
- Optimize each component of emergency management

Application

- Hazard mapping
- Analysis of vulnerability
- Assessment of the flexibility of the existing local system for emergency
- Assessment of needs and damages
- Monitoring health problems
- Implementation of disease-control strategies
- Assessment of the use and distribution of health services
- Etiological research on the cause of mortality and morbidity
- Follow-up long-term impacts of health, etc.
Surveillance System Development

1. Establish Objectives
   - Detect epidemics
   - Monitor changes in the population
     - Numbers
     - Health status including nutritional conditions
     - Security
     - Access to food
     - Access to water
     - Shelter and sanitation
     - Access to health services
   - Facilitate the management of relief

2. Develop Case Definitions (Request NEC)
   - Standard case definitions of health conditions simplify reporting and analysis

3. Choose the Indicators
   - Indicators must:
     - Illustrate the status of the population (ex. death rates)
     - Measure the effectiveness of relief (ex. immunization coverage)

4. Determine Data Sources
Data can come from health-care facilities ("passive surveillance") and from surveys in the community ("active surveillance")
- Involve those who provide health care
- Health surveillance in an emergency requires input from all sectors

5. Develop Data Collection Tools and Flows
- Use pre-existing local formats and/or international standards
- Use formats that facilitate data entry (EpiInfo)
- Utilize existing process flows

6. Field-Test and Conduct Training
- Can these data produce the information required?
- Training field workers will improve data facility and local analysis

7. Develop and Test the Strategy of Data Analysis
- Data analysis should cover:
  - Hazards and impact on the population’s health
  - Quality and quantity of services provided
  - Impact of services on population’s health
  - Relation between services provided to different groups (evacuees and hosts)
  - Deployment and utilization of resources
Major operations may require a central epidemiological unit

8. Develop Mechanisms for Disseminating Information (Risk Communication)
   - Who will receive the information?
   - For the information to be useful, it must be disseminated widely and in a timely fashion:
     - Feedback will sustain data collection and the performance of field workers
     - Health information is important for the activities of other sectors.

   - Sharing information is good coordination
   - Share information to authorities who manage the cases and the incident

9. Monitor and Assess Usefulness of the System
   - Is everybody reporting on time? Which data are missing?
   - Lack of information in areas or programs that have problems
   - Is the system useful?
   - Is the information generated by the system being used for decision making?
   - If not, readjust the system
Mass Casualty Management

Mass Casualty Incident

Any event resulting in a number of victims large enough to disrupt the normal course of emergency and health care services

Different Approaches to Mass Casualty Incident (MCI):

1. “Scoop and Run” Approach
   - Most common
   - Does not require specific technical ability from rescuers
   - Justified for small numbers occurring near a hospital
   - May just transfer problem to the hospital

2. Classical Approach
   - First responders are trained (basic triage and field care)
   - Disregard the receiving hospitals from the field
   - Quickly result to chaos

3. Mass Casualty Management Approach
   - Most sophisticated approach includes pre-established procedures for resource mobilization, field management, and hospital reception
   - Training of various level of responders
Incorporates links between field and health care facilities
- Includes setting up a command post and dealing with multi-sectoral response
- Dependent on the availability of large amounts of human & material resources

Components of Field Management

Field Organization Checklist

- Situation Assessment
- Report to Central Level
- Work Areas Pre-identification
- Safety
- Primary Area: Impact Zone
- Secondary Area Units: CP/AMP/EVAC/TRANSFER
- Radio Communications
- Crowd and Traffic Control
- Search and Rescue
- Triage and Stabilization
- Controlled Evacuation

Field Management

- Encompass procedures used to organize the disaster area in order to facilitate the management of victims
- Components: Alerting process, Pre-identification of field
Alerting Process

- Sequence of activities implemented to achieve the efficient mobilization of adequate resources
- Aims to confirm the initial warning, evaluate the extent of the problems, and ensure that appropriate resources are informed and mobilized
- Dispatch center:
  - Core of the alerting process (Operation/Communication Center)
  - Functions to receive all warning messages (radio/phone) and mobilize a small assessment team (Flying Team) from police, fire or ambulance services

Initial Assessment

- Precise location of the event
- Time and type of the event
- Estimated number of casualties
- Added potential risk
- Exposed population
- Resources needed
Pre-identification of Affected Areas

- Impact zone
- Command post
- Collecting area in unstable location
- Advance medical post area (3-T Principle)
- Evacuation area
- VIP and press area (Information officer)
- Access roads (geographical presentations if available)
- Check point for resources (Staging area)

Safety/Security

- Best practice technique to protect victims, responders and exposed population: immediate/potential risk
- Direct action measures:
  - Risk reduction - fire fighting
  - Contain hazardous material
  - Evacuation of exposed population

- Preventive actions: establish field areas
  - Primary - Impact zone
  - Secondary - Rescue/ICP/AMP
  - Tertiary-“buffer zone”; tri-media

- Personnel safety: fire services; specialized units hazardous materials and explosives (bio-nuclear and radioactive materials) experts, etc., airport manager and chemical
plant experts

- Security measure for non-interference of external elements: *crowd/traffic* control
- Contribute to safety:
  - Protect workers from external influence; additional stress
  - Free flow: victims/resources
  - Protect general public from risk exposure (ensured by police officers/special units or security in airports, buildings, hospitals, establishments, etc.)

**Command Post (CP/ICP)**

- Multi-sectoral control unit to:
  - Coordinate sectors involved in field/scene management
  - Linked with back-up system: provide information and mobilization resources
  - Supervise victim management

- Requisite: Radio communication network (for main criterion to be effective)
- Purpose: Coordination and communication hub of people who don’t work routinely (pre-hospital setting)
- Location: External boundary of restricted area (impact zone) close to AMP/ Evacuation Area; accessible and easily identified; and can accommodate visuals, maps and boards
• Personnel:
  ► High ranking officer (government police, fire, health, defense)
  ► Identified by name/position, coordinator/commander
  ► May depend on what type of incident
  ► Must be familiar with each other’s roles during previous meetings, drills, simulation exercises and policies
  ► Core group cooperates with volunteer organizations

• Method: The communication and coordination hub of the pre-hospital organization. By constant re-assessment, CP will identify needs to increase or decrease resources:
  ► Organize timely rotation of rescue workers exposed to stressful/exhausting conditions in close coordination with back-up system
  ► Ensure adequate supply of equipment / manpower
  ► Ensure welfare / comfort of rescue workers
  ► Provide information to back-up system, other officials, and tri-media thru an Information Officer
  ► Release as soon as situation allows emergency staff and reestablish normal operations
  ► Determine termination of field operations

Search and Rescue Team

• Locate victims
• Remove victims from unsafe locations – collecting area
Assess victim’s status (on-site triage)
Provide first aid, if necessary (no CPR on-site in MC Event)
Transfer victims to AMP thru entry triage (medical triage)
Under supervision of the CP/IC/or Commander/Coordinator
May require trained medical personnel in special situations
Stabilize/resuscitate/amputate (trapped) victim before extrication

Field Care

Pre-established capabilities/inventory: Pre-planning
Integrated community plan: Practiced with policy support
The “Golden Hour” Principle
Establish advance medical post with skilled and disaster
trained field medical teams capable of good triage/stabilization, and with efficient (radio) communications
between the field scene and medical facility

For further details, please refer to:

Mass Casualty Management, 8th National Training Course on Public Health
Triage and Stabilization

Triage

- Objective: to quickly identify victims needing immediate stabilization or transport, and the level of care needed by these victims by assessing airway, breathing, and circulation (ABC’s)
- Basis:
  - Urgency (victim’s status)
  - Survival (chance or likelihood)
  - Care resource availability and capability

On-Site Triage (‘where they lie’)

1. Acute
2. Non-acute

Medical Triage (at Advance Medical Post)

1. Priority One (Highest Priority)

- Immediate care and transportation
- Patients receive treatment at the scene for life-threatening injuries
Pocket Emergency Tool

- First to be sent to available medical facilities

2. Priority Two (Intermediate Priority)

   ![Yellow Tag]

   - Urgent care
   - May delay treatment and transport up to one hour

3. Priority Three (Delayed or Low Priority)

   ![Green Tag]

   - “Walking-wounded”
   - May delay treatment and transport up to 3 hours

4. Priority Four (Lowest Priority)

   ![Black Tag]

   - No care required; patient is dead or near-death
   - Hardest priority to deal with emotionally
   - Necessary for others to survive
Evacuation Triage (for transport)

1. **Red Tag**
   Transferred as soon as possible to tertiary to tertiary facilities in an equipped ambulance with medical escort

2. **Yellow Tag**
   After evacuation of red tagged patients; without life-threatening problem

3. **Green Tag**
   To AS/OPD

4. **Black Tag**
   To morgue, forensic services, public health and psychosocial interventions for relatives and kin
All walking wounded

Minor

Start Triage

Respiration

Yes

No

> 30 min

< 30 min

Position Airway

Yes

No

Immediate

Immediate

Deceased

Immediate

Immediate

Deceased

Perfusion

Radial pulse absent

Radial pulse present

Capillary Refill

Over

Under

2 secs

2 secs

Control bleeding

Mental Status

Can follow single command

Cannot follow single command

Immediate

Immediate

Delayed
Patient Assessment

Respiration
• Greater than 30/min > Red Tag (priority one)
• Less than 30/min > move on to assessing pulse
• If not breathing:
  ▶ Quickly make sure mouth is clear
  ▶ Open airway with head tilt method
  ▶ If patient does not start to breath with simple airway maneuvers > Black Tag (priority four)

Circulation
• Check pulse rate and quality (radial area) no more than 5 seconds
• If pulse is strong, move on to assess mental status
• If pulse is weak/irregular > Red Tag (priority one)
• If no pulse > Black Tag (priority four)

Mental Status
• Have patient respond to simple commands such as “open your eyes” or “squeeze my hand”
• If patient can perform this function, is breathing and has a pulse > Yellow Tag (priority two)
• If patient is unresponsive and cannot follow simple commands > Red Tag (priority one)
First Aid

- Personnel: volunteers, fire, police staff, special units, EMT’s, and medical personnel
- Location:
  - On-site, before moving victim
  - At collecting point or area in an unstable environment
  - “Green Area” of AMP
  - Ambulance in transit to facility
- Action: Primarily to transfer with consideration of the ABC’s order of priority

Advance Medical Post

- Purpose:
  - Reduce loss of life and limbs, and save as many as possible in the context of existing and available resources or situation
- Location:
  - 50-100 meters from Impact Zone (within walking distance)
  - Direct access to the Evacuation Road and Command Post
  - Safe and clear Radio-Com Zone
Pocket EMERGENCY Tool

• Role:
  ▶ Provide “entry” medical triage
  ▶ Effective stabilization for victims of a MCI/Situation (capable of doing intubation, tracheostomy, chest drainage, shock management, analgesia, fracture immobilization, fasciotomy, control external bleeding and dressing)
  ▶ Convert red to yellow category as maybe possible
  ▶ Organize patient transfer to designated care facility/ties
  ▶ AMP 3-T principle: Tag – Treat – Transfer

• Personnel:
  ▶ ER (A&ED), physicians/ nurses (trained & skilled)
  ▶ Support: Anesthetists, surgeons, EMT’s, nurses, aiders, etc.

For further details, please refer to:

Transfer Organization and Evacuation

Procedures used to ensure that victims of an MC situation is safely, quickly, and efficiently transferred by appropriate vehicles to the appropriate and prepared facility.

Preparation for Evacuation:

1. Single Reception Facility
2. Multiple Reception Facilities
   - Type of vehicle and escort required
   - Type of escort required

Transport and Evacuation Procedures

• Evacuation Officer to ensure the following:
  - Assess patient’s status (vital signs, ventilation, hemostasis)
  - Security of equipment and accessories
  - Efficiency of immobilization measures
  - Triage tags are secured and clearly visible

• Main principle is not to overwhelm care facility and avoid spontaneous evacuation of unstable patients
• Victim should be in the most possible stable condition and adequately equipped for transfer
• Receiving facility correctly informed and ready
• Use best possible available vehicle and escort

Victim Flow

• Ambulance Traffic Control
  ▶ Radio links to Transport Officer at AMP, Hospital Admission/ER Dept, Command Post, and Ambulance Headquarters
  ▶ Responsibility of Ambulance Driver to take order from the Transport Officer

• Police Officers to manage crowd and traffic control
• For evacuation of non-acute victims, use available mass transport and transfer to primary care center as much as possible

Incident Management System

• Incident Command created to deal with any incident in an organized manner
• Manages resources, personnel and equipment to mitigate the incident
• Builds from first responder
• Expandable to manage hundreds
• Implementation is critical for safe and effective operation
• Allows for multi-agency operations and response based on incident type
Command Staff

1. Incident Commander
   - First person on the scene with communications capability
   - Remains in command until transferred or incident is terminated
   - Complete authority and responsibility
   - Must assume and announce command, rapidly evaluate incident, identify resources on hand, request additional resources and establish incident action plan
   - Fill command staff and functional areas
   - Must approve all information releases to the media

2. Safety Officer
3. Liaison Officer
4. Public Information Officer

Transfer of Command

- Based on the initial responders experience and comfort level
- Higher ranking officer does not need to assume command
- Transfer procedures should be predetermined
- Detailed briefing is required
- Face to face is best method
- Include: current status, strategies and tactics employed,
progress, safety, accountability and resources assigned or needed

General Staff

1. Operations Section
   ▶ Operations officer functions under direction of the Incident Commander
   ▶ Deploys tactics to control and resolve the incident
   ▶ Responsible for execution of the incident action plan
   ▶ Makes recommendations for changes to plan based on incident status
   ▶ Oversees and is in direct contact with the staging manager
   ▶ Task supervisors report to Operations not Incident Command

2. Planning Section
   ▶ Responsible for collection, evaluation, distribution and use of information about the incident
   ▶ Forecast and develop plans to contain and resolve incident
   ▶ Communicates with logistics section

3. Logistics Section
   ▶ Responsible for providing facilities, services and materials in support of incident
   ▶ Includes equipment, personnel and associated
materials and tools

- Support branch and Services branch

4. Administrative / Finance Section

- Generally not located at incident site
- Responsible for financial, administrative and cost analysis
- Divided into four units: time, procurement, compensation/claims and cost

For further details, please refer to:

Critical Incident Management

- Demands a coordinated response from all agencies to prevent incident from getting worse
- This includes unresolved element of danger such as additional bomb, a threat to citizens and responders, or an unusual incident
- Mass casualty is a critical incident

Initial Response

- Ability to establish control and command
- Crucial to develop a team and place a plan in action
- Protecting citizens and rescue of victims
- Protect arriving responders
- Identify ingress and egress routes
- As soon as possible:
  - Gain control of the scene
  - Restore order
  - Prevent target opportunities

Incident Control (Six-Step Response)

1. Assume Command
   - The first responder provides order to the incident
   - Prevents independent and multiple commands, and reassures responders that someone is in charge
Must advise incoming responders of incident location and secure tactical frequency
Request supervisory support

2. Assess the situation
- Size up the incident that includes type of threat, approximate number of injured, size of threatened area, and possibility of secondary event

3. Identify and Set Parameters
- Divide the incident into manageable divisions (geographical areas)
- Allow command to provide resources where they are needed

a. The Hot Zone
  - Area in which the incident occurred
  - May be a street corner or spread over a large area
  - Secured by placing responders in controlling positions of ingress and egress

b. Inner Perimeter
  - Protects responders in hot zone
  - Uniformed personnel only
  - Used as decontamination area, treatment area and evacuation area for walking wounded
c. Outer Perimeter
   • Provides last line of defense from internal incident acceleration
   • Provides first line of defense from external incident acceleration
   • Secure area for command post, resources and control of media

4. Establish Command Post
   ▶ Typically begins at first responders vehicle
   ▶ Incident dynamics will require Incident Commander to shift to a fixed command post
   ▶ Must be away from hot zone
   ▶ The command post will ensure support for field personnel, create a controlled environment and improve communications

5. Assign Safety Officer
   ▶ Should be filled as soon as possible
   ▶ Officer selected on operational experience and ability to recognize acceptable and unacceptable risk
   ▶ Operations can be stopped or modified

6. Establish Staging Area and Assign Staging Officer
   ▶ Effective tool in correct and safe deployment of resources
   ▶ Staging Supervisor must track, rotate and relieve resources as appropriate
Area established within inner or outer perimeter. Avoid congestion

Recovery

- Most important goal is document collection
- Information can assist in Post Incident Analysis, cost recovery and tracking responder injuries or deaths
- Collect and properly dispose of used medical supplies and biohazard waste from the incident

For further details, please refer to:

Management of Temporary Settlements

Overview of Temporary Settlements

Emergency Settlement

- Should be given priority when there is risk or threat to the civilian population
- Those whose homes can be or have been damaged
- In most situations finding a building large enough to house several families (like a church or gymnasium) initially or for a few days might be sufficient
- Assistance and basic services must be provided

Requirements for Camp Operation

1. Select an appropriate site
2. A plan for a health emergency settlement such as site selection, layout, and shelter
3. Organize the affected population
4. Determine the needs of the settlement with priority to water and sanitation
5. Establish health services for the settlement
6. Reporting, documentation and coordination
Site Selection

General Considerations in Selection
- Camps for more than 10,000 people should be avoided
- Small shelters for a small number of people are preferred
- Electric power is desirable
- Camp sites should be cleaned regularly
- Vector control: Insecticide spraying
- Separate accommodation for unaccompanied children
- Coordinate with local officials for site identification and preparation
- Provision of health personnel and welfare staff
- Good security
- Possible temporary shelters: tents, school, church, gymnasium, cave, makeshift shelter

Field Recommendation in Selection
- Temporary relocation to relatives is ideal
- Use of indigenous materials should be encouraged
- Consider lifestyle/culture of communities (e.g., portalets in rural areas)
- Consider the duration of evacuation (school buildings used as classrooms by the local community)
- Organize the required services
Settlement Planning

Planning for a Settlement

- Data needed for emergency settlements
  - FIC
  - Community morbidity of both communities
  - Available health personnel
  - Nutritional status
  - Functional referral system

- Identification of communities for evacuation
- Communities are assigned to an evacuation center
- Communities, responders/health personnel informed

The UNICEF Criteria for site selection:

- Adequate water
- Space is sufficient
- Drainage is good
- No major environmental health hazards
- Access to roads, communications, and supplies of food, cooking fuel and shelter materials
- Vegetation is adequate
- Good security
- Consideration for land rights
Organizing the Affected Population

- Community participation in planning evacuation
- Identify community resources available for evacuation process such as motor vehicles, bancas, etc.
- Agree on the process (ex. alert warning, pick up points and point persons)
- Coordinate with local government agencies
- Color tagging scheme:
  a. Community is assigned a basic color
  b. An evacuation center is matched
  c. The community/partners are informed
  d. Children are given colored tags
  e. Responders are informed on the arrangement
  f. Receiving community informed

Emergency Shelter Guidelines

✓ Accommodation
  - Minimum floor area: 3.5 m²/ person
  - Minimum air space: 10 m³/ person
  - Minimum air circulation: 30 m³/ person/hour
  - Minimum distance between beds: 75 cms

✓ Washing
  - 1 hand basin/ 10 persons
  - 1 wash bench (4–5 m)/ 100 persons

✓ Laundry platform (3m double sided)
  - two/ 100 persons
Determining Settlement Needs

- As a public health issue, it may involve the resources of the entire disaster area
- Assessment should be performed
- Rehabilitation of the community services should be considered
- May require collaboration of the government and private sector
- In prolonged evacuation, big shelters may be difficult to operate in prolonged evacuation, assistance and services must include stress management, and economic considerations should be addressed
- Mass evacuation should be avoided unless it is absolutely necessary

Establishing Health Services

Medical Services

- Regular consultation and follow up of cases reported by the disease surveillance teams
- Available medical supplies
- Health personnel go on 24 hour duty at the clinic in the evacuation center (evacuating barangay and receiving community) with the following responsibilities: 1) make available list of patients for consult, 2) refer emergency
patients for treatment, and 3) conduct inventory of available resources

Disease Surveillance

• Rapid assessment and survey
• Agree on case definition
• Agree on the inclusion/exclusion of diseases that are monitored
• Recommend measures to address existing operational problems

Reporting, Documentation and Coordination

• Required for situational analysis
• Will show resources that are available
• Guide for future management
• Basis for liquidation
• Not entirely for media consumption; release of reports to media should be agreed by all players

For further details, please refer to:

• Page 118 for measures on Water Supply, Sanitation and Hygiene Promotion
• Page 200 for sample of Reporting Forms for Temporary Settlements
Prevention and Control of Communicable Diseases

Vaccine Preventable Diseases

- Measles, Hepatitis A, Haemophilus Influenza Type B, Hepatitis B
- Tetanus, Rabies, Rubella, Typhoid Fever, Japanese Encephalitis, Influenza
- A single suspected measles case is sufficient to prompt an immediate immunization response. Life-saving measles vaccine should be made available immediately targeting all infants and children 6-59 months of age (may be expanded up to 15 years old in areas with substantial crowding).
- Each visit to health care facilities should be an opportunity to vaccinate for routine EPI regardless of reason for visit. Vaccination program activities should be part of basic emergency health care services.
- If there are cases, vaccinate non-immunized high risk groups (Diphtheria, Poliomyelitis, Rubella, Pertussis, Influenza)
- Mass immunization is not recommended for cholera, typhoid, tetanus (booster for the injured) and hepatitis A
- Health education
Food and Water-borne Diseases

