



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
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Control of Communicable Diseases during Disasters – Part 3

This is the third article of a series, titled “Control of Communicable Diseases during Disasters”. This article discusses the principal of disease prevention following a disaster.

The planning of disease prevention following a disaster has to be based on the analysis of the local data generated during rapid and in-depth assessments. Identification of the preventive activities, prioritization and implementation has to be carried out immediately. Continuous monitoring of the progress of these activities is an essential component of the whole process. Disease surveillance activities also should happen as a parallel programme. Preventive activities need to be modified according to the findings of the ongoing surveillance activities. This could be either introduction of new activity, changing the priority, etc. Disease prevention activities in camp setting can be broadly categorized as follows.

- ◆ Good site planning
- ◆ Provision of appropriate shelter
- ◆ Clean water supply
- ◆ Regular and sufficient food supply
- ◆ Provision of essential medicines
- ◆ Waste management
- ◆ Control of vectors
- ◆ Sanitation
- ◆ Mass vaccination against specific diseases if necessary
- ◆ Provision of basic clinical services

Site planning

If the number of disaster victims is less, public places like schools, temples can be utilized to accommodate them. If the numbers are high temporary shelters/camps need to be built. Following are the things to be considered while selecting places to set up such temporary shelters.

- ◆ Number of disaster victims – at present and anticipated numbers in future (e.g. In the case of war)
- ◆ Type of people (Nationality, conflicts) – try to accommodate people with same socio-cultural and religious backgrounds together
- ◆ Length of stay – expected (sometimes can be judged by meteorological data and it will be hard in the case of war situations) (If you guess the length of stay to be long, it is advisable to avoid schools being occupied as camps)
- ◆ Security of the location (Less chance to be affected by another disaster)
- ◆ Nearby villages (There are advantages (can get support and supplies) and disadvantages (mixing of communicable diseases, conflicts..))
- ◆ Distance from major towns (important to consider for the provision of supplies)
- ◆ Road access
- ◆ Land area available and its expansion possibility (If you anticipate the number of victims to increase over

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time (e.g. War situation) it is much convenient to find a place with expansion possibility. It is much easy to provide services to a camp located in one place rather than to a scattered camp)

- ◆ Availability of nearby established health facility (in mass scale catastrophe with many victims with anticipated long stay, it is important to pay attention to select a place closer to an established health facility. Because upgrading to a higher scale is much easier than setting up a new hospital and allocating new staff. E.g. DH Settikulam was upgraded to BH level during the post-war situation)
- ◆ Elevation, Terrain, Soil condition
- ◆ Water availability
- ◆ Drainage facilities/water table
- ◆ Rain pattern & other climatic conditions

Shelter

According to the published guidelines on “minimum standards in humanitarian response” by the Sphere Project (www.sphereproject.org), the minimum recommended space per person to sleep during a disaster situation is 3.5m². This figure can be utilized to calculate the space requirement for the disaster victims. As a proactive measure, the number of people could be accommodated in each public place in the local area can be calculated beforehand. These numbers will be immensely useful to the health manager during a disaster situation.

Water supply

According to the same guidelines, the total water requirement for a person per day during a disaster situation is calculated as 7.5 to 15 litres. Using this figure the water requirement for the whole camp can be calculated and informed to the relevant authorities to prevent water shortages. Further, it is recommended to set up 1 tap for 250 individuals and one hand pump for 500 individuals if they are feasible options.

Usage of bottled water is recommended for the initial period of the disaster. Later on, filtration and disinfection by chlorination of local water source/s are recommended. Water quality needs to be checked by Chlorinometer on daily basis and bacteriological and chemical analysis need to be performed at the beginning and then fortnightly.

Regular and sufficient food supply

It is essential to ensure that all disaster victims get an adequate, nutritious and regular food supply during the camp settings. They may be already nutritionally com-

promised due to the disaster itself. The condition becomes worse if they were malnourished prior to the disaster. Poor nutrition leads to high risk of contracting communicable diseases, delayed wound healing, growth faltering in children, intrauterine growth retardation in pregnant mothers, etc. According to WHO the baseline nutritional requirement is 2100 kcal/person/day. Further, the pregnant women need an additional 300 kcal per day and breastfeeding women need an additional 500 kcal per day. The above are the general guidelines and individuals with severe food deprivation need to be managed in a hospital setting under specialist care.

Food is supplied as parcels during the initial period of the disaster by the government, non-governmental organizations and volunteers. The main issue with this is assuring the quality and the safety. Visual inspection and checking the signs of decomposing are the only available methods during disaster situations.

If the stay happens to become longer, group cooking can be introduced. Before embarking on group cooking following aspects need the attention of the camp managers and health authorities.

- ◆ Continuous supply of good quality raw materials,
- ◆ Transportation,
- ◆ Storage of raw materials,
- ◆ Adequacy of the cooking utensils,
- ◆ Preparation of area for cooking
- ◆ Supply of cooking fuel (firewood...)
- ◆ Cleanliness of the cooks and other assistants,
- ◆ Preparation of cooking roasters
- ◆ Storage of the cooked foods,
- ◆ Fly control,
- ◆ Waste management

Group cooking is much safer than parcelled food as they prepared fresh, ingredients can be checked and food can be prepared according to the local need. However, it has its own issues such as those who can cook and cannot also involve in the preparation and it can lead to infections. Personal hygiene of the cooks and other assistants is very important.

