WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Healthcare and Nutrition

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PUBLIC HEALTH MEASURES TO BE ADOPTED FOR INTERNALLY DISPLACED PEOPLE IN THE EVENT OF FLOODS

According to the meteorological department prevailing inter monsoon and upcoming monsoon will bring heavy showers to the country. Sri Lanka has a rich network of rivers. It also suffers from unplanned urbanization. These two conditions in solo and in combination provide ideal grounds for floods. In a situation of flood, public health workers at all levels have to work upon providing basic life support such as water, food, shelter etc for the internally displaced people in these affected areas. To facilitate this work, the following guidelines have been laid down by the Epidemiological Unit of the Ministry of Health. Use of these guidelines are encouraged to lift up the health of these displaced communities.

1. Ensuring Safety of Water

(Need to address - safety, adequacy, supply and source)

The following water supply measures are to be adopted in short term emergencies involving population displacement and temporary shelters are considered.

- Identify sources of water (e.g.: wells, pipe borne, tube wells, external supply)
- Co-ordinate with the Divisional Secretary and local government authorities to ensure continuous and adequate supply of safe drinking water.
- Adequate water storage tanks should be supplied for proper storage of water.
- First priority is to provide adequate supply of water. The water supplied should be adequately treated. Chlorinated water should be ideal and need to be monitored regularly.
- In special situations of disasters as in floods, PHI should involve in super chlorination of water.
- If pipe-borne water is not available, water to be collected in tanks or barrels and chlorinated adequately to ensure safety in drinking water.
- Train a group leader in water sanitation. If facilities are available, make arrangements for boiling and proper storage of water at least for children.
- Advise and supervise correct methods of storage and usage of water for different purposes

2. Ensuring Safety of Food

(Need to address – safety, adequacy, nutrition)
Satisfaction and acceptance also to be considered)

- PHI should co-ordinate with the Divisional Secretary to ensure that food supplied by local authorities and other sources are hygienically prepared before distribution during early recovery period.
- Ensure all food supplies to the displaced are hygienically stored, prepared and distributed.
- Strictly monitor the preparation of food in food handling establishments.
- Establish a food preparation place within the camp as soon as possible and maintain safety practices.
- Educate food handlers on food safety practices and personal hygienic measures.
- PHI should supervise regularly the food preparation practices carried out within the temporary shelter.
- Common food preparation practices at the initial stage may be divided into several groups with time should be encouraged but regular monitoring of food preparation sites should be supervised. Upgrading of the knowledge on nutritious and hygienic preparation of food should be carried out.
- Storage facilities for raw materials should be provided and adequately maintained. It is the responsibility of the PHI to supervise and maintain activities regularly.

3. Ensuring Providing Sanitary Facilities

- Identify sanitary facilities existing in the camp.
- Ensure adequate sanitary facilities for the displaced within the camp. Where necessary, make arrangements to construct an adequate number of temporary latrines.
- PHI of the area should involve in the assessment of the adequacy of toilets. Shallow or deep trench latrines or temporary pit latrines should be prepared depending on the situation.
- The latrines should be sited at least 30 meters away from any water source. If the ground water is not abstracted, the distance may be reduced depending on the availability of space.
- Need to get the opinion of users also in construction of latrines at the design stage to get the maximum co-operation for proper maintenance.
- Ensure proper disposal of excreta of infants, babies and disabled. Distribute potties for children. Train and educate to discard all excreta and empty potties to latrine pit.
- Ensure cleanliness of toilets. PHI should monitor regularly the cleanliness. Prepare and make available adequate amount of TCL, soap and cleaning equipment to latrines.

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- Make arrangements for continuous and adequate water supply and soap for washing purposes.

4. Ensuring Safe Disposal of Refuse

- The number and size of the refuse containers needed will vary depending on the situation.
- The area PHI should co-ordinate with the local authority on the supply of requirements in maintaining proper refuse disposal within the temporary shelter.
- Identify a suitable method of garbage disposal. Co-ordinate disposal of garbage by sanitary burial or burning in suitable adjacent areas of temporary shelters.
- If garbage is removed daily by the local authorities using tractors, ensure enough containers (garbage bins) are made available in the temporary shelters for collection of garbage.
- Co-ordinate with the local authority on regular removal of garbage.
- Train to collect and sort garbage. Dispose in separate containers.
- Make arrangements for refuse storage, collection and transport and regular monitoring by the PHI.
- Control flies, insects and rodents by proper use of physical and chemical methods (insecticides and TCL powder).
- Train to ensure cleanliness in and around the camp.

5. Ensuring Waste Water Management

- Waste water from kitchen, bath areas and laundering is considered here.
- Quantity and nature of waste water problem should be assessed. Disposal options depending on the situation should be considered.
- Co-ordinate with the local authority for proper disposal of waste water produced within the temporary shelter. (e.g.: Infiltration into soaking pit, diversion into a drain or open channels)
- Should not allow stagnation within the temporary shelter or should not allow drainage through dwellings.