- Acute Gastroenteritis (Diarrhea), Cholera, Hepatitis A and E, Food Poisoning, Typhoid/Paratyphoid
- Diseases of immediate concern
- May occur anytime during disaster
- Related to unsafe drinking water and inadequate sanitation
- Diagnosis and specific treatment based on standard protocols
- Chlorination of drinking water, appropriate and sufficient water containers, and proper handling of food
- Adequate sanitation facilities—latrines or designated defecation areas, proper garbage collection and disposal
- Continuous health education especially personal hygiene

Vector-borne Diseases

- Dengue Fever/Dengue Hemorrhagic Fever, Malaria, Japanese Encephalitis, Filariasis, Chickungunya
- Diseases posing threats in 3-4 weeks
- Related to ecological changes that favor breeding of vectors
- Diagnosis and specific treatment based on standard protocol
- Eliminate/modify breeding places
- Appropriate collection and disposal of garbage
Personal protection
Vector control and control of animal reservoirs
Health education and social mobilization

Respiratory Diseases

- **Pneumonia**, Influenza, Tuberculosis, Meningococcal Diseases
- Diseases posing threat in 3-4 weeks
- Related to overcrowding
- Diagnosis and specific treatment based on standard protocol
- Ensure proper living conditions – well spaced, good ventilation, proper clothing and use of sleeping blankets
- Vaccinate, if necessary
- Continuous provision of drugs for TB
- Health education

Zoonotic Diseases

- Leptospirosis, Rabies, Typhus
- Diseases posing threat in 3-4 weeks
- Related to rains and flooding or accumulation of refuse, displacement of domestic and wild animals
- Diagnosis and specific treatment based on standard protocol
- Immunize if necessary
- Use of personal protection
### Treatment Protocol for Selected Diseases

<table>
<thead>
<tr>
<th>General Signs and Symptoms</th>
<th>Warning Signs</th>
<th>Local Measures</th>
<th>Emergency Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measles</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Fever</td>
<td>• Tachypnea or difficulty of breathing</td>
<td>• Isolate patient</td>
<td>• Assess ABC and monitor vital signs</td>
</tr>
<tr>
<td>• Maculopapular rash starts from face then spreads to body/limbs</td>
<td>• Seizure or changes in sensorium</td>
<td>• Paracetamol (10-15 mg) for fever</td>
<td>• Do CPR for CP arrest</td>
</tr>
<tr>
<td>• 3Cs</td>
<td>• Dehydration</td>
<td>• Vit. A 100,000u for 6-12 mos and 200,000u for &gt;12 mos</td>
<td>• Start IV line – Plain LR/ pNSS if in shock</td>
</tr>
<tr>
<td>• (cough, colds, conjunctivitis)</td>
<td>• Immunocompromised status (malignancy, AIDS, asthma, Down’s)</td>
<td>• Repeat dose next day and 4 weeks after for pts with ophtha evidence of Vit. A deficiency</td>
<td>▶ &lt;12y/o: D5 0.3% NaCl</td>
</tr>
<tr>
<td>• May have Koplik spots on buccal mucosa</td>
<td>• Grossly malnourished</td>
<td>• Do measles IgM</td>
<td>▶ &gt;12y/o: D5NM</td>
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<td>• Tachypnea or difficulty of breathing</td>
<td>• History of coriander (kulantro, uan-suy) intake</td>
<td>• Assess ABC and monitor vital signs</td>
<td>• Give O2 (2-4 L/min by nasal prong) inhalation</td>
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<td>• Grossly malnourished</td>
<td>• Assess ABC and monitor vital signs</td>
<td>• Refer to hospital with referral note</td>
</tr>
<tr>
<td>• Dehydration</td>
<td>• History of coriander (kulantro, uan-suy) intake</td>
<td>• Vit. A 100,000u for 6-12 mos and 200,000u for &gt;12 mos</td>
<td>• Give O2 (2-4 L/min by nasal prong) inhalation</td>
</tr>
<tr>
<td>• Immunocompromised status (malignancy, AIDS, asthma, Down’s)</td>
<td>• Grossly malnourished</td>
<td>• Repeat dose next day and 4 weeks after for pts with ophtha evidence of Vit. A deficiency</td>
<td>• Salbutamol inhalation (2 puffs) or nebulization (1/2-1 neb) Q20 mins for wheezes until arrival at hospital</td>
</tr>
<tr>
<td>• May have Koplik spots on buccal mucosa</td>
<td>• History of coriander (kulantro, uan-suy) intake</td>
<td>• Assess ABC and monitor vital signs</td>
<td>• Diazepam (0.2-0.4 mg, max 10 mg) for seizure</td>
</tr>
</tbody>
</table>

### General Signs and Symptoms
- **Measles**
  - Fever
  - Maculopapular rash starts from face then spreads to body/limbs
  - 3Cs (cough, colds, conjunctivitis)
  - May have Koplik spots on buccal mucosa

### Warning Signs
- Tachypnea or difficulty of breathing
- Seizure or changes in sensorium
- Dehydration
- Immunocompromised status (malignancy, AIDS, asthma, Down’s)
- Grossly malnourished
- History of coriander (kulantro, uan-suy) intake

### Local Measures
- Isolate patient
- Paracetamol (10-15 mg) for fever
- Vit. A 100,000u for 6-12 mos and 200,000u for >12 mos
- Repeat dose next day and 4 weeks after for pts with ophtha evidence of Vit. A deficiency
- Do measles IgM

### Emergency Measures
- Assess ABC and monitor vital signs
- Do CPR for CP arrest
- Start IV line – Plain LR/ pNSS if in shock
  - <12y/o: D5 0.3% NaCl
  - >12y/o: D5NM
- Give O2 (2-4 L/min by nasal prong) inhalation
- Salbutamol inhalation (2 puffs) or nebulization (1/2-1 neb) Q20 mins for wheezes until arrival at hospital
- Diazepam (0.2-0.4 mg, max 10 mg) for seizure
- Refer to hospital with referral note

### Acute Gastroenteritis
- >3 episodes liquid stools in 24 hours plus:
  - Fever
  - Vomiting
  - Abdominal pain
  - Poor appetite
  - Signs of some dehydration (increase thirst, irritability, sunken eyeballs, poor skin turgor)

### Treatment Protocol
- Severe dehydration signs (lethargic or unconscious, floppy infant, sunken eyes, drinks poorly, poor skin elasticity)
- Cold clammy extremities, pallor, weak pulse
- Difficulty of breathing
- Seizure
- Absent or decrease urine output
- Persistent vomiting
- Persistent diarrhea >14 days with dehydration
- Give home fluids (soups, rice gruel)
- Give ORS
- Continue feeding or increase frequency of breastfeeding
- Do not give anti-diarrheal or anti-spasmodic drugs
<table>
<thead>
<tr>
<th>General Signs and Symptoms</th>
<th>Warning Signs</th>
<th>Local Measures</th>
<th>Emergency Measures</th>
</tr>
</thead>
</table>
| **Acute gastroenteritis** | • Bloody stools or rice watery voluminous stools  
• Abdominal distention  
• Muscle cramps  
• Grossly malnourished  
• No clinical improvement after 4-6 hours of ORS | • Zinc 20 mg/day for 10-14 days for children and 10 mg/day for infants <6 mos old)  
• Paracetamol (10-15 mg) for fever Q4 hrs  
• Do rectal swab (c/o NEC)  
• Advise good personal hygiene  
• Observe for warning signs | **Additional for AGE:**  
• Start 2 IV lines for pts w/ possible cholera  
• Give ORS by NGT (20 ml/kg for 6 hrs) if IV therapy not feasible for pts who can’t drink |
| **Dengue** | • Fever of 2-7 days plus 2 or more of ff:  
• Headache/ eye pains  
• Arthralgia/ myalgia/ generalized body malaise  
• General flushing of the skin/ rash  
• Positive tourniquet test (≥ 20 petechiae/in2) | • Spontaneous bleeding  
• Pallor/ cyanosis/ DOB  
• Hypotension and weak pulses/ frequent dizziness & fainting (for 5 y/o) cold clammy skin  
• Plasma leakage: cherry red lips, pleural effusion, ascites  
• Restlessness/ listlessness/ seizure  
• Severe persistent abdominal pain and tenderness  
• Dehydration signs 2° to vomiting, diarrhea or poor fluid intake  
• Jaundice/ tea-colored urine  
• Platelet ct<100,000 | • Paracetamol (10-15 mg) for fever  
• Do not give Aspirin  
• ORS by mouth at 3 cc/kg/hr  
• Assess patient daily until 3 days without fever  
• Request CBC, platelet count and monitor hematocrit and platelet daily, if feasible  
• Observe for warning signs | **Additional for Dengue:**  
• Do nasal packing for nose bleeding, Epinephrine –soaked nasal pack in severe bleeding |
### Pneumonia

**General Signs and Symptoms**
- Cough
- Any abnormal VS:
  - Tachypnea (RR > 20 breaths/min)
  - Tachycardia (CR > 100/min)
  - Fever (T > 37.8°C)
  - With at least one abnormal chest finding:
    - Diminished breath sounds
    - Rhonchi
    - Crackles
    - Wheezes

**Warning Signs**
- Worsening VS (RR ≥ 30 breaths/min, CR ≥ 125 beats/min, T < 35°C or ≥ 40°C) or no improvement of condition for 3 days
- Respiratory failure (RR ≤ 12 breaths/min or cyanosis)
- Suspected aspiration
- Hypotension/alteration mental state
- Extrapulmonary evidence of sepsis (bleeding/jaundice)
- Co-morbid/ debilitating conditions (DM, malignancies, neurologic disease, heart diseases on prolonged steroid use, renal failure, COPD)
- Inability to take in food or medicine
- Severe malnutrition

**Local Measures**
- Isolate patient and observe proper bed spacing
- Low Risk CAP
- Drugs of choice:
  - Amoxycillin 1gm PO every 8 hrs x 7 days
  - Alternative drugs:
    - Azithromycin 500mg PO 1x/day x 3-5 days
    - Clarithromycin 500mg PO 2x/day x 7 days
    - Roxithromycin 150mg PO 2x/day or 300mg PO 1x/day x 7 days
    - Cotrimoxazole 160/800mg PO 2x/day x 7 days
    - Salbutamol 2mg tab 3-4x/day for wheezing
    - Paracetamol 500mg/tab Q4 hrs for fever
    - Increase oral fluid intake
    - Balanced nutrition and regular exercise

**Additional for Pneumonia**
- Place patient on moderate high back rest
### General Signs and Symptoms
- Fever (T > 38°C), headache/body malaise/abdominal discomfort in patient plus
- Red eyes (conjunctival suffusion)
- Yellow skin
- Calf pain/tenderness
- History of exposure to contaminated water (flood/ponds/sewage) or infected urine droplets in rat-infested areas

### Warning Signs
- Hypotension
- Cold, clammy skin
- Difficulty of breathing/cyanosis
- Seizure or changes in sensorium
- Decrease or no urine output
- Bleeding manifestations

### Local Measures

### Emergency Measures

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## Preventive Measures for Common Diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>Major Contributing Factors</th>
<th>Preventive Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrheal diseases</td>
<td>• Overcrowding</td>
<td>• Adequate living space</td>
</tr>
<tr>
<td></td>
<td>• Contamination of food and water</td>
<td>• Hygiene/public health education</td>
</tr>
<tr>
<td></td>
<td>• Lack of hygiene</td>
<td>• Distribution of soap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Good personal and food hygiene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Safe water supply and sanitation</td>
</tr>
<tr>
<td>Measles</td>
<td>• Overcrowding</td>
<td>• Minimum living space standards</td>
</tr>
<tr>
<td></td>
<td>• Low vaccination coverage</td>
<td>• Immunization of children with distribution of Vitamin A</td>
</tr>
<tr>
<td>Acute Respiratory Infections</td>
<td>• Poor housing</td>
<td>• Minimum living space standards</td>
</tr>
<tr>
<td></td>
<td>• Lack of blankets and clothing</td>
<td>• Proper shelter, adequate clothing, sufficient blankets</td>
</tr>
<tr>
<td></td>
<td>• Smoke in living area</td>
<td></td>
</tr>
<tr>
<td>Disease</td>
<td>Major Contributing Factors</td>
<td>Preventive Measures</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Malaria</td>
<td>• Stagnant water which becomes a breeding area for mosquitoes</td>
<td>• Inhibiting mosquito breeding by draining stagnant water, covering stored water, etc.</td>
</tr>
<tr>
<td>Dengue</td>
<td>• For displaced people, a new environment with a strain to which they are not immune</td>
<td>• Killing larvae and adult mosquitoes by spraying</td>
</tr>
<tr>
<td>Meningococcal meningitis</td>
<td>• Overcrowding in areas where disease is endemic (often has local seasonal pattern)</td>
<td>• Minimum living space standards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Immunization only after expert advice when surveys suggests necessity</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>• Overcrowding • Malnutrition • High HIV prevalence</td>
<td>• Minimum living space standard (but where it is endemic it will remain a problem)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Immunization</td>
</tr>
<tr>
<td>Typhoid</td>
<td>• Overcrowding • Poor personal hygiene • Contaminated water supply • Inadequate sanitation</td>
<td>• Minimum living space standards • Safe water, proper sanitation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Good personal, food and public hygiene and public health education</td>
</tr>
<tr>
<td>Worms (especially hookworms)</td>
<td>• Overcrowding • Poor sanitation</td>
<td>• Minimum living space standards • Proper sanitation, good personal hygiene • Wearing shoes</td>
</tr>
<tr>
<td>Scabies</td>
<td>• Overcrowding • Poor personal hygiene</td>
<td>• Minimum living space standards • Enough water and soap for washing</td>
</tr>
<tr>
<td>Xerophthalmia (Vitamin A deficiency)</td>
<td>• Inadequate diet • Following acute prolonged infections, measles and diarrhea</td>
<td>• Adequate dietary intake of Vitamin A. If not available, provide Vitamin A supplements • Immunization against measles • Systematic prophylaxis for children, every 4-6 months</td>
</tr>
<tr>
<td>Anemia</td>
<td>• Malaria • Hookworm • Poor absorption or insufficient intake of iron and folate</td>
<td>• Prevention/treatment of contributory disease • Correction of diet including food fortification</td>
</tr>
<tr>
<td>Disease</td>
<td>Major Contributing Factors</td>
<td>Preventive Measures</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Tetanus</td>
<td>• Injuries to unimmunized individuals&lt;br&gt;• Poor obstetrical practice causes neonatal tetanus</td>
<td>• Good first aid&lt;br&gt;• Immunization of pregnant women and subsequent general immunization within EPI&lt;br&gt;• Training of midwives and clean ligatures, scissors, razors, etc.</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>• Lack of hygiene&lt;br&gt;• Contamination of food and water</td>
<td>• Safe water supply&lt;br&gt;• Effective sanitation&lt;br&gt;• Safe blood transfusion</td>
</tr>
<tr>
<td>STDs/HIV</td>
<td>• Loss of social organization&lt;br&gt;• Poor transfusion practices&lt;br&gt;• Lack of information</td>
<td>• Test syphilis during pregnancy&lt;br&gt;• Test all blood before transfusion&lt;br&gt;• Ensure adherence to universal precautions&lt;br&gt;• Health education&lt;br&gt;• Availability of condoms&lt;br&gt;• Treat partners</td>
</tr>
</tbody>
</table>

Handbook for Emergencies, UNHCR, 1999

**List of Measures for Communicable Disease Control**

7. The use of interview for rapid assessment of communicable disease problems in emergency

8. Immunization
   - Indications for an immunization program
   - Implementation for an immunization program
   - Evaluation of an immunization program

9. Chemoprophylaxis
   - Right choice of drug
   - Length of use of the drug
Pocket EMERGENCY Tool

- Proper use of the drug
- Distribution of drugs

10. Therapeutic Approaches
- Mass treatment
- Short treatment versus long treatments

11. Health Education
- Have the community identify its problems
- Study a population’s behavior and customs when faced with the problems identified
- Set objectives
- Determine the appropriate measures
- Evaluate the impact of a health education program

For further details, please refer to:

Nutrition in Emergency

Key Concepts

1. **Nutrition Management**: Management of nutritional risks and consequences of emergencies and disasters, including measures of prevention and preparedness in anticipation of possible hazards, and all aspects of planning for a nutrition response in emergencies.

2. **Nutrition Emergency**: Situation in which food security is often severely threatened causing increased risk to malnutrition, disease, and death.

3. **Nutrition Cluster**: Refers to a group composed of government, non-governmental and international humanitarian agencies that take the lead in nutrition management during emergencies and disasters.

4. **Nutrition Surveillance System**: It refers to watching over nutrition in order to make decisions leading to improvements on nutrition of the population by providing regular information about nutrition. (Aguila, D.V. 2005)

5. **Food Security**: A condition that exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food for a healthy and active life (World Food Summit Plan of Action, paragraph 1, 1996).

6. **Rapid Nutrition Assessment**: Refers to the assessment of nutritional status based on simple anthropometric data (weight, height, sex, age and presence of edema).
and limited to children of preschool age, who serve to represent the general population.

7. **Recommended Energy and Nutrient Intakes (RENI):** Refers to the levels of intakes of energy and nutrients, which are considered adequate for the maintenance of health and well-being of nearly all healthy persons in the population.

8. **Mass Feeding:** Refers to the distribution of food rations to all those affected by an emergency or disaster regardless of nutritional status or risk to undernutrition.

9. **Complementary Feeding:** Provision of additional foods and liquids in addition to breast milk for infants from 6 months of age onwards. It complements breastfeeding rather than replaces it.

10. **Supplementary Feeding:** Refers to provision of food for the undernourished or nutritionally vulnerable (young children, pregnant, lactating women and elderly), equivalent to about 1/3 of the RENI for energy and protein. It also refers to the giving of foods in addition to what is available at evacuation centers, which includes cereals, meat or fish, vegetables, and fruits.

11. **Under nutrition:** Refers to consequence of consuming and/or absorbing insufficient nutrients or using or excreting them more rapidly than they can be replaced. It refers to a range of conditions, including acute malnutrition (wasting/thinness), chronic malnutrition (stunting/shortness), and micronutrient deficiencies (vitamin A deficiency, iron deficiency anemia, and iodine deficiency).
deficiency disorders). In times of emergencies and disasters, undernutrition is of greater concern.

12. **Malnutrition**: A pathological state resulting from a relative lack of nutrients (under nutrition) or excess of nutrients (over nutrition) or an absolute imbalance in nutrient intake. It results to impaired physical function to a point that the person cannot maintain adequate levels of performance at physical work, recovering from effects of disease, maintaining adequate level of growth and processes of pregnancy and lactation.

13. **Severe Acute Malnutrition**: Characterized by weight-for-height measurement minus 3 Z-scores below the standard median weight-for-height. In the Philippine context, these are those classified as “low weight-for-height, very low”, based on the revised tables using the WHO Child Growth Standards. SAM is also indicated if mid-upper arm circumference (MUAC) is less than 110mm (11.0 cm. or in); and when bilateral edema is present.

**Nutrition Preparedness**

1. **Coordination and Networking**
   - Nutrition cluster established at all LGU levels
   - Local nutrition cluster membership strengthened and linked with other clusters such as WASH, psychosocial, social protection, food and non-food clusters under the NDCC
2. Planning
   ▶ Nutrition management integrated into local disaster preparedness plan, with the following components identified:
     a. Nutrition package and services to be delivered, including estimated requirements of the following: Food rations for mass and supplementary feeding; supplements such as Vitamin A, iron, zinc, multiple micronutrients; assessment tools and equipment
     b. Target groups
     c. Logistics management (e.g. sources, delivery networks and warehousing)
     d. Service providers (volunteers, health staff, private practitioners, referral units)
     e. Funding requirements and sources
     f. Capacity building on nutrition management, nutritional assessment, and monitoring and evaluation schemes

3. Capacity Building
   ▶ Training on nutrition management to cover the members of the nutrition cluster, service providers, volunteer workers, designated personnel for special assignments (warehouse, desk officers, etc.), and other personnel involved in nutrition management in emergencies and disasters.
   ▶ Orientation on nutrition management in disaster among local officials and disaster brigade members
Community assemblies to orient community members on nutrition preparedness in disaster

Conduct nutrition preparedness in disaster drills (table top drills)

4. Organizational Support
   - LGUs to adopt or pass local ordinances to support compliance to national laws and policies related to nutrition management
   - Mobilize existing calamity fund and lobby for increased allocation of budget for nutrition activities
   - Designate infrastructures and equipment which can serve as centers for nutrition management.

5. Social Mobilization
   - Establish rapport with potential allies (e.g. donors, NGOs including civic organizations, church groups, private companies) and seek commitments for assistance.
   - Establish regular communication with stakeholders to sustain partnership.
   - Capacitate community in planning, response rehabilitation, monitoring, evaluation and provision of long-term interventions for sustainability.