Editor

Table 1: Selected notifiable diseases reported by Medical Officers of Health 25th-01st December 2017 (48thWeek)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmaniasis		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	275	32947	1	66	0	3	0	30	2	43	7	169	0	3	2	20	0	0	9	360	0	28	0	1	22	84
Gampaha	289	30717	3	42	0	15	0	23	0	16	8	113	0	14	1	18	0	1	18	335	1	29	1	6	94	
Kalutara	64	10479	3	61	0	4	0	21	0	54	17	405	0	10	0	22	0	1	2	494	1	145	0	1	91	
Kandy	204	13655	1	72	1	6	0	8	1	21	5	60	2	127	0	16	0	2	3	251	0	39	0	16	100	
Matale	41	2997	0	22	0	4	0	1	0	12	1	34	0	2	0	11	0	1	0	51	0	60	1	8	100	
NuwaraEliya	6	859	0	31	0	9	0	36	0	53	0	54	0	179	0	21	0	0	3	313	0	45	0	0	63	100
Galle	57	5983	0	49	0	13	0	23	0	16	24	456	0	72	0	5	0	1	2	362	0	68	0	1	18	100
Hambantota	28	3425	0	26	0	7	1	9	0	31	2	60	0	70	0	10	0	1	3	210	0	19	20	430	11	100
Matara	40	6189	0	41	0	8	0	5	0	17	8	248	0	31	2	18	0	1	3	224	1	16	5	170	11	100
Jaffna	146	5309	4	411	1	24	2	47	0	58	3	34	4	486	0	3	0	0	4	200	1	39	0	0	43	87
Kilinochchi	3	489	3	40	0	1	0	12	0	1	2	6	0	17	0	2	0	0	0	3	0	11	0	3	23	100
Mannar	1	522	4	19	0	0	0	3	0	2	0	3	0	4	1	1	0	0	0	15	0	0	0	0	15	100
Vavuniya	33	965	0	24	0	0	3	89	0	7	2	29	0	11	0	7	0	0	0	37	0	4	1	11	13	100
Mullaithivu	6	360	4	22	0	4	2	11	0	5	3	25	0	4	0	2	0	1	0	17	0	5	1	4	9	100
Batticaloa	97	5147	6	177	0	10	0	16	1	44	1	26	0	1	0	6	0	1	4	170	0	34	0	1	23	100
Ampara	9	883	2	48	0	3	0	2	0	4	1	19	0	2	0	5	0	0	6	213	2	48	0	7	31	100
Trincomalee	16	4904	1	47	0	2	0	14	0	21	2	33	0	14	0	18	0	0	1	158	0	23	2	13	20	100
Kurunegala	119	10826	2	100	0	10	0	6	0	60	4	92	0	29	1	20	0	4	2	482	1	75	2	159	12	100
Puttalam	249	6955	0	61	0	2	0	2	0	18	0	29	0	11	0	1	0	0	2	155	1	46	0	3	13	100
Anuradhapur	38	2762	1	45	0	5	0	2	2	18	1	75	0	21	1	18	0	2	5	377	0	72	5	260	7	95
Polonnaruwa	15	1352	5	33	1	7	0	9	0	8	12	63	0	7	0	9	0	1	4	222	1	25	3	144	4	100
Badulla	37	3601	4	119	0	11	0	14	0	5	4	145	3	123	0	57	0	1	4	358	3	223	1	14	7	100
Monaragala	51	3004	1	82	0	3	0	1	0	17	8	144	1	124	0	20	0	1	2	103	0	70	1	31	31	100
Ratnapura	44	11034	3	171	0	85	0	13	0	9	7	587	0	32	1	78	0	0	2	280	0	146	0	22	11	100
Kegalle	35	9324	0	37	0	14	0	8	1	46	11	211	0	80	0	15	0	0	10	326	1	69	1	11	11	100
Kalmune	65	2628	4	106	0	7	0	4	1	291	0	10	0	0	0	3	0	0	2	150	0	36	0	0	13	100
SRILANKA	1968	177316	52	1952	3	257	8	409	8	877	13	3130	10	1474	9	406	0	19	91	5866	13	1375	44	1316	17	97

Source: esurveillance.epid.gov.lk

*T=Timeliness refers to returns received on or before 01st December, 2017 Total number of reporting units 349 Number of reporting units data provided for the current week: 341 C**=Completeness
A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP **25th– 01st December 2017 (48thWeek)**

Disease	No. of Cases by Province									Number of cases during current week in 2017	Number of cases during same week in 2016	Total number of cases to date in 2017	Total number of cases to date in 2016	Difference between the number of cases to date in 2017 & 2016
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	01	00	01	02	66	62	6.4%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	01	00	00	01	00	00	00	00	00	02	05	284	368	- 22.8%
Measles	00	00	00	00	00	00	00	00	00	00	02	188	365	- 48.5%
Rubella	00	00	00	00	00	00	00	00	00	00	01	10	11	- 9.0 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	01	00	0%
Tetanus	00	00	00	00	00	00	00	00	00	00	00	16	10	60 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Japanese Encephalitis	00	00	01	00	00	00	00	00	00	01	00	26	18	44.4%
Whooping Cough	01	00	00	01	00	01	00	00	00	03	01	22	66	- 66.6%
Tuberculosis	05	31	08	03	04	19	11	07	07	95	180	7755	8508	- 8.8%

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.
 RDHS 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, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,
Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis
CRS** =Congenital Rubella Syndrome

AFP and all clinically confirmed Vaccine Preventable Diseases except Tuberculosis and Mumps should be investigated by the MOH

Dengue Prevention and Control Health Messages

Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them

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ON STATE SERVICE

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