6. Treatment and Management of Minor Ailments

- Co-ordinate with the local medical institutions/authorities to establish mobile medical teams to visit temporary shelters for the displaced daily and provide treatment.
- Conduct mobile health clinics daily at early recovery phase, and 2-3 days time per week later.
- Preplan conduct of health clinic before conducting out the clinic. Eg: age categorization, spot treatment for minor ailments, referrals for follow up for chronic/ non communicable diseases, screening for communicable diseases.
- Issue a personal health record for each person to continue and follow up throughout the period of stay in temporary shelters which will facilitate identification of diseases early and prevention of multiplication of treatment.
- Direct and co-ordinate all volunteer health teams and health facilities through the MOH office of the area.

7. Prevention and Control of Potential Outbreaks

- Disaster affected people are particularly vulnerable to communicable diseases which are directly related to environmental health and behaviours. Public education and provision of information in behavioural changes should be carried out to reduce the occurrence and spread of communicable diseases. Water quality surveillance for bacteriological testing
- should be continued weekly in an epidemic related to water and during early phase of recovery of the disaster. Otherwise monthly surveillance will be adequate. Samples should be collected according to guidelines provided by the Medical Research Institute.
- Diarrhoea will result due to contaminated drinking water, food or poor sanitation and unhygienic practices. Prompt action must be taken to ensure early treatment and prevention of further spread. Maintain hygienic practices.
- In case of contagious diseases such as acute respiratory tract infections, eye infections
- and chickenpox patients should be isolated if facilities are available and referred to the area hospital if necessary. In case of spreading respiratory tract infections contact Epidemiology Unit and MRI for necessary technical support for prevention of spread and viral studies for accurate diagnosis.
- Some disaster conditions give rise to increase in the populations of vector or nuisance species, usually insects and rodents. People living in temporary shelters are specially exposed and prone to diseases spread by vectors. Steps should be taken to control mosquito breeding to prevent and control mosquito borne diseases such as Dengue,
- Malaria and JE. Ensure maintenance of environmental sanitation. Appropriate advice will be provided by the Epidemiology Unit whenever necessary.
- Promote camp leaders and mobile medical teams to report notifiable diseases and other contagious diseases to the local public health staff as early as possible.
- Although vaccines for disease conditions in disasters are recommended, it will not provide 100% protection but will help to boost the immunity during epidemics such as Chickenpox, Hepatitis A and Typhoid.
- Routine age appropriate vaccination procedure should be continued through mobile clinics by the area field public health staff.

8. Disease Surveillance

Major steps in communicable disease surveillance after disaster,

1. Vigilance on occurrences of communicable diseases.
2. Carry out field investigation of rumours and notifications of outbreaks of diseases.
3. Gaining access to laboratories to obtain definitive diagnoses and support for epidemiological investigations.
4. Presenting epidemiological information to decision makers.
5. Guaranteeing surveillance during and after the recovery phase.

MOH/PHI should visit temporary shelters daily to inquire into unusual occurrences of disease events/outbreaks. Leaders in temporary shelters should be contacted daily and be inquired about specific communicable diseases and unexpected occurrences of diseases. If any field health staff member received information or a rumour on infectious disease he/she should inform the MOH without delay. The suspected patient of the temporary shelter is visited by the PHI and relevant additional information is obtained from the patient, his/her medical records, his/her family, others in the temporary shelter and environment. The MOH also should visit the temporary shelter and investigate where necessary. Suspected cases of communicable diseases should be isolated within the temporary shelter if facilities are available or otherwise arrangements made to isolate in the area hospital to prevent spread. If doubtful cases are present, the MOH of the area should take action to prevent the spread of the disease and confirm the case. When required, get necessary technical advice from the Regional Epidemiologist, consultants in regional hospitals and the Epidemiology Unit. Obtain assistance from regional laboratories to confirm the disease which is essential for prevention of spread of diseases.

- MOH should collect communicable disease surveillance data from each temporary shelter.
- MOH should consolidate the above data daily and send a consolidated report to RE.
- RE should consolidate it by MOH area and send it to the Epidemiology Unit daily.
- Routine surveillance system should be continued (notification, investigation, prediction and early detection of outbreaks) and returns should be maintained (H544, H399, H 411a and special investigations)
- In addition, general information regarding the flood affected area should be filled by the RE in duplicate and one copy to be kept at RDHS office and one to be sent to the Epidemiology Unit.