6. Advocacy
   - Identify appropriate nutrition interventions based on implications for immediate nutritional needs.
Promote resource generation and social mobilization.
Utilize a central database of relevant nutrition and related information for dissemination.

7. Logistics Management
- Ensure availability of essential supplements, supplies, tools, equipment (weighing scale, mictoise or infantometer or MUAC for the rapid assessment), and materials for nutrient management during the pre-emergency period.
- Make special arrangements with selected donors and suppliers to have a credit set-up during disaster and emergency for immediate purchases.
- Preposition items for supplementary feeding before the disaster season.
- Prepare a monthly inventory report or database of supplies and materials including expiry dates which shall be circulated to all concerned offices.
- Ensure that identified evacuation centers or transit centers have provisions for feeding centers and breastfeeding areas.

8. Surveillance, Monitoring and Evaluation
- Pre-emergency stage or “normal” times:
  - LGUs conduct Operation Timbang (OPT) with results organized into a database that can be used for planning and program monitoring and evaluation.
Growth charts used in recording the results of regular weighing.

Information on the prevalence of underweight preschool children with respective rankings for each barangay ready at the municipal level.

Early stage of the emergency:
- Conduct nutritional assessment to identify and locate preschool children with weights below the standard weight-for-height indicative of wasting (watch out for presence of bilateral edema).
- If measuring weight and height not possible, the mid-upper arm circumference (MUAC) could be used as index for screening preschool children.
- Weighing and height measurement of preschool children done monthly until “full normalcy” achieved, by which time the OPT system can be used for nutritional assessment.

Nutritional assessment should be complemented with:
- Profiling of the population affected in terms of no. of pregnant women, no. of infants not exclusively breastfed, no. of infants 6 months and older who are not receiving complementary foods, and extent of practice of proper complementary feeding
- Determining the presence of other risk factors
(e.g., child-headed households, orphan-hosting households (substitute households), elderly-headed households (caring for grandchildren), households caring for chronically sick members, high prevalence of HIV further exacerbated by the foregoing risk situations)

- Assessment of food security status
- Extent of diarrhea and acute respiratory tract infection among preschool children
- Child mortality

- Monitor the extent of implementation of interventions at all stages of an emergency to determine needed adjustments in targeting, intervention design and implementation, and resource allocation.

9. Service Delivery

- Early Phase
  - Mitigate hunger
  - Re-establish body reserves for micronutrients
  - Provide comfort and improve morale
  - Help counteract shock

- Intermediate and Extended Phase
  - Maintain/Improve the nutritional status of the malnourished
  - Prevent deterioration in the nutritional status of
the affected population

- Priority groups
  - Pregnant women
  - Lactating women
  - Infants
  - Children below 6 years old
  - Young children, 1-2 years old
  - Children with low weight-for-height or MUAC
  - Older persons
  - Sick and injured
  - Rescue workers
  - Cases of HIV-AIDS

10. Psychosocial Care
- Supporting play-sessions for mother and child, and ensuring that a play area with toys is available to parents and staff to interact with malnourished children.
- Offering breastfeeding corners for pregnant and breastfeeding women to provide mothers with a space to share experiences receive advice and reinforce self-esteem in the evacuation areas.
- Facilitating discussions between the families and the staff when a severely malnourished child has to be treated in an inpatient facility to clarify who will take care of the rest of the family and the household in the absence of the mother.
Nutritional Assessment and Surveillance

Nutritional Assessment and Measuring Targets

- Family Member breakdown for an estimated number of targets per 1,000 population (barangay with 200 households):
  - 35 Pregnant Women
  - 30 Lactating Women
  - 14 Infants
  - 140 Preschoolers
  - 140 School Children
  - 209 Women of Childbearing age
  - 200 Fathers
  - 37 Elderly

- Existing knowledge on demography, mortality and morbidity, previous nutritional status, the socioeconomic situation, administrative structure, communications, etc. should be collected before embarking on a rapid assessment of nutritional status.
  - Displaced population are commonly hungry and eventually becomes malnourished.
  - Many suffer from one or more of multiple forms of malnutrition, anemia, vitamin A deficiency, iodine deficiency disorder.
  - Scurvy, pellagra, and beriberi may also be seen when
populations are dependent entirely on food aid.

- The most widely accepted practice is to assess malnutrition levels in children aged 6-59 months as a proxy for the population as a whole. Reports should always describe the probable causes of malnutrition, and nutritional edema should be reported separately.

Two-stage cluster sampling is normally used: 30 clusters are selected, then 30 children within each cluster.

### Classification of Acute Malnutrition

<table>
<thead>
<tr>
<th></th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edema of both feet</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Weight-for-Height*</td>
<td>80-90% (-1 to -2 SD)</td>
<td>70-79% (&lt;-2 to -3 SD)</td>
<td>&lt;70% (&lt;-3 SD)</td>
</tr>
<tr>
<td>MUAC</td>
<td>(-1 to -2 SD)</td>
<td>12.0 to 12.5 cm</td>
<td>&lt;12 cm</td>
</tr>
<tr>
<td>Body Mass Index</td>
<td>17 to &lt; 18.5</td>
<td>16 to &lt;17</td>
<td>&lt;16</td>
</tr>
</tbody>
</table>

* see page 205 for length-for-weight/height-for-weight reference values
** see page 213 for decision framework for implementing feeding programs.
Energy Requirements

For initial planning purposes:

- Average daily energy requirement: 2,100 kcal/person/day
- When the data are available, the planning figure should be adjusted according to:
  - Physical activity level: add 140 kcal for moderate activity, 350 kcal for heavy activity (e.g., during construction or land preparation works)
  - Age/sex distribution when adult males make up more than 50% of the population is exclusively women and children, requirements are reduced.
- Special needs of pregnant women
  - Need an additional 300 kcal/day
  - If malnourished, need another 500 kcal/day
  - Should receive iron and folate supplements
- Special needs of lactating women
  - Need an additional 500 kcal/day
  - If malnourished, need another 500 kcal/day
  - Should receive sufficient fluids, taking into account activity
- Other nutritional requirements:
  - Protein: 10 to 12% of diet (i.e. 52 to 64 g)
  - Fat/oil: = 17% of diet (i.e. 50 g)
  - Micronutrients: a range of micronutrients (vitamins and
minerals) are required for survival and good health.

**Nutrition Activities and Key Services During Disaster**

1. Breastfeeding program
   - Protection and reinforcement of breastfeeding in the general population (including HIV-positive females)
   - Infants less than 6 months old are exclusively breastfed, and older children up to 2 years old continue to be breastfed while complementary food is given starting at 6 months

   **Breastfeeding**

   ✓ **Up to 6 months of age**: Encourage mothers to exclusively breastfeed as often as the child wants, day and night, at least 8 times in 24 hours. Do not give any other fluid or food.

   ✓ **6 months to 12 months**: Breastfeed as often as the child wants. In addition, given adequate servings of locally available complementary foods at least 3 times a day.

   ✓ **12 months to 2 years**: Breastfeed as often as the child wants. Give adequate serving of locally available complementary food at least 5 times a day.

   ✓ **2 years and older**: Give three meals of family food per day. Also, give nutritious snacks, twice daily.

   - Provision of “safe havens” or designated special area in evacuation centers for pregnant and lactating women, as well as counseling services for relactation
Discourage use of infant-feeding bottles and artificial teats during emergencies and disasters

In the very extreme and unlikely case of breastfeeding not being possible, breast milk substitutes may be used provided that it is given using properly sterilized cups/spoons and with safe drinking water.

E.O. 51 Philippine Code of Marketing of Breastmilk Substitutes (or Milk Code) and R.A. 7600 Rooming-in and Breastfeeding Act, emphasizes the safe and adequate nutrition of infants by protecting and promoting breastfeeding and also calling for the intensification of the dissemination of information on breastfeeding and proper nutrition.

2. Complementary feeding

- Complementary foods should be nutritionally adequate, safe/hygienically prepared, easy-to-eat and digest, given to the infant in a caring manner, and introduced at 6th month of life onwards.

- Preparation and giving of complementary foods should be the responsibility of the family even in evacuation centers or camps. However, caregivers should have a secure and uninterrupted access to appropriate ingredients with which to prepare and feed nutrient-dense complementary foods.

- When available, food aid in the form of blended foods, especially if fortified with essential nutrients may be used provided the child’s caregiver is informed on its proper use.
3. Food rations/Mass feeding
   - Meals to be given are easy to prepare, practical, can satisfy hunger and nutritious that commonly include boiled rice, cooked sardines, boiled root crops or one-dish meals (sinigang, nilaga, munggo).
   - To the extent possible, food provided either in cooked or dry-ration form should contain 100 percent of the RENI for calories and protein, and at least 80 percent of vitamins A, B1, B2, niacin, iron, and calcium.
   - For HIV or HIV-AIDS cases, calorie allowance increased by 10% for asymptomatic and 20-30% for symptomatic HIV-infected adults; and 50-100% for children with acute weight loss and infection
   - Smaller (2 week) rations particularly for child- and elderly-headed households, if feasible.

4. Vitamin A supplementation
   - High-dose vitamin A supplements should be given to all victims of disasters or emergencies.
   - If the supply is limited, the following target groups will be prioritized:
     - 6-11 months old infants (1 capsule of 100,000 IU, 1 dose only)
     - 12-71 months preschoolers (1 capsule of 200,000 IU, 1 capsule every 6 months)
     - High-risk cases with severe pneumonia, persistent diarrheas, under nutrition and measles (1 capsule of 100,000 IU for infants and 1
capsule 200,000 IU for young children regardless of when the last dose was given)
  - Lactating mothers (1 capsule of 200,000 IU)

5. Iron or multi-vitamin supplementation
   - For pregnant mothers, iron-folate or multi-vitamin supplements (composed of vitamins A, D, E, C, thiamine, riboflavin, niacin, B12, B6, folic acid and minerals iron, zinc, copper, selenium and iodine) should be given.

6. Supplementary feeding
   - Targeted supplementary feeding for 10-14% wasting prevalence
   - Blanket approach if >14% wasting prevalence
   - May be given in dry or wet (cooked food eaten in a centralized location) form

7. Therapeutic treatment
   - Consists of feeding with a high-energy liquid diet such as milk, soup, juice, and nutritious drinks at 3-hour intervals daily for 3 to 5 weeks
   - Therapeutic treatment for all preschool children who show wasting, with or without bilateral edema
   - Moderate acute malnutrition but have no medical complication: Supplementary feeding program (dry take-home rations and standard medicines)
   - Severe acute malnutrition (SAM) with no medical
complications: Outpatient care sites
- SAM with medical complications or infants with SAM: Inpatient care (until well enough to continue being treated in outpatient care)

Meal Considerations for Disaster Periods

- For early emergency period, characterized by stress and anxiety, serve a stimulating warm drink and light snacks. Avoid very hot or iced beverages. Milk is best for infants and children. Coffee or fruit juice for adults. Easy to serve snacks which are high in carbohydrates are preferred.
- For the intermediate period, when cooking facilities are available, a full meal may be served, usually a nourishing one-dish hot meal which is easy to prepare, transport and serve, otherwise, meals from packaged, or canned foods may be planned, or fresh fruits which do not require heating.
- For extended operations, when cooking facilities are already set-up, one-dish meals with fruit and rice/bread may be served. Two or 3 meals a day may be served.

Post-Disaster Nutrition Activities

Rehabilitation

- Provision of food for work activities
- Supplemental feeding to vulnerable individuals
- Complementary feeding for 4-6 month-old infants
**Ideal Foods for Disaster**

- Carbohydrate sources: rice, root crops, bread, noodles
- Protein sources: eggs, canned meat and fish, fresh meat and fish, dried meat and fish, milk
- Fat sources: cooking oil, margarine
- Vitamin and mineral sources: fruits and vegetables
- Others: coffee and other beverages

- Provision of seedlings for crop production

**Monitoring and Evaluation**

- Monitor nutritional status and access to food.
- How efficient were the food service operations done?
- Were the feeding operations successful?
- Was food and nutrition management during disaster successful?

For further details, please refer to:

Water Supply, Sanitation and Hygiene (Wash)

Hygiene Promotion

A. General Assessment
   1. How many people are affected and where are they? Disaggregate the data as far as possible by sex, age, disability, etc.
   2. What are people’s likely movements? What are the security factors for the people affected and for potential relief responses?
   3. What are the current water- and sanitation-related diseases? What are the extent and expected evolution of problems?
   4. Who are the vulnerable people in the population and why?
   5. Who are the key people to consult or contact?
   6. Are there existing community organization/structure such as WASH Cluster, Barangay Health Workers (BHWs), Barangay Water and Sanitation Association (BAWASAs, etc.)?
   7. Are there any hygiene promotion activities?
   8. Is there equal access for all to existing hygiene supplies and facilities (e.g. handwashing facilities with soap and water, bathing facilities, covered water container, hygiene supplies, etc.) for maintaining hygiene?
9. Are the users involved in the management and maintenance of hygiene and sanitation facilities?
10. What special security risks exist for women and girls?
11. What water and sanitation practices were the population accustomed to before the emergency?
12. What are the accepted beliefs and practices related to hygiene and sanitation among affected population?

B. Program Design and Implementation

- An assessment is needed to identify the key hygiene behaviors to be addressed and the likely success of promotional activity. Key risks of public health focusing on WASH must be identified so that messages are relevant and practical.
- Programs shall include an effective mechanism for participatory input from all users, other organizations/clusters during the initial design of facilities.
- All groups within the population shall have equitable access to the resources of facilities needed to continue or achieve the hygiene practices being promoted. In evacuation centers, there should be at least one (1) hygiene promoter/community mobilizer per 1,000 population.
- Hygiene promotion messages and activities shall address key behaviors and misconceptions and are targeted for all user groups. Representatives from these groups must participate in planning, training, implementation, monitoring and evaluation.
Users must take responsibility for the management and maintenance of facilities and different groups must contribute equally.

Water Supply

A. Water Supply Assessment
1. What is the current water source and who are the present users?
2. How much water is available per person per day?
3. Is the water available at the source sufficient for short-term and longer-term needs for all groups in the population?
4. Are water collection points close enough to where people live? Are they safe?
5. Is the current water supply reliable? How long will it last?
6. Do people have enough water containers of the appropriate size and type?
7. Is the water source contaminated or at risk of contamination (microbiological, chemical, and radiological)?
8. Is treatment necessary? Is treatment possible? What treatment is necessary?
9. Is disinfection necessary, even if the supply is not contaminated?
10. Are the alternative sources nearby?
11. Is it possible to take water if water sources are adequate? What is the capacity of water tank?
12. What is the daily/weekly frequency of the water supply distribution?
13. What traditional beliefs and practices relate to the collection, storage, and use of water?
14. Are there any obstacles to using available supplies?
15. Is it possible to move the population if water sources are inadequate?
16. What are the key hygiene issues related to water supply?
17. Do people have the means to use water hygienically?

### B. Water Supply Standard

1. Access and Water Quantity
   - Average water use for drinking, cooking and personal hygiene in a camp/evacuation center is at least 15 liters per person per day for the first one week

<table>
<thead>
<tr>
<th>Use</th>
<th>Minimum demand (liters/person/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survival needs: water intake (drinking and food)</td>
<td>3 liters</td>
</tr>
<tr>
<td>Basic hygiene practices</td>
<td>6 liters</td>
</tr>
<tr>
<td>Basic cooking needs</td>
<td>6 liters</td>
</tr>
<tr>
<td>TOTAL</td>
<td>15 liters</td>
</tr>
</tbody>
</table>

*The Sphere, Humanitarian Charter and Minimum Standards in Disaster Response.*
• The quantities of water needed may vary according to the climate, the sanitation facilities available, people practices, the food they cook, among others.
• Water use/demand increases due to prolonged encampment period

<table>
<thead>
<tr>
<th>Minimum Water Demand/per day (Prolonged Period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use</td>
</tr>
<tr>
<td>Drinking</td>
</tr>
<tr>
<td>Food preparation and cooking</td>
</tr>
<tr>
<td>Bathing</td>
</tr>
<tr>
<td>Laundry</td>
</tr>
<tr>
<td>Sanitation and hygiene</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Planning Guidelines for Minimum Water Quantities for Institutions and Other Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutions/Other Uses</td>
</tr>
<tr>
<td>Minimum demand (liters/day)</td>
</tr>
<tr>
<td>Health centers and hospitals</td>
</tr>
<tr>
<td>5 liters/out-patient</td>
</tr>
<tr>
<td>40-60 liters/in-patient</td>
</tr>
<tr>
<td>(Additional for laundry equipment, flushing toilets, etc.)</td>
</tr>
<tr>
<td>Cholera centers</td>
</tr>
<tr>
<td>60 liters/patient</td>
</tr>
<tr>
<td>15 liter/carer</td>
</tr>
</tbody>
</table>
### Planning Guidelines for Minimum Water Quantities for Institutions and Other Uses

<table>
<thead>
<tr>
<th>Institutions/Other Uses</th>
<th>Minimum demand (liters/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapeutic feeding centers</td>
<td>30 liter/in-patient 15 liter/carer</td>
</tr>
<tr>
<td>Schools</td>
<td>3 liters/pupil for drinking and hand washing (use for toilets not included)</td>
</tr>
<tr>
<td>Mosques</td>
<td>2-5 liter/person for washing and drinking</td>
</tr>
<tr>
<td>Public toilets</td>
<td>1-2 liters/user for hand washing 2-8 liters/cubicle for toilet cleaning</td>
</tr>
<tr>
<td>All flushing toilets</td>
<td>20-40 liter/user for conventional flushing toilets connected to a sewer 3-5 liters/user for pour-flush toilets</td>
</tr>
<tr>
<td>Anal washing</td>
<td>1-2 liters/person</td>
</tr>
<tr>
<td>Livestock</td>
<td>20-30 liters/large or medium animal 5 liters/small animal</td>
</tr>
</tbody>
</table>


- The maximum distance from the users to the nearest water point is 500 meters
- Queuing time at a water source is no more than 15 minutes
- It should take no more than three minutes to fill a 20-liter container
- The number of people per source depends on the yield and availability of water at each source.
Pocket EMERGENCY Tool

<table>
<thead>
<tr>
<th>Maximum Number of People Per Water Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>250 people per tap</td>
</tr>
<tr>
<td>Based on a flow of 7.5 liters/min</td>
</tr>
<tr>
<td>500 people per handpump</td>
</tr>
<tr>
<td>Based on a flow of 16.6 liters/min</td>
</tr>
<tr>
<td>500 people per single use open well</td>
</tr>
<tr>
<td>Based on a flow of 12.5 liters/min</td>
</tr>
</tbody>
</table>

Maximum Number of People Per Water Source, Sphere, 2004.

- Until minimum indicators are met, the priority should be equitable access to an adequate quantity of water even if of intermediate quality.

2. Water Quality

a. Microbiological
   - A sanitary survey should indicate a low risk of fecal contamination.
   - Sampling and testing for presence-absence of E.coli/ fecal coliform should be done before delivery of emergency supplies of drinking water to users
   - There should be no fecal coliform per 100 ml at the point of delivery.

b. Physical and Chemical
   - Where hydrological records or knowledge of industrial or military activities suggest that water
supplies may contain chemical health risks, those risks should be assessed by carrying out chemical water analysis.

### Standard Values for Physical and Chemical Constituents with Health Significance

<table>
<thead>
<tr>
<th>Constituents</th>
<th>Maximum Level (mg/liter) or Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron</td>
<td>1.0</td>
</tr>
<tr>
<td>Color</td>
<td>10 color units (Apparent); 5 color units (true)</td>
</tr>
<tr>
<td>Turbidity</td>
<td>5 NTU</td>
</tr>
<tr>
<td>pH</td>
<td>6.5 – 8.5; 5 – 7 for water that undergone reverse osmosis</td>
</tr>
<tr>
<td>TDS</td>
<td>500; &lt; 10 for water that undergone reverse osmosis</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.05</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.003</td>
</tr>
<tr>
<td>Lead</td>
<td>0.01</td>
</tr>
<tr>
<td>Nitrate</td>
<td>50.00</td>
</tr>
<tr>
<td>Benzene</td>
<td>0.01</td>
</tr>
<tr>
<td>Chloride</td>
<td>250.00</td>
</tr>
<tr>
<td>Manganese</td>
<td>0.400</td>
</tr>
<tr>
<td>Sulfate</td>
<td>250.00</td>
</tr>
</tbody>
</table>

c. **Post-delivery Contamination**
   - Steps should be taken to minimize post-delivery contamination such as improved collection, proper storage practices, and distribution using clean and appropriate containers.

d. **Water Treatment/Disinfection**
   - Water should be treated when found contaminated or positive for E. coli/ fecal coliform. Water is treated with a disinfectant so that there is a chlorine residual at the tap of at least 0.3 mg per liter and turbidity is below 5 NTU.

**Water Treatment Options for Household Drinking Water:**

- Use of water disinfectant (tablet form), Sodium dichloro-isocyanurate a) 3.5 mg tablet (free available chlorine 2mg) for one (1) liter water, or b) 67 mg tablet (free available chlorine 40mg) for twenty (20) liters water
- Use of water disinfectant (liquid form), 3.5ml of 1.25% Sodium Hypochlorite Solution for every twenty (20) liters water
- Use water disinfectant (granular form), Calcium hypochlorite 65-70% available chlorine to be prepared as ‘Stock solution’. Stock Solution must be prepared by mixing one (1) teaspoon or five
(5) grams of Calcium hypochlorite in a one liter water. (NOTE: The solution must be keep out of direct sunlight and is effective for one week). Mix two (2) teaspoon ‘Stock Solution’ for twenty (20) liters water and let it stand for at least 30 minutes before using.

Disinfection of Level 1 Water Supply Facility (e.g. Deep Well)

- The following tables give the amount of Calcium Hypochlorite in preparing chlorine solution. Allow the chlorine solution to remain in the well for 12 hours, then draw out water until the water is free from chlorine odor.
### Depth of Water Column (Meters) and Using Calcium Hypochlorite (70% available chlorine) for 100 ppm Dosage

<table>
<thead>
<tr>
<th>Well Diameter</th>
<th>2” (50mm)</th>
<th>3” (75mm)</th>
<th>4” (100mm)</th>
<th>6” (150mm)</th>
<th>8” (200mm)</th>
<th>10” (250mm)</th>
<th>12” (300mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>¼ tsp</td>
<td>¼ tsp</td>
<td>½ tsp</td>
<td>¾ tsp</td>
<td>1 ½ tsp</td>
<td>2 tsp</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>¼ tsp</td>
<td>¼ tsp</td>
<td>½ tsp</td>
<td>1 tsp</td>
<td>1 ¾ tsp</td>
<td>2 ¼ tsp</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>¼ tsp</td>
<td>½ tsp</td>
<td>½ tsp</td>
<td>1 ½ tsp</td>
<td>2 ½ tsp</td>
<td>4 ½ tsp</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>¼ tsp</td>
<td>½ tsp</td>
<td>¾ tsp</td>
<td>2 tsp</td>
<td>3 ½ tsp</td>
<td>5 ½ tsp</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>¼ tsp</td>
<td>½ tsp</td>
<td>1 ¼ tsp</td>
<td>2 ½ tsp</td>
<td>4 ½ tsp</td>
<td>7 tsp</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>½ tsp</td>
<td>¾ tsp</td>
<td>1 ½ tsp</td>
<td>3 tsp</td>
<td>5 ½ tsp</td>
<td>8 ½ tsp</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>½ tsp</td>
<td>¾ tsp</td>
<td>1 ½ tsp</td>
<td>3 ½ tsp</td>
<td>6 ¼ tsp</td>
<td>9 ¾ tsp</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>½ tsp</td>
<td>1 tsp</td>
<td>1 ¾ tsp</td>
<td>4 tsp</td>
<td>7 ¼ tsp</td>
<td>5 ½ tsp</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>½ tsp</td>
<td>1 ¼ tsp</td>
<td>2 tsp</td>
<td>4 ½ tsp</td>
<td>8 tsp</td>
<td>6 ¼ tsp</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>½ tsp</td>
<td>1 ¼ tsp</td>
<td>2 ¼ tsp</td>
<td>5 tsp</td>
<td>9 tsp</td>
<td>7 tsp</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>1 ¼ tsp</td>
<td>1 ½ tsp</td>
<td>4 ½ tsp</td>
<td>5 tbsp</td>
<td>9 tbsp</td>
<td>14 tbsp</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>1 ½ tsp</td>
<td>3 ¾ tsp</td>
<td>6 ¾ tsp</td>
<td>7 ½ tsp</td>
<td>13 ½ tsp</td>
<td>21 tbsp</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>1 ¼ tsp</td>
<td>5 tsp</td>
<td>9 tsp</td>
<td>10 tbsp</td>
<td>18 tbsp</td>
<td>28 tbsp</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>2 ¼ tsp</td>
<td>6 ½ tsp</td>
<td>5 ½ tsp</td>
<td>12 ½ tsp</td>
<td>22 ½ tsp</td>
<td>35 tbsp</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>3 ½ tsp</td>
<td>7 ½ tsp</td>
<td>6 ¾ tsp</td>
<td>15 tbsp</td>
<td>27 tbsp</td>
<td>42 tbsp</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>4 tsp</td>
<td>8 ¾ tsp</td>
<td>8 tsp</td>
<td>17 ¾ tbsp</td>
<td>31 ½ tbsp</td>
<td>49 tbsp</td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>4 ½ tsp</td>
<td>5 tsp</td>
<td>9 tsp</td>
<td>20 ¼ tbsp</td>
<td>36 tbsp</td>
<td>56 tbsp</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>5 tsp</td>
<td>5 ¾ tsp</td>
<td>10 tsp</td>
<td>22 ¾ tbsp</td>
<td>40 ½ tbsp</td>
<td>63 tbsp</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>5 ½ tsp</td>
<td>6 ¼ tsp</td>
<td>11 ¼ tsp</td>
<td>25 ¼ tbsp</td>
<td>45 tbsp</td>
<td>70 tbsp</td>
<td></td>
</tr>
</tbody>
</table>

Implementing Rules and Regulations of Chapter II-Water Supply of the Code on Sanitation of the Philippines
3. Water Use Facilities and Goods
   - Each family has at least two clean water containers (with narrow necks and covers) of 10-20 liters capacity for collecting clean water, plus enough clean water storage.
   - For communal water storage tank: 10 liters per person per day. Volume of tank good for two days demand, half full in the evening; with residual chlorine of 0.7 ppm.
   - There is at least 250 gram of soap available for personal hygiene per person per month.
   - Sufficient bathing cubicles must be available, with separate cubicles for males and females, and they are used appropriately and equitably.
   - Private laundry areas must be available taking into consideration the needs for women to wash and dry undergarments and sanitary cloths, and have at least one washing basin per 100 people.
   - Participation of all vulnerable groups and concerned clusters is actively encouraged in the siting and construction of bathing facilities, production and distribution of soaps, and promotion of suitable alternatives.
Excreta Disposal

A. Excreta Disposal Assessment
1. What is the current defecation practice? If it is open defecation, is there a designated area? Is the area secure?
2. What are current beliefs and practices, including gender-specific practices concerning excreta disposal?
3. Are there any existing facilities? If so, are they used, are they sufficient and are they operating successfully? Can they be extended or adapted?
4. Is the current defecation practice a threat to water supplies (surface of ground water) or living areas?
5. Do people wash their hands after defecation and before food preparation and eating? Are soap or other cleansing materials available?
6. Are people familiar with the construction and use of facilities?
7. What local materials are available for constructing toilets?
8. Are people prepared to use pit latrines, defecation fields, trenches, etc?
9. Is there sufficient space for defecation fields, pit latrines, toilets, etc?
10. What is the slope of the terrain?
11. What is the level of the groundwater table?
12. Are soil conditions suitable for on-site excreta disposal?
13. Do current excreta disposal arrangements encourage
vectors?
14. Are there materials or water available for anal cleansing? How do people normally dispose of these materials?
15. How do women manage issue related to menstruation? Are there appropriate materials or facilities available for this?

B. Accessibility and Number of Toilets
- Separate toilets for women and men must be available
- Toilets must be cleaned and properly maintained in such a way that they are being used by all intended users.
- Toilets are no more than 50 meters from dwellings.
- Toilets are used in the most hygienic way and children’s feces are disposed of immediately and hygienically.

<table>
<thead>
<tr>
<th>Planning Guidelines for Minimum Numbers of Toilets in Disaster Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Toilet</strong></td>
</tr>
<tr>
<td>Communal Trench Latrine (2.4 x 0.3 x 0.6 meter)</td>
</tr>
<tr>
<td>Pour-Flush Water-Sealed Toilet</td>
</tr>
<tr>
<td>Ventilated Improved Pit (VIP) latrine</td>
</tr>
<tr>
<td>Other type of Sanitary Toilet</td>
</tr>
</tbody>
</table>
C. Design, Construction and Use of Toilets

- Users (especially women) have been consulted relative to the design of the toilet. Coordination with concerned cluster must be done prior to construction of toilet facilities in the camps/evacuation centers.
- Toilets are designed in such a way that can be used by all sections of the population, including children, older people, pregnant women, and physically and mentally disabled people.
- Toilets are sited in such a way as to minimize threats to users, especially women and girls, throughout the day and night.
- Toilets provide a degree of privacy in line with the norms of the users.
- Toilets allow for the disposal of women’s sanitary protection, or provide women with the necessary privacy for washing and drying sanitary protection cloths.
- All toilets constructed that use water for flushing and hygienic seal have an adequate and regular supply of water.
- Toilets, septic tanks and soakaways (for most soils) shall be located not less than 25 meters from any groundwater source and bottom of any pit/septic tank is at least 1.5 meters above the water table. Drainage or spillage from defecation systems must not run towards any surface water source or shallow groundwater source.
People wash their hands after defecation, hence toilet must be provided with soap and water

People are provided with tools and materials for constructing, maintaining and cleaning their own toilets if appropriate.

Vector Control

A. Vector-borne Disease Assessment

1. What are the vector-borne disease risks and how serious are these risks?
2. What are the existing traditional beliefs and practices related to vectors and vector-borne disease?
3. If vector-borne disease risks are high, do people at risk have access to individual protection?
4. Is it possible to make changes to the local environment (by drainage, excreta disposal, refuse disposal, etc.) to discourage vector breeding?
5. Is it necessary to control vectors by chemical means? What programs, regulations and resources exist for vector control and the use of chemicals?
6. What information and safety precautions need to be provided to the households?
Estimation of Vector Population

Mosquitoes

1. Select several shelters in the camp
2. In the shelter, close all openings, windows, holes, etc.
3. Spread a white sheet on the floor of the rooms.
4. Spray insecticide and wait 20 minutes until mosquitoes are killed
5. Count number of killed mosquitoes and record
   - # killed adult mosquitoes/ # inspected shelter = average mosquito density per shelter
   - # killed adult mosquitoes/ # persons occupying each shelter = average # of mosquitoes per person
   - # mosquitoes found with blood in the abdomen (red or black)/ # persons living in the shelter = average number of bites per person

Flies

Count the average number of flies that land on a grill where flies congregate during three 30-second periods.

B. Individual and Family Protection
   - All populations at risk from vector-borne disease must understand the modes of transmission and possible methods of prevention, and are protected as well by appropriate vector control measures.
   - People must avoid exposure to mosquitoes during peak biting times by using all non-harmful means available to them (insecticide-treated tents, curtains, bednets, etc.). Special attention is paid to the protection of high-risk groups such as pregnant and feeding mothers, babies, infants, older people and the sick.
   - People must use treated mosquito nets effectively when necessary.
   - Food must be protected at all times from contamination by vectors such as flies, insects and rodents.

C. Physical, Environmental and Chemical Protection Measures
   - Affected populations must be settled in locations that minimize exposure to mosquitoes (e.g., camps located 1-2 km upwind from large breeding sites)
   - Intensive fly control must be carried out in high-density settlements when there is a risk or presence of a diarrhea epidemic
   - Environmental control measures must be instituted to minimize the impact on the population density of
some vectors as follows:

a. Proper disposal of human and animal excreta
b. Proper disposal of refuse/garbage to control flies and rodents
c. Proper drainage to control breeding place of mosquitoes
d. Cover water storage container and latrines to prevent them of becoming mosquito-breeding places

Chemical control measures will be instituted only when environmental control measures failed and these must be done under the supervision of a Sanitary Engineer.

D. Chemical Control Safety

- Personnel must be protected by provision of training, protective clothing, use of bathing facilities, supervision and restriction on the number of hours spent handling chemicals.
- Choice, quality, transport and storage of chemicals used for vector control, application equipment and disposal of substances follow international norms, and can be accounted for at all times.
- Communities are informed about potential risks of substances used in chemical vector control and about schedule for application. They are protected during and after the application of chemicals or pesticides.
Solid Waste Management

A. Solid Waste Disposal Assessment
1. Is solid waste a problem?
2. How do people dispose of their waste? What type and quantity of solid waste is produced?
3. Can solid waste be disposed of on-site, or does it need to be collected and disposed of off-site?
4. What is the normal practice of solid waste collection and final disposal for the affected population? (compose/refuse pits? collection system? bins?)
5. Are there health care facilities and activities producing health care waste? How is this being disposed of? Who is responsible?

B. Segregation, Collection and Disposal
1. Segregation and Collection
   ▪ People from affected population shall be involved in the solid waste program design and implementation (e.g. organize a Refuse Collection team among evacuees for daily collection of wastes)
   ▪ Provide at least one 100-liter refuse container per 10 families
   ▪ All households must have access to a refuse container and no more than 100 meters from a communal refuse pit
Segregation of health care wastes shall be done. Infectious wastes, pathological wastes and sharps shall be treated prior to final disposal.

2. Disposal
   - Wastes must be disposed of properly from the camp/evacuation center before it becomes a nuisance or a health risk, especially health care wastes.
   - If off-site final disposal is not feasible, on-site disposal of domestic wastes may be allowed using a properly located compost/communal pit (1.2 x 1.2 x 1.8 meters in size for every 500 persons).
   - Treated health care wastes shall be disposed of in a sanitary landfill, safe burial pit within health care premises and septic/concrete vault specifically designed for sharps.
**Safe Burial Pit on Healthcare Facilities**

1. Line the bottom of the pit with clay or low permeable material.
2. The burial site should be managed as landfill, with each layer of waste should be covered with soil.
3. Construct an earth mound around the mouth to prevent water from entering and a fence around to prevent unauthorized entry.
4. The location of the pit should be downhill or down-gradient from any nearby wells or water supply source and about 50 meters away from any body of water or water supply sources.
5. The bottom of the pit should be at least 1.50 meters higher than the ground water level.

Health Care Waste Management Manual, DOH, 2004

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**Diagram:**

- **W=1**
- **H=1.0 m**
- **1% Slope**
- **Security fence**
- **10 cm Soil layer**
- **Liner of low permeability (i.e. clay, hdpe, cement)**
- **Sharp waste**
- **Soil cover**
- **Ground H₂O**

Burial Pit (Volume 1x1x1.8)
Septic/Concrete Vault for Sharps

1. Dig a pit (minimum size of 1m x 1m x 1.8m depth)
2. Construct concrete walls and slabs. Provide slab with opening or manhole for easy deposition of treated sharps and syringes. The manhole should be extended a few centimeters above the soil surface to overcome infiltration of surface water.

Health Care Waste Management Manual, DOH, 2004
Drainage

A. Drainage Assessment
   1. Is there a drainage problem (e.g. flooding of dwellings or toilets, vector breeding sites, polluted water contaminating living areas or water supplies)?
   2. Is the soil prone to water logging?
   3. Do people have the means to protect their dwellings and toilets from local flooding?

B. Drainage Works
   - Areas around dwellings and water points must be kept free of standing wastewater
   - Shelters, paths and WASH facilities must not be flooded or eroded by water
   - Water point drainages from washing/bathing areas and water collection points must be well planned, built and maintained in coordination with concerned cluster.

For further details, please refer to:

- Water Supply, Sanitation and Hygiene Promotion, Sphere, 200
- Health Care Waste Management Manual, DOH, 2004
Mental Health and Psychosocial Support

Domains and Minimum Responses in Emergencies


A. Common Functions

1. Coordination
   - Establish coordination of multisectoral mental health and psychosocial support

* Exemplified in the Philippines by the NDCC and creation of an MHPSS Inter-Agency and multisectoral body co-chaired by DOH and DSWD.

2. Assessment, Monitoring, and Evaluation
   - Conduct assessment of mental health and psychosocial issues
   - Initiate participatory systems for monitoring and evaluation

* Inclusion of MHPSS as a component of the NDCC standard report forms.
3. Protection and Human Rights Standards
   - Apply a human rights framework through mental health and psychosocial support
   - Identify, monitor, prevent and respond to protection threats and failures through social protection
   - Identify, monitor, prevent and respond to protection threats and failures through legal protection

* Integration of protection and human rights standards in the formulation of Philippine MHPSS guidelines, plans and activities.

4. Human Resources
   - Identify and recruit staff and engage volunteers who understood local culture
   - Enforce staff codes of conduct and ethical guidelines
   - Organize orientation and training of aid workers in mental health and psychosocial well-being among staff and volunteers
   - Prevent and manage problems in mental health and psychosocial well-being among staff and volunteers

* Formulation of a Code of Conduct and Ethical Standards on MHPSS
* Development of MHPSS training programs such as psychological first aid, stress management for workers, and development of a
human resource development plan in collaboration with relevant sectors.

B. Core Mental Health and Psychosocial Supports

1. Community Mobilization and Support
   - Facilitate conditions for community mobilization, ownership and control of emergency response in all sectors
   - Facilitate community self-help and social support
   - Facilitate conditions for appropriate communal, spiritual, religious and healing practices
   - Facilitate support for young children (0-8 years) and their care-givers

* Competent workers situated at the command post and other strategic areas to provide MHPSS (e.g. psychological first aid), assist tracing for family reunification, provision of information, welfare, temporary shelters and other forms of possible assistance to the affected population.

2. Health Services
   - Include specific psychological and social considerations in provision of general health care
   - Provide access to care for people with severe mental disorders
   - Protect and care for people with severe mental disorders and other mental and neurological disabilities living in institutions
Learn about and, where appropriate, collaborate with local indigenous and traditional health systems
Minimize harm related to alcohol and other substance abuse

* Local physicians and health staff to provide psychological interventions and mental health treatment, screening procedures, guidelines, treatment protocols, assessment and reporting forms for the care of persons with severe psychological or mental conditions

3. Education
  - Strengthen access to safe and supportive education

* Restore school classes to normalcy or provide equivalent informal education in coordination with Dep Ed, LGUs, and with the parents as soon as possible.

4. Dissemination of Information
  - Provide information to the affected population in the emergency, relief efforts and their legal rights
  - Provide access to information about positive coping methods

* Ensure the presence of a functional information and communications team with technical knowledge on MHPSS at all Disaster Coordinating Council levels; as well as formulate a comprehensive reporting system to include MHPSS.
C. Social Considerations in Sectors

1. Food Security and Nutrition
   - Include specific social and psychological considerations (safe aid for all in dignity, considering cultural practices and household roles) in the provision of food and nutrition support

2. Shelter and Site Planning
   - Include specific social considerations (safe, dignified, culturally and socially appropriate assistance) in shelter planning and site planning, in a coordinated manner

3. Water and Sanitation
   - Include specific social considerations (safe and culturally appropriate access for all in dignity) in the provision of water and sanitation

* Social considerations in sectors are addressed in partnership with relevant agencies, coordination lead by DSWD and DOH, for more productive and appropriate interventions concerning these domain
1. Assess psychosocial and mental health concerns. Schedule consultative meetings with the provincial and municipal health workers in the affected area to:
   - Estimate the psychosocial problems experienced by the people, guided by the classification of people at high risk
   - Estimate available resources for mental health/social services
2. Brief field officers in the areas of health and social welfare regarding issues of fear, grief, disorientation and need for active participation. Mobilize informal human resources in the community (e.g., Red Cross volunteers, religious and political leaders).

3. Conduct mostly social interventions that do not interfere with acute needs such as the organization of food, shelter, clothing, PHC services, and, if applicable, the control of communicable diseases.

As far as possible, manage acute distress without medication. It is also not advisable to organize single session psychological debriefing to the general population as an early intervention after exposure to trauma.

4. Establish contact with PHC.
   - Develop the availability of mental health care for a broad range of problems through general health care and community-based mental health services.
   - Manage urgent psychiatric complaints (i.e., dangerousness of self or others, psychoses, severe depression, mania, epilepsy) within PHC.
   - Endure availability of essential psychotropic medications at the PHC level. Many persons with urgent psychiatric complaints will have pre-existing psychiatric disorders and sudden discontinuation of medication needs to be avoided.
5. Start planning medium- and long-term development of community-based mental health services and social interventions needed during recovery and rehabilitation. This is vital since it is during this phase that survivors will be rebuilding their lives amidst the grief from the loss of loved ones, property, and livelihood.

6. If the acute phase is protracted, start training and supervising PHC workers and community workers (e.g., provision of appropriate psychotropic medication, ‘psychological first aid’, supportive counseling, working with families, suicide prevention, management of medically unexplained somatic complaints, substance use issues and referral).

7. Educate other humanitarian aid workers as well as community leaders (e.g., village heads, teachers, etc.) in core psychological care skills (e.g., ‘psychological first aid’, emotional support, providing information, sympathetic reassurance, recognition of core mental health problems) to raise awareness and community support and to refer persons to PHC when necessary.

8. Carefully educate the public on the difference between psychopathology and normal psychological distress, avoiding suggestions of wide-scale presence of psychopathology and avoiding jargon and idioms that carry stigma.

9. Facilitate creation of community-based self-help support groups. The focus of such self-help groups is typically problem sharing, brainstorming for solutions or more
effective ways of coping (including traditional ways), generation of mutual emotional support and sometimes generation of community level initiatives.