Table 1: Vaccine-preventable Diseases & AFP

03rd - 09th April 2010(14th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2010	Number of cases during same week in 2009	Total number of cases to date in 2010	Total number of cases to date in 2009	Difference between the number of cases to date in 2010 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	00	00	00	00	00	00	02	00	00	02	01	29	20	+ 45.0 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	-
Measles	00	00	01	00	00	00	00	00	00	01	05	30	41	- 26.8 %
Tetanus	00	00	00	00	00	00	00	00	00	00	01	07	08	- 12.5 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	05	20	- 75.0 %
Tuberculosis	51	02	08	25	05	03	02	17	04	117	306	2467	2303	+ 7.1 %

Table 2: Newly Introduced Notifiable Disease

03rd - 09th April 2010(14th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2010	Number of cases during same week in 2009	Total number of cases to date in 2010	Total number of cases to date in 2009	Difference between the number of cases to date in 2010 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	04	07	04	01	00	01	055	03	04	29	645	1085	4299	- 74.6 %
Meningitis	00	02 NE=2	00	00	00	01 KN=1	00	00	00	03	22	401	287	+ 39.7 %
Mumps	00	00	01	00	00	00	00	00	00	01	46	217	511	- 57.5 %
Leishmaniasis	00	00	00	00	00	00	00	00	00	00	13	96	315	- 69.5 %

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.

DPDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps.

Special Surveillance: Acute Flaccid Paralysis.

Leishmaniasis is notifiable only after the General Circular No: 02/102/2008 issued on 23 September 2008.

Table 4: Selected notifiable diseases reported by Medical Officers of Health

03rd - 09th April 2010(14th Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns Received
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	%
Colombo	8	1415	1	43	0	4	0	15	0	6	5	175	0	2	0	22	0	1	**46**
Gampaha	7	1402	0	10	0	7	0	12	0	8	0	135	0	1	0	27	0	1	**20**
Kalutara	4	385	0	42	0	6	0	5	0	23	2	111	0	0	0	14	0	1	**33**
Kandy	6	482	0	86	0	1	0	7	0	1	1	22	0	52	0	20	0	1	**39**
Matale	0	292	1	178	0	0	0	7	0	57	0	26	0	1	0	14	0	0	**17**
Nuwara	1	55	4	46	0	0	1	40	0	3	0	9	0	27	0	13	0	0	**54**
Galle	12	214	3	61	0	3	0	0	0	7	1	22	0	2	0	6	0	2	**37**
Hambant	2	266	0	13	0	2	0	1	0	3	0	20	0	38	1	4	0	0	**36**
Matara	3	113	1	31	0	1	0	1	2	37	2	97	1	59	0	9	0	0	**41**
Jaffna	14	1793	1	48	0	1	2	250	0	5	0	0	0	88	1	24	0	1	**8**
Kili-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Mannar	0	65	0	12	0	0	0	21	0	2	0	0	0	0	0	10	0	0	**0**
Vavuniya	0	470	0	14	0	1	0	22	0	7	0	0	0	0	0	7	0	0	**0**
Mullaitivu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Batticaloa	3	820	0	36	0	1	0	10	0	11	0	1	0	1	0	0	0	0	**21**
Ampara	0	47	0	17	0	1	0	4	0	4	0	15	0	0	1	6	0	0	**0**
Trincomal	1	669	0	47	0	4	0	3	0	7	0	8	0	4	0	9	0	0	**40**
Kurunega	2	429	1	59	0	1	0	9	0	4	1	130	0	22	0	40	0	1	**40**
Puttalam	4	463	0	18	0	3	0	25	0	120	1	52	0	0	0	3	0	0	**44**
Anuradha	9	688	4	25	1	2	0	3	0	21	3	20	1	15	2	21	0	4	**47**
Polonnar	5	119	3	23	0	1	0	1	0	2	1	31	0	0	0	14	0	0	**14**
Badulla	6	197	0	48	0	0	1	37	2	12	1	18	0	22	2	26	0	0	**47**
Monaraga	8	143	0	53	0	0	0	16	0	3	0	13	0	18	2	36	1	1	**27**
Ratnapur	29	488	0	89	0	3	0	6	0	8	4	119	0	27	0	31	0	1	**22**
Kegalle	3	306	0	18	0	4	0	22	0	15	0	75	0	5	0	34	0	0	**27**
Kalmunai	7	416	1	48	0	0	1	5	0	0	0	0	0	0	0	7	0	1	**08**
SRI LANKA	**134**	**11737**	**20**	**1065**	**01**	**46**	**05**	**523**	**04**	**366**	**22**	**1099**	**02**	**384**	**09**	**397**	**01**	**15**	**30**

Source: Weekly Returns of Communicable Diseases WRCD).
*Dengue Fever / DHF refers to Dengue Fever / Dengue Haemorrhagic Fever.
**Timely refers to returns received on or before 09thApril, 2010 Total number of reporting units =311. Number of reporting units data provided for the current week: 97
A = Cases reported during the current week. B = Cumulative cases for the year.

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