10. Provide support to caregivers who, because of the exhaustion and enormity of the job, may experience “burn-out.”

**Early Social Interventions for Children and Families**

Mental Health in Emergencies: Mental and Social Aspects of Health in Populations Exposed to Extreme Stressors, WHO, 2003

Measures should be taken to ensure that, to the extent possible:

- People have access to an ongoing reliable flow of credible information on:
  - The nature and scale of the emergency
  - Efforts to establish physical safety of the population
  - Relief efforts, including what each government department and aid organization is doing and where they are located

- Normal cultural and religious events are maintained (including grieving rituals by relevant spiritual and religious practitioners); people are able to conduct ceremonious funerals
- Death certificates are available to avoid unnecessary financial and legal consequences for relatives
• Children have access to formal or informal schooling and to normal recreational activities
• Adults and adolescents have access to participate in concrete, purposeful, common interest activities, such as emergency relief and recovery activities
• Isolated persons, such as orphans, widows, widowers, or those without their families, have access to activities that aim for their inclusion in social networks
• When necessary, a family tracing service is established
• Uncomplicated, reassuring, empathic information on normal stress reactions is available to the community at large
• Where people are displaced, shelter is organized to keep members of families and communities together, there is provision for recreational and cultural space, and the people are consulted regarding the location of religious places, schools, water points and sanitation facilities
**Individuals Likely to Develop Severe Psychological Reactions After Disaster**

- Those who were trapped inside fallen buildings, entombed for hours or caught in a near-death situation during the disaster
- Those that lost a limb or suffered any serious physical injury as a result of the disaster
- Those who lost one or more members of the family because of the disaster
- Those who watched a friend, a relative, or a person die as a result of the disaster
- Those who lost their homes, their properties or livelihood because of the disaster
- Those who do not show the usual reactions to disaster
- Those whose reactions are exaggerated or distorted (e.g., excessive fear of rain)
- Those who were forced to flee, leave their homes or transfer to another place as a result of the disaster
- Those whose reactions last for more than 4 to 6 weeks
- Those that had previous psychiatric problems/crisis before the disaster
Guidelines for Delivering Psychological First Aid


1. Politely observe first; don’t intrude. Then ask simple respectful questions to determine how you may help.
2. Often, the best way to make contact is to provide practical assistance (food, water, blankets).
3. Initiate contact only after you have observed the situation and the person or family, and have determined that contact is not likely to be intrusive or disruptive.
4. Be prepared that survivors will either avoid you or flood you with contact.
5. Speak calmly. Be patient, responsive, and sensitive.
6. Speak slowly, in simple concrete terms; don’t use acronym or jargon.
7. If survivors want to talk, be prepared to listen. When you listen, focus on hearing what they want to tell you, and how you can be of help.
8. Acknowledge the positive features of that the survivor has done to keep safe.
9. Give information that is accurate and age-appropriate for your audience.
10. Remember that the goal of psychological first aid is to reduce distress, assist with current needs, and promote adaptive functioning, not to elicit details of traumatic experience and losses.
Psychosocial Concerns for Disaster Workers

**Burnout Syndrome:** A state of exhaustion, irritability, and fatigue which markedly decreases worker’s effectiveness and capability

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<tr>
<th>Burnout Signs and Symptoms</th>
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<tr>
<td>Cognitive</td>
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<td>• Mental confusion</td>
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<td>• Slowness of thought</td>
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<td>• Inability to make judgments and decisions</td>
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<td>• Loss of objectivity in evaluating own functions</td>
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<td>Emotional</td>
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<td>• Depression</td>
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<td>• Hyper-excitability</td>
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<td>• Irritability</td>
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<td>• Excessive rage reactions</td>
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<td>• Anxiety</td>
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<td>• Physical exhaustion</td>
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<td>• Loss of energy</td>
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<td>• Gastro-intestinal distress</td>
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<td>• Excessive fatigue</td>
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<td>• Hyperactivity</td>
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<td>• Inability to express self</td>
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**Management of Burnout**

- Be aware of, be alert for, and recognize the symptoms
- Official temporary relief from work
- Rotation of workers to low/moderate/high stress tasks
- Briefing/debriefing
- Buddy-buddy system
• Limit exposure to high stress assignments
• Counseling and/or referral to psychiatrist

For further details, please refer to:

• Mental Health and Psychosocial Care in Children, World Health Organization, 2005.
Management of the Dead and the Missing Persons

Administrative Order 2007-0018 provides a national policy framework that acts as a guide to an efficient and well coordinated action in the management of the dead and the missing persons (MDM) in emergencies and disasters.

Search and Recovery Operation

- Search and Rescue (SAR) Commander to establish and disseminate unified and standardized tagging system of bodies and body parts recovered
- All dead bodies/body parts retrieved onsite should be placed in cadaver bags (NOTE: place one retrieved body per bag or one retrieved body part per bag, as one body part is considered one dead body) during transport to collection points or storage areas (preferably refrigerated) for identification/examination
- Local Health Office (with support from DOH) to look after health conditions and needs of responders and volunteers
- Protection and safety of responders/volunteers must be observed in entire MDM and should be the primary consideration of sending agencies
- Local chief executive to coordinate all MDM processes
Identification of the Dead Operation

- For disaster victim identification (DVI), the Local Government Unit (LGU) shall request NBI (in cases of natural disasters) or PNP Crime Laboratory (in cases of mass fatality incidents caused by human generated activities)
- NBI or PNP to provide Local Health Officer an official list of identified & unidentified victims
- Local health officer to issue Death Certificate based on the Certificate of Identification issued by NBI or PNP Medico-Legal Officers
- LGU to provide list of missing/dead persons for the NBI and PNP; and list of identified and unidentified dead foreigners for the DFA
- Local Health Office to monitor proper sanitation of collection and storage areas, and maintain sanitary retrieval and disposal of body parts/dead bodies
- Retrieved body parts/corpses waiting for examination should be preserved properly preferably by refrigeration (will resort to temporary burial if not available)
- Chemical preservatives (quicklime, formol, zeolite) and common disinfectants (hypochlorite) may be applied only after DVI
- NBI and PNP may request fingerprints, dental and medical records of the missing/dead in custody of other government agencies (GSIS, SSS, etc.) for the purpose of
identifying dead bodies only

- Interpol Identification System for the Ante Mortem (Dead/Missing Persons Form) and Post Mortem (Dead Bodies Identification Form) may be use for MDM data
- LGU, in coordination with NBI, PNP, DOH, DILG, and other agencies, shall conduct trainings regarding proper handling of the dead/missing
- All concerned agencies to undertake Forensic Research regarding DVI

**Final Arrangement for the Dead**

- For identified remains:
  - Turned over to rightful/legitimate claimants, who will be responsible for the ultimate disposal of identified cadavers
  - No embalming procedures shall be done without permission from the nearest of kin (bereaved)
  - Respective embassies of identified dead foreigners shall be informed and will be responsible for repatriation of their bodies

- For unidentified remains:
  - Turned over to LGU after thorough postmortem examinations
  - Final disposition c/o LGU, with religious and ethnic considerations and consultation with the community
  - Shall be buried in collective or individual graves,
marked with their unique case numbers

- Cremation will not be allowed
- Exhumation shall be done in the presence of local health officials

- Disinterment areas should be decontaminated or disinfected
- Burial of bodies in mass graves or the use of mass cremation/burning shall be avoided in all circumstances
- MDM related to infectious diseases and Biological, Chemical, Radiological, Nuclear, and Explosive Emergencies (BCRNE) shall be done in accordance with existing DOH guidelines

Management of the Missing Persons Operation

- Provincial/City/Municipal Social Welfare Office shall:
  - Establish the Social Welfare Inquiry Desks for data generation and information management of missing persons and their surviving families
  - Manage information regarding the Identification of Retrieved Bodies/Body Parts using the Interpol Identification System
  - Validate and process documents of missing persons for issuance of Certificates of Missing Person Believed to be Dead during Disaster and submit to LCE
- DSWD, DOH and PNRC to assist in medical, psychological, and physiological needs of the families of missing persons
• The NDCC through OCD as per recommendation of the LGU shall issue Certificates of Missing Persons Believed to be Dead during Disaster

Management of the Bereaved Families

• Provincial/City/Municipal Social Welfare Office (P/C/MSWDO) is the lead agency in the over-all management of bereaved families
• DSWD to assist in terms of food, finances, livelihood, clothing, shelter; management of orphans; and food/cash for work
• DSWD, PNRC, and NGOs to assist P/C/MSWDO in the ff:
  ▶ Social needs of the bereaved in terms of family/peer support system; social welfare inquiry desk/info center; educational assistance; legal needs
  ▶ Psychological needs of the bereaved in terms of CISD training, counseling; and other special needs (psychiatric/mental services)
• DOH to assist in medical and psychological needs of the bereaved, and PNRC for provision of a support system from volunteers
Other Concerns in Cases of Mass Fatalities

1. Initial Concerns
   - Type of incident (natural hazards, e.g., flood, landslide, earthquake, epidemics; human-generated, e.g., fire, land/sea/air transport crash, accidental or deliberate use of biochemical/radionuclear agents)
   - Probable condition of remains (e.g. burnt, with severe corneal burns, severe burn injuries, etc.)

- Emphasize that, in general, the presence of exposed corpses poses no threat of epidemics. The corpse has a lower risk for contagion than an infected living person. The key to preventing disease is to improve sanitary conditions and to educate the public.

- If death resulted from trauma or bodies were buried in landslide or mudslide, these are quite unlikely to cause outbreaks of diseases.

- They may, however, transmit gastroenteritis or food poisoning syndrome to survivors if they contaminate stream, wells, or other water sources. Thus, any bodies (or dead animals) lying in water sources should be removed as soon as possible.

- Principal diseases that should be avoided by those responsible for managing corpses in order to prevent possible contagion:
  - Streptococcal infection
  - Gastrointestinal infection (e.g., cholera, salmonellosis)
  - Hepatitis B and C
  - HIV

trauma, decomposed, contaminated)
- Estimated number of fatalities
- Location of incident
- Local authority in-charge
- Budget

2. Personnel
- Tap medico-legal officers from the NBI, PNP and local government doctors.
- Mobilize volunteers like medical and dental students or specialists from the area.
- Ideally a list of the people involved and their contact numbers should have been prepared beforehand.

3. Handling of the Bodies at the Scene
- Before anything else, observe and document the location and position of each body/body part at the scene prior to removal.
- Sketch and photograph for documentation.
- Every effort must be taken to identify the bodies at the site where they are found. Tags should be attached to the bodies that provide the name (if known), approximate age, sex, and location of the body.

4. Evidence and Property
- All items of property that are on the body should remain on it.
Other items associated with a body should be collected as property and tagged with the body.
Location of loose items (e.g., proximity to which body) should be documented prior to collection.

5. Removal and Transport of Remains
- Care must be taken not to lose, contaminate or switch such body, body parts or property to be removed and transported.
- Properly labeled separate bags must be used.
- Be particularly careful of potential loss of teeth if they are loose (e.g., badly burned or crushed remains); put a bag around the head.
- When choosing vehicles to transport dead bodies, it is advisable to use trucks or vans, preferably closed, with floors that are either waterproof or covered with plastic.

6. Temporary Mortuary Facility
- Identify a place that can be converted into a makeshift morgue (e.g., empty warehouse, covered basketball court).
- Basic requirements:
  - Security
  - Adequate lighting, ventilation, water supply
  - Examining tables
  - Instruments for examining the remains and documentation
  - Ideally, should consist of a reception, a viewing
room, a storage chamber for bodies not suitable for viewing and a room to store personal possessions and records.

7. Examination of Remains

- Objectives of the Postmortem examination:
  - Identification of the remains
  - Cause of death determination
  - Manner of death determination
  - Collection of forensic evidence

- Identification through visual identification by the next-of-kin should be limited to bodies that are suitable for viewing (i.e., not decomposed, burnt or mangled) and should be subject to verification by other means.

- Because of limited resources, not all bodies can undergo a full autopsy; priority may be given to certain remains (such as those of transport operators driver, pilot/ship captain and crew).

- A detailed examination of the external body is done; marks such as tattoos, scars, moles and deformities are searched.

- Fingerprints are obtained and dental charting is done.

- Blood and other tissue/fluid samples are collected or possible tests (e.g., histopathology, DNA analysis, toxicology).

- Property collected from each body (e.g., clothes,
jewelry, wallets, IDs) must be described and inventoried.

8. Preservation of the Body
   - Remains are best stored refrigerated (e.g., in rented refrigerated storage trucks) while awaiting examination.
   - After the postmortem examination, embalming can be done.

9. Dealing with Claimants
   - Notify family members of the death or disappearance of victims in a clear, orderly, and individualized manner.
   - Organize a separated area where the next-of-kin can be systematically interviewed for data.
   - Useful antemortem information to get:
     - Name, age, sex, height, build
     - Appearance when last seen
     - Distinguishing features (tattoos, scars, moles, deformities, etc.)
     - Significant medical history
   - Ask the next-of-kin to submit the following:
     - Medical records including x-ray films
     - Dental records
     - Clear photograph with teeth bared
     - Fingerprints on file
Note that personal items that a person believed to be among the victims could have used (e.g., toothbrush, hairbrush, other items), could potentially contain reference fingerprints or DNS samples.

10. Death Certification and Release of Bodies
   - Properly identified victims shall be issued death certificates and the bodies released to the next-of-kin.
   - Maintain a record of how the bodies are disposed of including information regarding the claimant’s names, addresses and contact numbers.
   - Bodies could remain unidentified in case of insufficient antemortem and postmortem data; these remains should be buried separately (not cremated!) and their postmortem records stored for future evaluation.
   - Court proceedings could be initiated according to Philippine laws that would legally declared dead the unidentified and missing victims.

11. Disposal of Dead
   - Respond to the wishes of the family and provide all possible assistance in final disposition of the body.
   - Burial is the preferred method of body disposal in emergency situations unless there are cultural and religious observances that prohibit it.
   - The location of graveyards should be agreed upon by the community and attention should be given
to ground conditions, proximity to groundwater drinking sources (which should be at least 50m) and to the nearest habitat (500m).

- Burial depth should be at least 1.5m above the groundwater table, with at least 1m of soil cover.
- If coffins are not available, corpses should be wrapped in plastic sheets to keep the remains separate from the soil.
- Burials in common graves and mass cremations are rarely warranted and should be avoided.

- Reject unceremonious and mass disposal or unidentified corpses. As a last resort, unidentified bodies should be placed in individual niches or trenches, which is a basic human right of the surviving family members.

12. Physical and Psychological Care of Relief Workers

- Ensure a plan for physical and psychological care of relief workers because handling a large number of corpses can have an enormous impact on the health of the working team.

For further details, please refer to:

Logistics and Supplies Management

Logistics management refers to a system that provides means to acquire and deliver resources (goods, services, manpower)

Right TIME
Right QUANTITY
Right QUALITY
Right PLACE
Right PRICE

In managing logistics during emergency situations, TIME is of the essence

Basic Principles in Logistics Management

- Centrally coordinated logistics operations with standardized procedure
- Supply of goods and services meets specifications, readily available when needed
- Source and delivery operations are simple, economical, equitable and transparent
- Transport and storage must have spare capacity

Key Functions in Logistics Management System

1. Planning, Management, Control
2. Procurement, Receiving
3. Allocation, Distribution, Recovery
4. Monitoring

Logistics Framework

1. Supplies and Equipment
2. Transportation
3. Communication
4. Security and Well-being
5. Coordination

Supplies and Equipment

- **In support to the emergency response operation:** Initial procurement of supplies/ equipment should be completed BEFORE and in anticipation of any emergency response operation. Stockpile composed of:
  - PPE/Antiviral Medicines
  - Medical-laboratory test/specimen kits
  - Disinfectants
  - (Possibly) vaccine and/or medical interventions requiring cold chain management

- **In support to the Rapid Response Team (RRT):** Make inventory of available resources and make sure of availability during emergency response operation:
  - Transportation
  - Communication Equipment
  - Deployment Kit for the Response Team
• Administrative Supplies/Equipment
• Food/Water
• Shelter/accommodations for staff/team

• SOPs that describe all phases of emergency response operations must be distributed (and known) to all partners involved and must be timely updated
  ▶ SOP to facilitate fast Customs Clearance
  ▶ Recovery of unused items/waste management
  ▶ Delegation of Authority
  ▶ Financial matters

• Ensure optimal airport/seaport operation
• Advanced planning and good relationship with all partners (dealers-suppliers) and consider emergency response simulation exercises
• Ensure availability and replenishment of supplies
• Above minimum requirements must be observed at central, regional, provincial and local levels
• Safe, secured and optimal supply chain (warehousing, transport, distribution)
• Ensure good quality of supplies

**Transportation**

• Refers to movement of team, patients, supplies and samples
• Plan in advance for the right kind of transport that may be necessary to transport what kind of cargo and make sure
it stays available all throughout the operation
• Fleet management to include daily maintenance of vehicles and level of spare parts and fuel
• Choose routes according to security situation, road condition, distance, urgency of delivery
• Consider transportations ranging from 4 wheels to vans, trucks, helicopters, planes, boats, motorcycles, bicycles

Communication

• Ensure the right equipment for the right place and situation (equipment ranging from landlines, mobile phones to satellite phones, satellite computer connections, VHF/HF radio equipment, two-way radios, video conferencing)
• Ensure proper installation, use and maintenance of communication equipment
• Training of team members including drivers
• List of contact numbers of other agencies and suppliers
• Communicate with the public

Security and Well-Being

1. Security related to the logistics operation:
   • Ensure secured warehousing and movement of supplies to avoid looting and wastage:
     • Warehouse with competent and reliable staff, security personnel and security alarm system
• Warehouse must be clean, free from pests and leaks
• Transport supplies at day time

2. Security of the Rapid Response Team (RRT)
   ▶ Secured and comfortable work and living space
     ▪ Guarded environment, uncontaminated workplace and staff
     ▪ Sufficient supply of food and drinking water

   ▶ Safe work practices
     ▪ Proper waste management and safe burials
     ▪ Proper distribution and correct use of PPE
     ▪ Correct isolation and disinfecting practices

   ▶ Safe travel of staff
   ▶ Safe personal well-being with respect to local culture, religion, rules and regulations

Donations

• Donation refers to the act of liberality whereby a foreign or local donor disposes gratuitously cash, goods, or articles, including health and medically-related items to address unforeseen, impending, occurring or experienced emergency and disaster situations, in favor of the Government of the Philippines, which accepts them (Administrative Order 2007-0017).
Guidelines on Acceptance

• DOH shall limit its monetary obligations to the payment of logistics for the transfer of donated items to emergency and disaster areas. Custom duties, brokerage fees, handling fees, warehousing fees, and others shall be borne by the Donor.

• Acceptance of donations shall be based on the expressed needs of the beneficiaries and be relevant to the disease pattern and health concerns that are prevailing in the area.

• Infant formula, breast milk substitute, feeding bottles, artificial nipples and teats will not be accepted.

• Foodstuffs should have a shelf life of at least 3 months from the time of arrival in the Philippines.

• Drugs/medicines for donation should comply with the following:
  ▶ Shelf life of at least 12 months from the time of arrival to the Philippines.
  ▶ Labeling with English translation or in a language that is understood by Philippine health professionals
  ▶ Packaging that complies with international shipping regulations accompanied by a detailed packing list
  ▶ Weight per carton does not exceed 50 kilograms
  ▶ Exclusive packaging with regard to other supplies
  ▶ Documentary proof of compliance to internationally accepted standards
  ▶ Documentary proof that the items were obtained
from reliable sources

- Medical equipment for donation should comply with the following:
  - Attached manual of instruction for installation or operation translated in English
  - Accompanied by list of service centers in the Philippines where services/spare parts are available

**Guidelines for Distribution**

- The DOH shall distribute the donated items to emergency and disaster affected areas. The distribution of items for election purposes shall not be allowed nor the repackaging thereof in consideration of elective or appointive government officials.
- The DOH reserves the right to distribute and utilize excesses of donated items that results from:
  - Situations wherein the donation exceeds the requirement in affected areas
  - Delays in the arrival of donated items to the Philippines

<table>
<thead>
<tr>
<th>Tag</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Foodstuff</td>
</tr>
<tr>
<td>Blue</td>
<td>Clothing and household items</td>
</tr>
<tr>
<td>Green</td>
<td>Medical supplies and equipment</td>
</tr>
</tbody>
</table>
Donation Labeling and Marking

- **Labeling**
  - Label of donated drugs should at least contain generic name, dosage forms, strength, quantity in container, and expiry date
  - English should be used on all labels

- **Size and Weight**
  - Goods should be in a 25-50 kg container, manageable by a single person

- **Contents**
  - Relief supplies must be packaged by type-in separate containers
  - Give advance notice to the health coordinator and supply information about the package (e.g., name and contact number of the donor, date, method of transport, details or contents, and other special requirements for handling)

For further details, please refer to:

Risk Communication

Objectives:

- Advocacy and policy development
- Information and education (communities, health personnel and decision-makers) to stimulate behavior change
- Emergency information for action
- Prevent misallocation and wasting of resources
- Decrease illness, injuries and deaths

Principles of Risk Communication

- Accept and involve the public as a legitimate partner
  - Fundamental right to information about risks
  - Share dilemmas
  - Share responsibilities to arrive at better choices

- Listen to the public’s concerns
  - Don’t ridicule the public’s emotions
  - Legitimize people’s fears
  - Tolerate early overreactions but warn against their possible negative consequences
  - Establish your own humanity
  - Speak clearly and with compassion
• Be honest and open. Do not mislead by providing incomplete or false information
  ▶ Don’t over-reassure
  ▶ Err on the alarming side
  ▶ Acknowledge uncertainty

• Coordinate and collaborate with other credible sources
  ▶ Name a “primary” or a “spokesperson”
  ▶ Network should be established and formal communication channels developed
  ▶ Joint planning
  ▶ Regular communication

• Warn people about uncertainty
• Plan carefully and evaluate your efforts
  ▶ Gauge public’s level of knowledge about risks and events
  ▶ Consider “teachable moments”
  ▶ Solicit feedback

• Meet the needs of the media to ensure that they provide accurate and useful information

Elements of Risk Communication

• **WHO: The “Spokesperson”**
  ▶ Key position
  ▶ Media experience
  ▶ Responsible, calm and confident
Ability to speak clearly and convincingly

**WHAT: The Message**
- What we know about the situation
- What ‘we’ (ex. health authorities) are doing about the situation
- What ‘you’ (the community) can do about the situation

**WHAT: Message Development**
- Bring it down to the basics: simplify
- Provide recommended actions
- Be positive: provide more “do” than “don’t”
- Don’t lie
- Be sympathetic

**To WHOM: The “Audience”**
- The audience will be the individuals and communities affected by the risk / emergency / disaster
- Why do people react to risks - real or perceived – the way they do
- How do we deal with the emotional component of how people respond?
- How do we help people to interpret the risk and respond to risk in constructive ways?

**HOW: Communication Channels**
- Mass media (TV, radio, newspaper, cinema, internet)
Stand-alone audio-visual (video, audio, public address system, loudspeakers, sirens)

Telephone (mobile, landline, SMS, faxsimile)

Face-to-face (group meetings, seminars, workshops, conferences, marches, exhibitions, door to door knocking, community leaders)

Folk Media (story telling, drama, dance, song, puppet show, street entertainment)

Stand alone print (bill boards, posters, banners, distributed print, leaflets, pamphlets, brochures)

Mail (postal, direct mailing)

Steps in Communicating Risks

1. Verify situation
   - Get the facts.
   - Obtain information from additional sources to put the event in perspective.
   - Review and critically judge all information. Determine credibility.
   - Clarify information through subject matter experts.
   - Begin to identify staffing and resource needs to meet the expected media and public interest.
   - Determine who should be notified of this potential emergency.

2. Conduct notifications

3. Activate crisis plan
Ensure direct and frequent contact with the EOC.
Determine what your organization is doing in response to the event.
Determine what other agencies/organizations are doing.
Determine who is being affected by this crisis. What are their perceptions? What do they want and need to know?
Determine what the public should be doing.
Determine what’s being said about the event. Is the information accurate?

4. Organize assignments
- Identify the spokesperson for this event.
- Determine if subject matter experts are needed as additional spokesperson.
- Determine if the organization should continue to be a source of information to the media about this emergency, or would some issues be more appropriately addressed by other government entities?

5. Prepare information and obtain approvals

6. Release information to media, public and partners through arranged channels
- Provide only information that has been approved by the appropriate managers. Don’t speculate.
- Repeat the facts about the event.
Describe the data collection and investigation process.

Describe what your organization is doing about the emergency.

Describe what other organizations are doing.

Explain what the public should be doing.

Describe how to obtain more information about the situation.

7. Conduct public education
8. Monitor events
9. Obtain feedback and conduct communication evaluation

Media Management

*Stick to facts, and put them in context*

- *There is no such thing as ‘off-the-record’. Everything you say and do can be reported. Be careful with what you say in the presence of journalists, even after a formal interview is finished and at social gatherings.*
- *Never make disparaging or critical remarks about local authorities or international partners.*
- *Do not mention weaknesses they might be all that is reported.*

Working with the Media

- One individual or organization should have overall responsibility for public comment and information
- Spokespeople are identified to speak to the media for
specific topics

- Arrangements are made with electronic and print media to advise the public of imminent or actual emergencies.
- Activities are carried out to build relationships with the mass media, such as participation in planning, seminars and exercises, and staff training.
- Messages (and background information) are pre-prepared for specific types of risks and situations.
- Media people are informed and aware of its roles and responsibilities, national plans, preparedness activities and decision-making processes for managing all types of risks and the operating practices of organizations, including health organizations.
- Past experience has shown the value of immediately dealing with the following points:
  - Control access to the disaster site
  - On-site facilities for issuing passes to media personnel (or accrediting media representatives)
  - Establishing a media liaison point
  - Nominating a media spokesperson

- The media will welcome any factual statements particularly from emergency services’ eye witness.
- Care should be taken that information about casualties is not released until details have been confirmed and next of kin informed.
- Avoid prejudicing what may become a criminal prosecution.
Pocket EMERGENCY Tool

- The first consideration should always be given to the individual (reporters look for survivors and emotional issues)

What makes a “good” spokesperson?

- Media savvy/rapport
- Versatility to be a statesman or a brawler
- Consistent and continuous authority
- Sufficient knowledge and information
- Available anytime (24 hours/day, 7 days/week)
- Spokesperson must be supported by authority with the following:
  4. Information and facts
  5. Resources and contacts
  6. Equally competent alternate

What do the people want to know?

- What has happened? (Incident and Scope)
- Why did it happen? (Cause)
- Who or what should be held responsible? (Blame)
- What is being done about it? (Action)
- What will prevent it from recurring? (Result)

Press Releases:

- Titles and opening lines are the most important parts grab attention and encourage awareness
• Put key points in first paragraph
• Text needs to be brief
• Use language appropriate for the audience
• Advocate for health in general
• Share credit and visibility with partners

For further details, please refer to:

• Crisis and Emergency Risk Communication, CDC, 2002.
Recovery and Reconstruction

Recovery focuses on how best to restore the capacity of the government and communities to rebuild and recover from crisis and to prevent relapses. In so doing, recovery seeks not only to catalyze sustainable development activities, but also to build upon earlier humanitarian programs to ensure that their inputs become assets for development (United Nations Development Program, 2001)

### Health Needs in an Emergency Over Time

<table>
<thead>
<tr>
<th>Stage</th>
<th>Time frame</th>
<th>General Needs</th>
<th>Health Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>First 24 hours</td>
<td>Search and rescue Evacuation/shelter Food Water Public information system</td>
<td>First aid</td>
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<td>Triage</td>
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<td>Primary medical care</td>
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<td>Transport/ambulance</td>
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<td></td>
<td>Acute medical and surgical care</td>
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<td></td>
<td></td>
<td>Emergency communication, logistics and reporting system (including injury and disability registers)</td>
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</tr>
</tbody>
</table>
## Health Needs in an Emergency Over Time

<table>
<thead>
<tr>
<th>Stage</th>
<th>Time frame</th>
<th>General Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short</td>
<td>End of first week</td>
<td>Security, Energy (fuel, heating, light, etc.) Environmental Health services for:</td>
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<tr>
<td></td>
<td></td>
<td>• Vector control • Personal hygiene • Sanitation, waste disposal, etc.</td>
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<td></td>
<td></td>
<td>Emergency epidemiological surveillance for vector-borne diseases, vaccine-</td>
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<td></td>
<td></td>
<td>preventable diseases, and diseases of epidemic potential</td>
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<tr>
<td></td>
<td></td>
<td>Control of disease of public health significance</td>
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<tr>
<td></td>
<td></td>
<td>Control of acute intestinal and respiratory diseases</td>
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<tr>
<td></td>
<td></td>
<td>Care of the dead</td>
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<tr>
<td></td>
<td></td>
<td>General curative services</td>
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<tr>
<td></td>
<td></td>
<td>Nutritional surveillance and support (including micronutrient and supplementation)</td>
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<tr>
<td></td>
<td></td>
<td>Measles vaccination and Vitamin A</td>
</tr>
<tr>
<td>Medium</td>
<td>End of first month</td>
<td>Protection (legal and physical), Employment Public transportation Communications,</td>
</tr>
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<td></td>
<td></td>
<td>Psychosocial services</td>
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<td></td>
<td></td>
<td>(Re)establishment of the health information system</td>
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<td></td>
<td></td>
<td>Restoration of preventive health care services such as EPI, MCH, etc.</td>
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<tr>
<td></td>
<td></td>
<td>Restoration of priority disease control programs such as TB, malaria, etc.</td>
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<tr>
<td></td>
<td></td>
<td>Restoration of services of non-communicable diseases/obstetrics</td>
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<tr>
<td></td>
<td></td>
<td>Care of the disabled</td>
</tr>
</tbody>
</table>
## Health Needs in an Emergency Over Time

<table>
<thead>
<tr>
<th>Stage</th>
<th>Time frame</th>
<th>General Needs</th>
<th>Health Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long term</td>
<td>End of 3 months</td>
<td>Education</td>
<td>Reconstruction and rehabilitation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Agriculture</td>
<td>Specific training programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Environmental protection</td>
<td>Health information campaigns/health education programs</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Compensation/reconstruction</td>
<td></td>
<td>Disability and psychosocial care</td>
</tr>
<tr>
<td></td>
<td>Restitution/rehabilitation</td>
<td></td>
<td>Evaluation of lessons learned</td>
</tr>
<tr>
<td></td>
<td>Prevention and preparedness</td>
<td></td>
<td>Revision of policies, guidelines, procedures and plans</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Upgrade knowledge and skills, change attitude</td>
</tr>
</tbody>
</table>

Health in Disaster Recovery and Reconstruction, National PHEMAP, 2008.
Response to Development Goals

<table>
<thead>
<tr>
<th>Response</th>
<th>Transition</th>
<th>Sustainable Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Saving lives</td>
<td>1. Saving livelihoods</td>
<td>1. Building livelihoods</td>
</tr>
<tr>
<td>2. Emergency aid</td>
<td>2. Support to rehabilitation</td>
<td>2. Building communities</td>
</tr>
<tr>
<td>5. Providing for the community</td>
<td>5. Working with the community</td>
<td>5. Understanding the community</td>
</tr>
<tr>
<td>7. Spontaneous interventions</td>
<td>7. Appropriate interventions</td>
<td>7. Planned strategies</td>
</tr>
<tr>
<td>10. Short time frame used advantageously</td>
<td>10. Strengthening of coping strategies</td>
<td>10. Sustainability</td>
</tr>
</tbody>
</table>

Health in Disaster Recovery and Reconstruction, National PHEMAP, 2008.

For further details, please refer to:

Part 3

Reference Notes, Tools and Samples
Emergency Manager Deployment Checklist

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Did you receive your orders?</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Is/are the mission objectives/s clear?</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Did you inform your family?</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Do you have with you</td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>Mission order?</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>Identification card?</td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>Emergency call number directory?</td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>Mission area map?</td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>List of contact persons/numbers?</td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>Communication equipment?</td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>Cell phone? Mobile phone?</td>
<td></td>
</tr>
<tr>
<td>h.</td>
<td>Handheld radio and accessories?</td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td>Pocket notebook and ball pen?</td>
<td></td>
</tr>
<tr>
<td>j.</td>
<td>Laptop computer?</td>
<td></td>
</tr>
<tr>
<td>k.</td>
<td>Transistor radio (with extra batteries)?</td>
<td></td>
</tr>
<tr>
<td>l.</td>
<td>Basic PPE (cap, mask, gloves)?</td>
<td></td>
</tr>
<tr>
<td>m.</td>
<td>Cash &amp; reimbursement vouchers?</td>
<td></td>
</tr>
<tr>
<td>n.</td>
<td>Water canteen?</td>
<td></td>
</tr>
<tr>
<td>o.</td>
<td>Food provisions?</td>
<td></td>
</tr>
<tr>
<td>p.</td>
<td>First aid kit?</td>
<td></td>
</tr>
<tr>
<td>q.</td>
<td>Backpack with clothing and blanket?</td>
<td></td>
</tr>
<tr>
<td>r.</td>
<td>Flashlight/candles and matches?</td>
<td></td>
</tr>
<tr>
<td>s.</td>
<td>Portable tent (if available)?</td>
<td></td>
</tr>
<tr>
<td>t.</td>
<td>Mosquito repellent?</td>
<td></td>
</tr>
<tr>
<td>u.</td>
<td>Pocket knife?</td>
<td></td>
</tr>
<tr>
<td>v.</td>
<td>Digital care?</td>
<td></td>
</tr>
<tr>
<td>w.</td>
<td>Pocket Emergency Tool?</td>
<td></td>
</tr>
</tbody>
</table>

*This list contains basic supplies, materials, equipment needed in the field*
Rapid Health Assessment Forms

HEMS Form 1

Rapid Health Assessment
(To be submitted within 24 hrs)

as of __________________________

Nature of Event: ______________________________________

Date and Time of Occurrence: __________________________

Region: ______________________________________________

A. Magnitude of Event
B. Consequences

<table>
<thead>
<tr>
<th>Province</th>
<th>Municipality/City</th>
<th>No. of Families Affected</th>
<th>No. of Individuals Affected</th>
<th>No. of Evacuation Centers</th>
<th>No. of Families and Individuals in Evacuation Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

TOTAL
C. Health Facilities Available in Affected Areas

<table>
<thead>
<tr>
<th>Municipality/ City</th>
<th>No. of Death/s</th>
<th>No. of Injured</th>
<th>No. of Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D. Lifelines Available in Affected Area

<table>
<thead>
<tr>
<th>Total No.</th>
<th>No. of Functional</th>
<th>No. of Non Functional</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RHU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

E. Status of Essential Drugs/Suppliers

<table>
<thead>
<tr>
<th>Type</th>
<th>Yes</th>
<th>No</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electric Power</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roads/Bridges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Stock level good for ______________
(no. of cases/no. of days/weeks/month)

F. Actions Taken
_____________________________________________________
_____________________________________________________
_____________________________________________________  

G. Problems Encountered
_____________________________________________________
_____________________________________________________
_____________________________________________________  

H. Recommendations
_____________________________________________________
_____________________________________________________
_____________________________________________________  

Prepared by: _______________________
Position: _________________________
Office: _________________________
Date: __________________________
HEMS Form 2

Rapid Health Assessment for Mass Casualty Incident
(To be submitted within 24 hrs)

A. Description of the Event
Nature of the Event: ___________________________________
Time of the Event: _____________________________________
Date of the Event: _____________________________________
Place of the Event: _____________________________________

B. Number of persons affected
Death: ________________________________________________
Injured: ______________________________________________
Treated on site: _______________________________________
Referred to hospital: __________________________________
OPD: ________________________________________________
Admitted: ____________________________________________
Missing: ______________________________________________
Total: ________________________________________________

C. Actions Taken
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
D. Problems Encountered


E. Recommendations


Prepared by: ______________________
Position: _________________________
Office: __________________________
Date: ____________________________

* Please fill out Form A for the listing of cases
HEMS Form 3

Rapid Health Assessment for Outbreaks

A. Description of the Event

Nature of the Event: ________________________________
Time of the Event: ________________________________
Date of the Event: ________________________________
Place of the Event: ________________________________

B. Consequences

Population Exposed: ________________________________
Number of Death/s: ________________________________
Number of Cases: ________________________________
  Admitted: ________________________________
  OPD: ________________________________

C. Actions Taken

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
D. Problems Encountered

_____________________________________________________
_____________________________________________________
_____________________________________________________

E. Recommendations

_____________________________________________________
_____________________________________________________
_____________________________________________________

Prepared by: ____________________
Position: _______________________
Office: _________________________
Date: __________________________

* Please fill out Form A for the listing of cases
# HEMS Form A

## List of Patients/Victims

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Sex</th>
<th>Diagnosis</th>
<th>Status (Injured, Died, Missing)</th>
<th>Remarks/Actions Taken (Sent home, Admitted, Outpatient, Referred, Surgery Done, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
### Reference Values for Rapid Health Assessment and Contingency Planning

#### Estimating Population Size

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>Average % in Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 years</td>
<td>12.4</td>
</tr>
<tr>
<td>5-9 years</td>
<td>11.7</td>
</tr>
<tr>
<td>10-14 years</td>
<td>10.5</td>
</tr>
<tr>
<td>15-19 years</td>
<td>9.5</td>
</tr>
<tr>
<td>20-59 years</td>
<td>48.6</td>
</tr>
<tr>
<td>*Pregnant women</td>
<td>2.4</td>
</tr>
</tbody>
</table>

#### Emergency Food Requirements

<table>
<thead>
<tr>
<th>Food</th>
<th>Kcal content</th>
<th>g/person/month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals</td>
<td>350/100 g</td>
<td>13.5</td>
</tr>
<tr>
<td>Pulses</td>
<td>335/100 g</td>
<td>1.5</td>
</tr>
<tr>
<td>Oil (vegetable)</td>
<td>885/100 g</td>
<td>0.8</td>
</tr>
<tr>
<td>Sugar</td>
<td>400/100 g</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Recommended ration person/day: 2,116 kcal  
Total kg/person/month for alimentation: 16.4 kg  
*Micronutrients (e.g. iodine, Vit. A) are also important*
### Basic Needs

<table>
<thead>
<tr>
<th>Average Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water</strong></td>
</tr>
<tr>
<td><strong>Quantity</strong></td>
</tr>
<tr>
<td><strong>Quality</strong></td>
</tr>
<tr>
<td>In hospital settings more water per person is needed</td>
</tr>
<tr>
<td><strong>Sanitation</strong></td>
</tr>
<tr>
<td><strong>Latrine</strong></td>
</tr>
<tr>
<td><strong>Waste disposal</strong></td>
</tr>
<tr>
<td><strong>Soap</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Shelter</strong></td>
</tr>
<tr>
<td><strong>Individual Requirements</strong></td>
</tr>
<tr>
<td><strong>Collective Requirements</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Household fuel</strong></td>
</tr>
<tr>
<td><strong>Weight of firewood</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
### Examples of Rations for General Food Distribution
(Providing 2100 kcal/person/day)

<table>
<thead>
<tr>
<th>Commodities</th>
<th>Ration 1</th>
<th>Ration 2</th>
<th>Ration 3</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meal with rice</td>
<td>(g) 450</td>
<td>(g) 420</td>
<td>(g) 400</td>
<td>Main source of energy and protein</td>
</tr>
<tr>
<td>Pulses (i.e., peas, beans, mongo)</td>
<td>50</td>
<td>60</td>
<td>60</td>
<td>Provide protein and various micronutrients</td>
</tr>
<tr>
<td>Oil/fat</td>
<td>25</td>
<td>30</td>
<td>25</td>
<td>Concentrated source of energy for palatability and the absorption of Vit. A</td>
</tr>
<tr>
<td>Fortified cereal</td>
<td>-</td>
<td>-</td>
<td>50</td>
<td>Provides essential vitamins and minerals, and is useful as weaning food</td>
</tr>
<tr>
<td>Canned fish/meat</td>
<td>-</td>
<td>30</td>
<td>-</td>
<td>Needed for proteins and minerals (including iron)</td>
</tr>
<tr>
<td>Sugar</td>
<td>20</td>
<td>20</td>
<td>15</td>
<td>Needed for cultural habits, palatability, and home oral rehydration</td>
</tr>
<tr>
<td>Salt</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>Provides sodium, and is needed for home oral rehydration</td>
</tr>
<tr>
<td>Vegetables/fruits</td>
<td>-As available-</td>
<td>-As available-</td>
<td>-As available-</td>
<td>Valuable source of vitamins and minerals</td>
</tr>
<tr>
<td>Condiments/spices</td>
<td>-As available-</td>
<td>-As available-</td>
<td>-As available-</td>
<td>Needed because of cultural habits and for palatability</td>
</tr>
</tbody>
</table>

**Approximate food values:**
- **Energy (kcal)**: 2116, 2092, 2113
- **Protein (g)**: 51, 45, 58
- **Fat (g)**: 41, 38, 43
### Essential Primary Health Care (PHC) Activities

<table>
<thead>
<tr>
<th>Essential PHC Activities</th>
<th>Target</th>
<th>Optimal Coverage of Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5y/o clinic &amp; growth monitoring</td>
<td>All children of 0-59 months</td>
<td>100% of &lt;5y/o per month</td>
</tr>
<tr>
<td>Antenatal clinic</td>
<td>All pregnancies</td>
<td>50% of pregnancies/month</td>
</tr>
<tr>
<td>Assisted deliveries</td>
<td>All deliveries</td>
<td>1/12 of total group per month</td>
</tr>
<tr>
<td>OPD Consultation</td>
<td></td>
<td>1.5 per person/yr</td>
</tr>
<tr>
<td>Treatment &amp; follow-up sessions</td>
<td></td>
<td>0.13 per person/month</td>
</tr>
</tbody>
</table>

### Vaccination

<table>
<thead>
<tr>
<th>Vaccination</th>
<th>Target</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetanus toxid</td>
<td>1.5 per pregnancy</td>
<td>30% per month</td>
</tr>
<tr>
<td>BCG</td>
<td>All new births</td>
<td>1/12 of total group per month</td>
</tr>
<tr>
<td>DTP1-TT1</td>
<td>0-1 yr</td>
<td>1/12 of total group per month</td>
</tr>
<tr>
<td>DTP2-TT2</td>
<td>0-1 yr</td>
<td>1/12 of total group per month</td>
</tr>
<tr>
<td>Measles</td>
<td>9-12 months</td>
<td>1/12 of total group per month</td>
</tr>
</tbody>
</table>

### Health Personnel Requirements

<table>
<thead>
<tr>
<th>Hospital: Population ratio</th>
<th>1:150,000 to 300,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal staffing:</td>
<td>1:500 or 1:1000</td>
</tr>
<tr>
<td>2 medical officers</td>
<td>1 person/day = 7 hours of field work</td>
</tr>
<tr>
<td>60-100 other staff CHWs (or home visitors) or Health Information Teams</td>
<td></td>
</tr>
</tbody>
</table>

Health Workers Emergency requirements (e.g. refugee camp) for treatments, management and clerical duties: 60 staff x 10,000 population.
# Health Supplies Requirements

## Essential Drugs and Medical Equipment

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WHO Basic NEHK Unit</td>
<td>1 kit for 10,000 pop for 3 mos.</td>
</tr>
<tr>
<td>WHO Supplementary NEHK Unit</td>
<td>1 kit for 10,000 pop for 3 mos.</td>
</tr>
</tbody>
</table>

## Safe Water

<table>
<thead>
<tr>
<th>Preparing 1 L of stock</th>
<th>Calcium hypochlorite 70%: 15 g/L of water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solution 1%</td>
<td>Bleaching powder 30%: 33g/L of water</td>
</tr>
<tr>
<td></td>
<td>Sodium hypochlorite 5%: 250ml/L of water</td>
</tr>
<tr>
<td></td>
<td>Sodium hypochlorite 10: 110 ml/L of water</td>
</tr>
<tr>
<td>Using the stock solution</td>
<td>0.6 ml or 3 drops/liter of water</td>
</tr>
<tr>
<td></td>
<td>60 ml/100 liters of water</td>
</tr>
</tbody>
</table>

*Allow the chlorinated water to stand at least 30 minutes before using*

## Cut-off Values for Emergency Warning

<table>
<thead>
<tr>
<th>Health Status</th>
<th>More than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Crude Mortality Rate</td>
<td>1 per 10,000 population</td>
</tr>
<tr>
<td>Daily Under-5 Mortality Rate</td>
<td>2 per 10,000 children &lt;5y/o</td>
</tr>
<tr>
<td>Acute Malnutrition (W/H or MUAC) in Under-5</td>
<td>10% of children &lt;5y/o</td>
</tr>
<tr>
<td>Growth Faltering Rate in Under-5</td>
<td>30% of monitorized children</td>
</tr>
<tr>
<td>Low Weight at Birth (&lt;2.5 kg)</td>
<td>7% of live births</td>
</tr>
<tr>
<td>Length (cm)</td>
<td>Boys’ weight (Kg)</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------</td>
</tr>
<tr>
<td></td>
<td>Median</td>
</tr>
<tr>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>49</td>
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### NCHS/WHO Normalized Reference Values for Weight-for-Length and Weight-for-Height by Sex (BOYS)

<table>
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<tr>
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<th>Boys' weight (Kg)</th>
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<td>Median</td>
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### NCHS/WHO Normalized Reference Values for Weight-for-Length and Weight-for-Height by Sex (GIRLS)

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<th>Length (cm)</th>
<th>Girls’ weight (Kg)</th>
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</table>
### NCHS/WHO Normalized Reference Values for Weight-for-Length and Weight-for-Height by Sex (GIRLS)

<table>
<thead>
<tr>
<th>Length (cm)</th>
<th>Median</th>
<th>-1 SD 90%</th>
<th>-2 SD 80%</th>
<th>-3 SD 70%</th>
<th>-4 SD 60%</th>
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<tbody>
<tr>
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<tr>
<td>75</td>
<td>9.6</td>
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<tr>
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<td>79</td>
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<td>80</td>
<td>10.6</td>
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<td>81</td>
<td>10.8</td>
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<td>91</td>
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<td>92</td>
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</table>
## NCHS/WHO Normalized Reference Values for Weight-for-Length and Weight-for-Height by Sex (GIRLS)

<table>
<thead>
<tr>
<th>Length (cm)</th>
<th>Girls’ weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>93</td>
<td>13.6</td>
</tr>
<tr>
<td>94</td>
<td>13.9</td>
</tr>
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<tr>
<td>99</td>
<td>15.1</td>
</tr>
<tr>
<td>100</td>
<td>15.4</td>
</tr>
<tr>
<td>101</td>
<td>15.6</td>
</tr>
<tr>
<td>102</td>
<td>15.9</td>
</tr>
<tr>
<td>103</td>
<td>16.2</td>
</tr>
<tr>
<td>104</td>
<td>16.5</td>
</tr>
<tr>
<td>105</td>
<td>16.7</td>
</tr>
<tr>
<td>106</td>
<td>17</td>
</tr>
<tr>
<td>107</td>
<td>17.3</td>
</tr>
<tr>
<td>108</td>
<td>17.6</td>
</tr>
<tr>
<td>109</td>
<td>17.9</td>
</tr>
<tr>
<td>110</td>
<td>18.2</td>
</tr>
</tbody>
</table>
1. Length is generally measured in children below 85 cm, and height in children 85 cm and above. Recumbent length is on average 0.5 cm greater than standing height; although the difference is of no importance to the individual child, a correction may be made by deducting 0.5 cm from all lengths above 84.9 cm if standing height cannot be measured.

2. SD= standard deviation score (or Z-score). The relationship between the percentage of median value and the SD-core or Z-score varies with age and height, particularly in the first year of life, and beyond 5 years. Between 1 and 5 years median -1 SD and median -2 SD correspond to approximately 90% and 80% of median (weight-for-length, and weight-for-age), respectively. Beyond 5 years of age or 110cm (or 100 cm in stunted children) this equivalence is not maintained; median 02 SD is much below 80% of media. Hence the use of “percentage-of-median” is not recommended, particularly in children of school age. Somewhere beyond 10 years or 137 cm, the adolescent growth spurt begins and the time of its onset is variable. The correct interpretation of weight-for-height data beyond this point is therefore difficult.
### Decision Framework for Implementing Selective Feeding Programs

<table>
<thead>
<tr>
<th>Findings</th>
<th>Actions Required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Serious situation:</strong></td>
<td></td>
</tr>
<tr>
<td>Malnutrition rate:</td>
<td>• ‘Blanket’ supplementary feeding for all members of vulnerable groups (especially children, pregnant and lactating women, adults showing signs of malnutrition)</td>
</tr>
<tr>
<td>= 15% or 10-14%, plus aggravating factors</td>
<td>• Therapeutic feeding programs for severely malnourished individuals</td>
</tr>
<tr>
<td><strong>Alert/Risky situation:</strong></td>
<td></td>
</tr>
<tr>
<td>Malnutrition rate:</td>
<td>• Targeted supplementary feeding for individuals identified as malnourished in vulnerable groups (mildly to moderately malnourished children under 5 years, selected other children and adults)</td>
</tr>
<tr>
<td>10-14% or 5-9%, plus aggravating factors</td>
<td>• Therapeutic feeding programs for severely malnourished individuals</td>
</tr>
<tr>
<td><strong>Unsatisfactory situation:</strong></td>
<td></td>
</tr>
<tr>
<td>Food availability at household level below 2100 kcal per person per day</td>
<td>• Improve general rations until local food availability and access can be made adequate</td>
</tr>
<tr>
<td><strong>Acceptable situation:</strong></td>
<td></td>
</tr>
<tr>
<td>Malnutrition rate:</td>
<td>• No need for population interventions</td>
</tr>
<tr>
<td>&lt; 10% with no aggravating factors</td>
<td>• Attention for malnourished individuals through regular community services</td>
</tr>
</tbody>
</table>

1. Malnutrition rate: defined as the percentage of the child population (6 months to 5 years) who are below either the reference median weight-for-height minus 2 SD or 80% of reference weight-for-height and/or with edema

2. Aggravating factors:
   - Food availability at household level less than the
mean energy requirement of 2100 kcal/person/day
- Crude mortality rate more than 1 per 10,000 per/day
- Epidemic of measles or whooping cough
- High incidence of respiratory or diarrheal diseases

Sample Protocol for the Use of Ready-to-use Therapeutic Food

A. Inpatient care
   1. Stabilization phase
      a. Patients with complicated SAM should be admitted to an inpatient facility
      b. Achieved with meals of F75 therapeutic milk given at 100 kcal/kg/day in 6-8 times per day
      c. In this phase, F75 formula promotes rapid recovery of normal metabolic function and nutrition electrolyte balance.

   2. Transition phase
      a. Once appetite returns and the main complications are under control, a transition phase is started with ready to use therapeutic food (RUTF) introduced gradually if child outpatient care
      b. If the child cannot be admitted for outpatient care or there is difficulty in swallowing, a replacement feed (F100, specialized therapeutic milk to promote weight gain) should be given every 4 hours
c. Infants below six months of age (or below 3 kg of weight) are treated with a different protocol aimed at reinstating breastfeeding.

B. Outpatient care (Rehabilitation phase)
1. Patients are with good appetite and have no major medical complication - if possible is implemented as outpatient with RUTF, otherwise can be implemented in inpatient centers with RUTF or F100
2. An intake between 150-220 kcal/kg/day is enough to promote rapid weight gain.
3. Nearly all severely malnourished children have anemia and should be given supplementary iron.
## Supplementary Feeding Program Admission Criteria

<table>
<thead>
<tr>
<th>Target</th>
<th>Admission Criteria for SFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children</td>
<td>• W/H 70% to &lt;80% of the median without edema</td>
</tr>
<tr>
<td>From 6 months to 10 years</td>
<td>• MUAC between 110 and 120 mm</td>
</tr>
<tr>
<td></td>
<td>• Discharged from the TFC</td>
</tr>
<tr>
<td>Adolescents</td>
<td>• W/H &lt;80% of the median without edema OR</td>
</tr>
<tr>
<td>From 11 years to 18 years</td>
<td>• Discharged from the TFC</td>
</tr>
<tr>
<td>Adults</td>
<td>• BMI between 16 and 17 OR</td>
</tr>
<tr>
<td>19 to 75 years</td>
<td>• Discharged from the TFC</td>
</tr>
<tr>
<td>Elderly</td>
<td>• BMI between 16 and 17 OR</td>
</tr>
<tr>
<td>75 years and above</td>
<td>• Discharged from the TFC</td>
</tr>
</tbody>
</table>

## Classification of Acute Malnutrition

<table>
<thead>
<tr>
<th>Severe Malnutrition (SAM)</th>
<th>Moderate Malnutrition</th>
<th>Global Total Malnutrition (GAM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z-score</td>
<td>≥ -3 and &lt; -2 z-score</td>
<td>&lt; -2 z-score or edema</td>
</tr>
<tr>
<td>% of the median</td>
<td>≥70% and &lt;80%</td>
<td>&lt;80% or edema</td>
</tr>
</tbody>
</table>

Severe Acute Malnutrition (SAM) + Moderate Malnutrition = Global Acute Malnutrition (GAM) Critical Index = 7.8-11.7%
### Summary of Classification Systems for Food Crises and Famines with Thresholds

<table>
<thead>
<tr>
<th>Classification System</th>
<th>Level</th>
<th>Mortality and Malnutrition Indicator</th>
</tr>
</thead>
</table>
| **UN-SCN Thresholds 1995** | Alert | CMR 1/10,000/day  
| U5MR 2/10,000/day  
| Wasting 5-8% |
| Severe | CMR 2/10,000/day  
| U5MR 4/10,000/day  
| Wasting >10% |
| **ODI Level and Type of Food Security 2003** | Chronic (or periodic) food insecurity | CMR 0.2-1/10,000/day  
| Wasting 2.3-10%  
| Stunting >40% |
| Acute food crisis | CMR 0.2-2/10,000/day  
| Wasting 2.3-10% or increases |
| Extended food crisis | CMR 1-2/10,000/day  
| Wasting 15-30% |
| Famine | CMR < 0.2/10,000/day  
| Wasting >25% or dramatic increases |
| **Howe and Devereux Famine Magnitude Scale** | Food security conditions | CMR <0.2/10,000/day and Wasting <2.3% |
| Food insecurity conditions | CMR ≥0.2 but <0.5/10,000/day |
| Food crisis conditions | CMR ≥0.5 but <1/10,000/day and/or  
| Wasting ≥10 but <20% and/or edema |
| Famine conditions | CMR ≥ 1 but <5/10,000/day and/or Wasting  
| ≥20% but <40% and/or edema |
| Severe famine conditions | CMR ≥5 but <15/10,000/day and/or wasting  
| ≥40% and/or edema |
| Extreme conditions | CMR ≥15/10,000/day |
## Summary of Classification Systems for Food Crises and Famines with Thresholds

<table>
<thead>
<tr>
<th>Classification System</th>
<th>Level</th>
<th>Mortality and Malnutrition Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSAU/FAO Integrated Food Security Phase Classification 2006</td>
<td>Generally food secure</td>
<td>CMR &lt;0.5/10,000/day&lt;br&gt;Wasting &lt;3%&lt;br&gt;Stunting &lt;20%</td>
</tr>
<tr>
<td></td>
<td>Chronically food secure</td>
<td>CMR &lt;0.5/10,000/day&lt;br&gt;U5MR &lt;1/10,000/day&lt;br&gt;Wasting &gt;3% but &lt;10%&lt;br&gt;Stunting &gt;20%</td>
</tr>
<tr>
<td></td>
<td>Acute food and livelihood crisis</td>
<td>CMR 0.5-1/10,000/day&lt;br&gt;U5MR 1-2/10,000/day&lt;br&gt;Wasting 10-15%, &gt; than usual, increasing</td>
</tr>
<tr>
<td></td>
<td>Humanitarian emergency</td>
<td>CMR 1-2/10,000/day, &gt;2x reference rate increasing&lt;br&gt;U5MR &gt;2/10,000/day&lt;br&gt;Wasting &gt;15%, &gt; than usual, increasing</td>
</tr>
<tr>
<td></td>
<td>Famine/humanitarian catastrophe</td>
<td>CMR &gt;2/10,000/day (example: 6,000/1,000,000/30 days&lt;br&gt;Wasting &gt;30%</td>
</tr>
</tbody>
</table>
## Summary Table on Projecting Psychosocial and Mental Health Assistance

<table>
<thead>
<tr>
<th>Description</th>
<th>12-Month Prevalence Rates</th>
<th>Type of Aid Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before Disaster</td>
<td>After Disaster</td>
</tr>
<tr>
<td>Severe disorder (e.g., psychosis, severe depression, severely disabling form of anxiety disorders, etc.)</td>
<td>2-3 %</td>
<td>3-4%</td>
</tr>
<tr>
<td>Mild or Moderate mental disorder (e.g., mild and moderate forms of depression and anxiety disorders including PTSD)</td>
<td>10%</td>
<td>20% (which over the years reduces to 15% through natural recovery without intervention)</td>
</tr>
<tr>
<td>Moderate or Severe psychological distress that does not meet criteria for disorder, that resolves over time or Mild distress that does not resolve over time</td>
<td>No estimate</td>
<td>30-50% (which over the years will reduce to an unknown extent)</td>
</tr>
<tr>
<td>Mild psychological distress that resolves over time</td>
<td>No estimate</td>
<td>20-40% (which over the years increase as people with severe problems recover)</td>
</tr>
</tbody>
</table>

*These rates vary with setting (e.g. sociocultural factors, previous and current disaster exposure) and assessment method but give a very rough indication what WHO expects the extent of morbidity and distress to be.*
Radio Procedures

Good communications are essential for management and security. Use the correct prowords and phonetic alphabet. Spell only important words.

<table>
<thead>
<tr>
<th>A – Alpha</th>
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<tbody>
<tr>
<td>B- Bravo</td>
<td>O – Oscar</td>
</tr>
<tr>
<td>C- Charlie</td>
<td>P – Papa</td>
</tr>
<tr>
<td>D- Delta</td>
<td>Q – Quebec</td>
</tr>
<tr>
<td>E – Echo</td>
<td>R – Romeo</td>
</tr>
<tr>
<td>F – Foxtrot</td>
<td>S – Sierra</td>
</tr>
<tr>
<td>G – Golf</td>
<td>T – Tango</td>
</tr>
<tr>
<td>H – Hotel</td>
<td>U - Uniform</td>
</tr>
<tr>
<td>I – India</td>
<td>V – Victor</td>
</tr>
<tr>
<td>J – Juliet</td>
<td>W – Whiskey</td>
</tr>
<tr>
<td>K – Kilo</td>
<td>X – X-ray</td>
</tr>
<tr>
<td>L – Lima</td>
<td>Y – Yankee</td>
</tr>
<tr>
<td>M – Mike</td>
<td>Z – Zulu</td>
</tr>
</tbody>
</table>

Numerals should be transmitted digit by digit except round figures as hundreds and thousands. Repeat only important numbers.

Check your equipment regularly.
### Conversion Table

<table>
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<th>Units</th>
<th>Metric to English</th>
<th>English to Metric</th>
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<td>Multiply by</td>
</tr>
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<td>cubic feet</td>
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<td>cubic inches</td>
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### Conversion Table

<table>
<thead>
<tr>
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<th>English to Metric</th>
<th>Multiply by</th>
</tr>
</thead>
<tbody>
<tr>
<td>To convert into</td>
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<td>To convert into</td>
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</tr>
<tr>
<td>liters</td>
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### Weights

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<thead>
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<td>pounds</td>
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<tr>
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<td>ton (US)</td>
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<td>metric ton</td>
<td>ton (long)</td>
<td>0.9842</td>
<td>ton (long)</td>
<td>metric ton</td>
<td>10.160</td>
</tr>
</tbody>
</table>
Temperature
Centigrade to Fahrenheit: Multiply by 1.8 and add 32
Fahrenheit to Centigrade: Subtract 32 and multiply by 0.555

Weight of water by volume (at 16.7°C or 62°F):
1 liter = 1 kg
1 UK gallon = 1.2 US gallons
1 US gallon = 0.8333 UK gallons
1 US gallon = 3.79 liters
1 cubic foot = 62.3 pounds

1 liter = 1 kg
1 UK gallon = 10 pounds
1 UK gallon = 4.54 liters
1 US gallon = 8.33 pounds
1 liter = 0.26 gallons
## Websites

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>National</strong></td>
<td></td>
</tr>
<tr>
<td>Department of Health-Philippines (DOH)</td>
<td><a href="http://www.doh.gov.ph">http://www.doh.gov.ph</a></td>
</tr>
<tr>
<td>National Disaster Coordinating Council (NDCC)</td>
<td><a href="http://www.ndcc.gov.ph">http://www.ndcc.gov.ph</a></td>
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<tr>
<td>Phil. Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)</td>
<td><a href="http://www.pagasa.dost.gov.ph">http://www.pagasa.dost.gov.ph</a></td>
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<tr>
<td>Phil. Institute of Volcanology &amp; Seismology (PHIVOLCS)</td>
<td><a href="http://www.phivolcs.dost.gov.ph">http://www.phivolcs.dost.gov.ph</a></td>
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<td>Phil. National Red Cross</td>
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<tr>
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</tr>
<tr>
<td>Asian Disaster Preparedness Center (ADPC)</td>
<td><a href="http://www.adpc.ait.ac.th">http://www.adpc.ait.ac.th</a></td>
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<tr>
<td>Asian Disaster Reduction Center (ADRC)</td>
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<td>Asian Disaster Reduction &amp; Response Network</td>
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<td><strong>WHO</strong></td>
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<td>Emergency and Humanitarian Action (EHA)</td>
<td><a href="http://www.who.int/disasters">http://www.who.int/disasters</a></td>
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<td>Regional Office for the Western Pacific (WPRO)-EHA</td>
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<td>European Region-Emergency Preparedness and Response Programme</td>
<td><a href="http://www.euro.who.int/emergencies">http://www.euro.who.int/emergencies</a></td>
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<td>Regional Office for the South-East Asia (SEARO)</td>
<td><a href="http://w3.whosea.org/index.htm">http://w3.whosea.org/index.htm</a></td>
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<td>Essential Drugs and Medicines policy</td>
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<td>Injuries and Violence Prevention</td>
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<td>Mental Health</td>
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### Websites

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<td>Water and Sanitation</td>
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<td>PAHO SUMA</td>
<td><a href="http://www.disaster.info.desastres.net/">http://www.disaster.info.desastres.net/</a> SUMA</td>
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<td>Centro Regional de Information Sobre Desastres</td>
<td><a href="http://www.crid.or.cr/crid">http://www.crid.or.cr/crid</a></td>
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<tr>
<td>Health Library for Disasters</td>
<td><a href="http://www.helid.desastres.net">http://www.helid.desastres.net</a></td>
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#### Other UN Agencies

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<td>UNAIDS</td>
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<td>UN Disaster Management Training Program (UNDMTP)</td>
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<td>UN Environmental Programme</td>
<td><a href="http://www.unep.org">http://www.unep.org</a></td>
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<td>UN High Commissioner for Refugees (UNHCR)</td>
<td><a href="http://www.unhcr.ch">http://www.unhcr.ch</a></td>
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<td>UN International Children’s Educational Fund (UNICEF)</td>
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<td>UN International Strategy for Disaster Reduction</td>
<td><a href="http://www.unisdr.org">http://www.unisdr.org</a></td>
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<td>UN Population Fund</td>
<td><a href="http://www.unpfa.org">http://www.unpfa.org</a></td>
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<tr>
<td>UN Office for the Coordination of Humanitarian Affairs (UN-OCHA)</td>
<td><a href="http://ochaonline.un.org">http://ochaonline.un.org</a></td>
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<td>World Food Programme</td>
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#### Other International Organizations

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<td>Federal Emergency Management Agency (FEMA), USA</td>
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<td>Centers for Disease Control &amp; Prevention, USA</td>
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## Websites

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<td>EM-DAT: Center for Epidemiology and Disaster (CRED)</td>
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<td>International Disaster Database</td>
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<td>Databases on Emergency Statistics and Bibliographic</td>
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<td>References (CRED)</td>
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<td>Accidents (2000)</td>
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<td>Alertnet</td>
<td><a href="http://www.alertnet.org">http://www.alertnet.org</a></td>
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<td>Disaster Relief</td>
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<td>International Committee of the Red Cross</td>
<td><a href="http://www.icrc.org">http://www.icrc.org</a></td>
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<td>International Federation of Red Cross and Red Crescent</td>
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<td>Societies</td>
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<td>Medecins Sans Frontiers</td>
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<td>One World</td>
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<td>Organization for Economic Co-operation and Development</td>
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<td>Relief Web</td>
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<td>Reproductive Health for Refugee Consortium (RHRC)</td>
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<td>American College of Emergency Physicians (ACEP)</td>
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<td>Natural Hazards Center at the University of Colorado</td>
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<td>Central Investigation Agency (CIA) Factbook</td>
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<td>AFR Reserve Command-Rescue and Emergency Medical Team</td>
<td>921-3746</td>
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<td>AFP-Office of the Surgeon General (AFP-OTSG)</td>
<td>911-6509 911-6001 loc. 6416</td>
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<td>Assoc. of Phil. Volunteer Fire Brigades, Inc.</td>
<td>522-2222</td>
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<td>Assoc. of Volunteer Fire Chiefs &amp; Firefighters of the Phil., Inc.</td>
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<td>Bureau of Fire Protection (BFP)</td>
<td>928-8363</td>
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<td>EARNET Network</td>
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<td>DOH-Dengue</td>
<td>723-2493</td>
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<td>DOH OPCEN</td>
<td>929-6919/ 929-6853 743-1937/ 741-7048</td>
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<td>Metro Manila Development Authority (MMDA) Road Emergency Group</td>
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<td>National Disaster Coordinating Council (NDCC)</td>
<td>912-5668</td>
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<td>National Poison Control &amp; Information Service</td>
<td>524-1078/ 404-0257 5218450 local 2311</td>
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<td>National Voluntary Blood Center</td>
<td>929-6274</td>
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<td>Office of Civil Defense (OCD) Operation Center</td>
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<td>Philippine Atmospheric, Geophysical and Astronomical Service</td>
<td>929-4570/ 927-1541 928-2031/ 927-2877</td>
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<td>Administration (PAGASA)</td>
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<td>Philippine Coast Guard (PCG) Action Center</td>
<td>527-3880/ 338-5634 527-8481 loc 6134 301-9369</td>
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<td>Philippine General Hospital (PGH) EARNET Network</td>
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<td>Philippine Long Distance Telephone Company (PLDT)</td>
<td>171</td>
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<td>Philippine National Police (PNP) Patrol 117</td>
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<td>Philippine National Red Cross (PNRC) EARNET Network</td>
<td>527-0864</td>
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<td>Disaster Management</td>
<td>527-8384 loc. 133/134</td>
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<td>PNP Firearms and Explosives</td>
<td>724-8085</td>
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<tr>
<td>Quezon City Rescue-Sagip Buhay EARNET Network</td>
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### Centers for Health Development

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<tr>
<td>CHD for Ilocos</td>
<td>Dr. Julia R. Magalong</td>
<td>Dr. Rosario Pamintuan</td>
<td>(072) 515-6842</td>
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<tr>
<td>CHD for Cagayan Valley</td>
<td>Engr. Paulino R. Padilla</td>
<td>Mr. Bobby Rey R. Ranchez</td>
<td>(078) 844-6585</td>
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<tr>
<td>CHD for Central Luzon</td>
<td>Dr. Evelyn V. David</td>
<td>Mr. Charlie V. Sanchez, RN</td>
<td>(045) 961-3802</td>
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<tr>
<td>CHD for CALABARZON</td>
<td>Dr. Noel G. Pasion</td>
<td>Dr. Gilbert G. Par</td>
<td>(02) 913-0864</td>
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<td></td>
<td></td>
<td>Ms. Blesila Z. Piñon, RN</td>
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<tr>
<td>CHD for MIMAROPA</td>
<td>Dr. Urbito M. Marciano</td>
<td>Dr. Joselito G. Awat</td>
<td>(02) 995-0827</td>
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<td></td>
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<td>Mr. Alejandro Mercado</td>
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<tr>
<td>CHD for Bicol</td>
<td>Dr. Rosa Maria B. Rempillo</td>
<td>Engr. William G. Sabater</td>
<td>(052) 483-0840</td>
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<td></td>
<td></td>
<td>Mr. Norberto A. Balane, Jr.</td>
<td>local 513</td>
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<tr>
<td>CHD for Western Visayas</td>
<td>Dr. May Ann Sta. Lucia</td>
<td>Ms. Sheila Mae Secular</td>
<td>(033) 321-0607</td>
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<td>Dr. Expedito A. Medalla</td>
<td>Mr. Rennan C. Cimafrance, RN</td>
<td>(032) 418-7629</td>
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<td>CHD for Zamboanga Peninsula</td>
<td>Dr. Marco C. Redoble, Jr.</td>
<td>Mr. Maxel G. BERMAS, RN</td>
<td>(053) 323-5025</td>
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<td>CHD for Northern Mindanao</td>
<td>Dr. David A. Mendoza</td>
<td>Mr. John Emata, RN</td>
<td>(062) 9911313</td>
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<td>CHD XI</td>
<td>Dr. Paulo S. Pantojan</td>
<td>Dr. Francisco Alivio</td>
<td>(082) 224-3011</td>
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<td>CHD XII</td>
<td>Mr. Leo A Chiong, RN</td>
<td>Mr. John Ernesto O. Tobias, RN</td>
<td>(064) 421-4583</td>
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<td>CHD ARMM</td>
<td>Ma. Julie M. Villadolid</td>
<td>Mr. Nudin S. Amil</td>
<td>(064) 421-6842</td>
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<td>CHD Caraga</td>
<td>Dr. Cesar C. Cassion</td>
<td>Dr. Ma. Wilma Joji O. Yu</td>
<td>(085) 342-5208 local 102</td>
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<td>CHD Metro Manila</td>
<td>Dr. Ma Paz P. Corrales</td>
<td>Ms. Jacinta C. Garcia, RN, Ms. Rosalie A. Espeleta</td>
<td>(02) 535-1488</td>
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### Metro Manila Hospitals

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<td>Amang Rodriguez Medical Center</td>
<td>Dr. Romel T. Menguito</td>
<td>Ms. Avelina R. Dela Cruz, RN</td>
<td>(02) 942-5988</td>
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<tr>
<td>Dr. Jose Fabella Memorial Hospital</td>
<td>Dr. Romeo A. Bituin</td>
<td>Dr. Jasminda E. Espiritu Dr. Antoinette C. Pacapac</td>
<td>(02) 734-5561 to 65</td>
</tr>
<tr>
<td>Dr. Jose N. Rodriguez Memorial Hospital</td>
<td>Dr. Roel A. Saludsong</td>
<td>Dr. Asuncion A. Cabaces Mr. Samuel C. Sumilang</td>
<td>(02) 962-8209</td>
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<tr>
<td>Dr. Jose R. Reyes Memorial Medical Center</td>
<td>Dr. Enrico A. De Jesus</td>
<td>Dr. Joseph T. Juico Ms. Teresita R. Rubio, RN</td>
<td>(02) 740-3785</td>
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<tr>
<td>East Avenue Medical Center</td>
<td>Dr. Emmanuel M. Bueno</td>
<td>Ms. Mary Jane R. Cruz, RN Dr. Alfonso G Nuñez III Dr. Allan Troy Baquir</td>
<td>(02) 921-6480</td>
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<tr>
<td>Las Piñas General Hospital and Satellite Trauma Center</td>
<td>Dr. Rodrigo H. Hao</td>
<td>Dr. Jocelyn V. Sales Dr. Rolando B. Mangune</td>
<td>(02) 873-0556 local 105</td>
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<tr>
<td>Lung Center of the Philippines</td>
<td>Dr. David F. Geollegue</td>
<td>Mr. Geraldo I. Lirag, RN</td>
<td>(02) 924-6101 local 333/403</td>
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<tr>
<td>National Center for Mental Health</td>
<td>Dr. Romeo J. Sabado</td>
<td>Mr. Teodoro Carrera, RN Ms. Johanna Medalla, RN</td>
<td>(02) 531-9001 local 356</td>
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<tr>
<td>National Children’s Hospital</td>
<td>Ms. Celia C. Pangan, RN</td>
<td>Ms. Belinda B. Pacis, RN Mr. Mariano Christopher P. Abella, RN</td>
<td>(02) 724-0656 to 59</td>
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<td>National Kidney and Transplant Institute</td>
<td>Dr. Enrico P. Ragaza</td>
<td>Ms. Ma. Belinda B. Evangelista, RN</td>
<td>(02) 924-3601 local 3094</td>
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<tr>
<td>Philippine Children’s Medical Center</td>
<td>Dr. Ma. Victoria C. Ribaya</td>
<td>Dr. Cesar Brence V. Labastida</td>
<td>(02) 924-9158</td>
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<tr>
<td>Philippine Heart Center</td>
<td>Dr. Jose A. Yulde</td>
<td>Mr. Elmer Benedict E. Collong, RMT</td>
<td>(02) 925-2401 local 3830</td>
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<td>Philippine Orthopedic Center</td>
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<td>Mr. Willy C. Veloria, RN</td>
<td>(02) 711-2316</td>
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<td>Quirino Memorial Medical Center</td>
<td>Dr. Jose Albert G. Capuno</td>
<td>Dr. Romeo R. Abary, Dr. Carlos Angelo C. Cajucon</td>
<td>(02) 421-9289</td>
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<tr>
<td>Research Institute for Tropical Medicine</td>
<td>Dr. Melinda Sweet Lovely Razalan</td>
<td>Mr. Eden Balanza, Ms. Emma Lopez</td>
<td>(02) 807-2628 to 32</td>
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<td>Rizal Medical Center</td>
<td>Dr. Roel Tito A. Marcial</td>
<td>Dr. Alexis L. Uy, Ms. Mariles Vargas, RN</td>
<td>(02) 671-9740</td>
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<tr>
<td>San Lazaro Hospital</td>
<td>Dr. Alexis Q. Dimapilis</td>
<td>Dr. Felix Roberto Torres</td>
<td>(02) 7323776 local 428</td>
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<td>San Lorenzo Ruiz Women’s Hospital</td>
<td>Dr. Noel D. Valderrama</td>
<td>Ms. Evangeline A. Rivano, RN</td>
<td>(02) 294-4853</td>
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<tr>
<td>Tondo Medical Center</td>
<td>Dr. Myrna T. Rivera</td>
<td>Ms. Maricel C. Serrano, RN</td>
<td>(02) 251-8420 to 23 local 234</td>
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<td>Valenzuela Medical Center</td>
<td>Dr. Mary Grace Reyes</td>
<td>Dr. Joseph T. Nocom, Ms. Josefina Blanco</td>
<td>(02) 294-6711 local 106</td>
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### Regional Hospitals

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<tr>
<td>Ilocos Training and Regional Medical Center, San Fernando, La Union</td>
<td>Dr. Magno Jose C. Valdez</td>
<td>Dr. Nathaniel Rimando Dr. Edgar Biteng</td>
<td>(072) 242-5543</td>
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<tr>
<td>Mariano Marcos Memorial Hospital and Medical Center, Batac, Ilocos Norte</td>
<td>Dr. Michael Martin C. Baccay</td>
<td>Dr. Eduardo V. Ramirez</td>
<td>(077) 792-3144</td>
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<tr>
<td>Region I Medical Center, Dagupan City</td>
<td>Dr. Otto S. Raguindin</td>
<td>Dr. Noel G. Manaos</td>
<td>(075) 523-4103</td>
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<tr>
<td>Batanes General Hospital, Basco Batanes</td>
<td>Dr. Benilda M Domingo</td>
<td>Mr. Richard Paul G. Ong</td>
<td>0321-6349448</td>
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<tr>
<td>Cagayan Valley Medical Center, Tuguegarao, Cagayan</td>
<td>Dr. Eduardo M. Padua III</td>
<td>Mr. Leon C. Batugal, RN</td>
<td>(078) 805-3561 local 132</td>
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<td>Southern Isabela General Hospital, Isabela</td>
<td>Dr. Mildred J. Naval</td>
<td>Ms. Eugenia V. Pinera Mr. Valentin R. Mindaro</td>
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<td>Veterans Regional Hospital, Santiago City, Isabela</td>
<td>Dr. Joselito A. Gonzales</td>
<td>Dr. Lirio Marie R. Adriatico Mr. Reynaldo T. Boy, RN</td>
<td>(078) 805-3561 local 132</td>
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<td>Bataan General Hospital, Tenejero, Balanga City, Bataan</td>
<td>Dr. Ruben F. Malabuyo</td>
<td>Dr. Romeo W. Alcantara, Jr. Dr. Joseph L. Malixi</td>
<td>(047) 237-3635</td>
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<tr>
<td>Jose B. Lingad Memorial General Hospital, Dolores, San Fernando City</td>
<td>Dr. Alfonso D. Danac</td>
<td>Ma. Victoria A. Rivera, RN Mr. Edwin Maniago, RN</td>
<td>(045) 963-6845</td>
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# Regional Hospitals

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<td>Mariveles Mental Ward</td>
<td>Dr. Ma. Lourdes L Evangelista</td>
<td>Dr. Ruby Lynda T. Reyes</td>
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<td>Paulino J. Garcia Memorial Research and Medical Center, Cabanatuan City</td>
<td>Ms. Pinky Miriam D. Canlas</td>
<td>Dr. Andrew P. Mangiduyos</td>
<td>(044) 463-9937</td>
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<tr>
<td>Talavera Extension Hospital</td>
<td>Dr. Catherine R. Salazar</td>
<td>Ms. Linda U. Fernando, RN</td>
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<td>Batangas Regional Hospital, Batangas City</td>
<td>Dr. Ernesto F. Reyes</td>
<td>Ms. Heidi C. Mac, RN&lt;br&gt;Mr. Marciano A. Luya</td>
<td>(043) 732-0165</td>
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<td>Culion Sanitarium and Balala Hospital</td>
<td>Dr. Arturo C. Cunanan, Jr.</td>
<td>Dr. Vilma Luna Pablo&lt;br&gt;Ms. Teresa Torres, RN</td>
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<td>Ospital ng Palawan</td>
<td>Dr. Ophelia O. Nufuar</td>
<td>Ms. Nilda N. Talamayan, RN</td>
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<td>Bicol Medical Center, Naga City</td>
<td>Ms. Wilhelmina C. De Castro, RN</td>
<td>Mr. Marlon R. Villamora, RRT&lt;br&gt;Mr. George S. Callada, RN</td>
<td>(054) 472-5106</td>
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<td>Bicol Regional Training and Teaching Hospital, Legaspi City</td>
<td>Dr. Eric N. Rabonar</td>
<td>Dr. Victor R. Colina</td>
<td>(052) 483-0635</td>
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<td>Bicol Sanitarium, Cabusao, Camarines Sur</td>
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<td>Corazon Locsin Montelibano Memorial Hospital, Bacolod City</td>
<td>Dr. Antonio S. Vazquez</td>
<td>Dr. Adhara Fernandez</td>
<td>(034) 435-1591 local 229</td>
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<td>Don Jose Monfort Medical Center, Barotac Nuevo, Iloilo City</td>
<td>Ms. Jacobina A. Padojinog, RN</td>
<td>Dr. Ma. Nanette Pabilona Ms. Emelyn B. Gando, RN</td>
<td>(033) 361-2011</td>
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<td>Western Visayas Medical Center, Mandurriao, Iloilo City</td>
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<td>Ms. Liza Gay S. Quimpo, RN Mr. Rudel M. Jaranilla, RN</td>
<td>(033) 321-1797</td>
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<td>Western Visayas Sanitarium</td>
<td>Dr. Elvira S. Sinoro</td>
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<td>Mr. Norman P. Sarmiento, RN</td>
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<td>Eversely Child Sanitarium</td>
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<td>Gov. Celestino Galleros Memorial Hospital, Tagbilaran City</td>
<td>Dr. Edgar D. Pizzaras</td>
<td>Dr. Rolando R. Po Mr. Hector C. Rodriguez</td>
<td>(038) 411-3185</td>
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<td>St. Anthony Mother and Child Hospital</td>
<td>Dr. Orlando N. Osorio</td>
<td>Ms. Candice Ann O. Tirando, RN</td>
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<td>Talisay District Hospital</td>
<td>Dr. Agustin D. Agos, Jr</td>
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<td>Vicente Sotto Medical Center, Cebu City</td>
<td>Dr. Joseph Al L. Alesna</td>
<td>Dr. Emmanuel F. Gines Mr. Danielo Y. Teorica, RN</td>
<td>(032) 253-9891 local 134</td>
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<td>Eastern Visayas Regional Medical Center, Tacloban City</td>
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<td>Schistosomiasis Control and Research Center</td>
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<td>Ms. Ma. Evelina D. Budlong, RN</td>
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### Regional Hospitals

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<td>Dr. Domingo Remus A. Dayrit</td>
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<td>Dr. Alderick Cape</td>
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<td>Labuan Public Hospital</td>
<td>Mr. Bernardo D. Orpiano, RN</td>
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<td>Margosatubig Regional Hospital, Zamboanga del Sur</td>
<td>Dr. Danilo D. Alfaro</td>
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<td>Mindanao Central Sanitarium</td>
<td>Mr. Robert Jacildo, RN</td>
<td>Mr. Vladimir Amiruddin, RN</td>
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<td>Sulu Sanitarium</td>
<td>Dr. Clemente A. Almonte II</td>
<td>Ms. Imelda Dawili, RN</td>
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<td>Zamboanga City Medical Center, Zamboanga City</td>
<td>Dr. Giovanni Paulo C. Gimena</td>
<td>Ms. Josephine C. Paragas, RN</td>
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<td>Amai Pakpak Medical Center, Marawi City, Lanao del Sur</td>
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<td>Camiguin General Hospital</td>
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<td>Mayor Hilarion Ramiro Regional Training and Teaching Hospital, Ozamis City</td>
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<td>Dr. Randy Guangco</td>
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<tr>
<td>Northern Mindanao Medical Center, Cagayan de Oro City</td>
<td>Dr. Enrique P. Saab</td>
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<td>Davao Medical Center, Davao City</td>
<td>Dr. Ricardo B. Audan</td>
<td>Dr. Antonio Solar</td>
<td>(082) 400-4416</td>
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<td>Cotabato Regional Medical Center,</td>
<td>Dr. Dimarin A. Dimatingkal</td>
<td>Ms. Norma P. Reyes, RN</td>
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<td>Cotabato City</td>
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<td>Ms. Maria Kristine G. Portaje, RN</td>
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<td>Ms. Ma. Rhodora N. Ledesma, RN</td>
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<td>Baguio General Hospital and Medical</td>
<td>Dr. Manuel F. Quirino</td>
<td>Dr. Honorio A. Pangilinan, Jr.</td>
<td>(074) 443-5678</td>
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<td>Mr. Gregory A. Bangon</td>
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<td>Dr. Juanita D. Lacuesta</td>
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<td>Luis Hora Memorial Regional Hospital, Bauko, Mt. Province</td>
<td>Dr. Edgardo I. Bolombo</td>
<td>Mr. John Jan C. Joven</td>
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<td>Adela Serra Ty Memorial Medical</td>
<td>Dr. Jess T. Avila</td>
<td>Ms. Lynde Dolly Masong, RN</td>
<td>(086) 211-3700</td>
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<td>Center, Tandag, Surigao del Sur</td>
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<td>Caraga Regional Hospital, Butuan City</td>
<td>Dr. Panfilo Jorge M. Tremedal</td>
<td>Engr. Hilarion P. Pasal</td>
<td>(085) 341-2579</td>
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<td>DOH Treatment and Rehabilitation</td>
<td>Dr. Carmelita B. Belgica</td>
<td>Mr. Marvin C. Ambion</td>
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<td>Center (DOH-TRC Tagaytay)</td>
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<td>Ms. Terence A. Santiago</td>
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References

General
1. 8th National Training Course on Public Health and Emergency Management in Asia and Pacific (PHEMAP), 2008.

Logistics Management

Management of the Dead and the Missing Persons
Mental Health and Psychosocial Support

Nutrition in Emergencies

Prevention and Control of Communicable Diseases

Risk Communication
Water Supply, Sanitation and Hygiene Promotion


