



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health, Nutrition & Indigenous Medicine

231, de Saram Place, Colombo 01000, Sri Lanka

Tele: + 94 11 2695112, Fax: +94 11 2696583, E mail: epidunit@sltnet.lk

Epidemiologist: +94 11 2681548, E mail: chepid@sltnet.lk

Web: <http://www.epid.gov.lk>

Vol. 43 No. 25

11th – 17th June 2016

Water Supply in Disaster Management (Part II)

This is the second and last of the series of articles on Water Supply in Disaster Management.



Type of need	Quantity (L per day)	Comments
Survival (drinking and food)	2.5 to 3	Depends on climate and individual physiology
Basic hygiene practices	2 to 6	Depends on social and cultural norms
Basic cooking needs	3 to 6	Depends on food type, social and cultural norms

Table 2. Water requirement for survival per person

Water source and quality

Sources of water can be several. Quality of water coming through each source of water can also be different.

Each use of water does not require the same quality of water. Therefore, water should not be coming from the same source for different uses. This principle can be used in disaster management as well. For example, bottled water can be used for drinking while water from a stream is taken for washing clothes.

Accessibility to water

Specially in a disaster situation, accessibility to water can get compromised. Although relief agencies as well as other donors provide drinking water, provision of water for other uses like washing, cleaning is limited. There ore, it is im-

Priorities for water

How each individual prioritizes these uses of water is influenced by many factors. It can depend on the role that each person plays in their respective families as well as their responsibilities. For example, women may use water for daily household activities like washing, cooking, cleaning etc. over other activities, while men will choose to give priority to agricultural activities. Another factor that affects prioritization is cultural beliefs and customs. However, proper prioritization is important specially in a disaster as it is usually the users, but not the providers decide how they will use a scarce supply of water. Therefore, the Sphere has suggested a basic survival level water requirement which can be used as a starting point for calculating demand.

Contents

Page

1. <i>Leading Article – Water Supply in Disaster Management - Part II</i>	1
2. <i>Summary of selected notifiable diseases reported –(04th – 10th June 2016)</i>	3
3. <i>Surveillance of vaccine preventable diseases & AFP –(04th – 10th June 2016)</i>	4

portant that the affected population has easy access to some sort of water source.

Even if there is a water source which provides plenty of water, time taken to travel and queuing at the water source are limitations to collect water. Therefore, according to the Sphere, maximum distance from any household to a water point should ideally be 500 meters and the maximum waiting time to collect water should be 15 minutes. This is because of the fact that, if it takes more than 30 minutes to collect water, amount of water collected will be drastically reduced. It is found out that if the return trip travel time from the water source is less than 5 minutes, up to 50 liters of water per capita per day will be collected. However, if the return trip travel time exceeds 10 minutes, the quantity of water collected reduces up to 10-20 liters per capita per day.

On the other hand, by interventions like providing washing and laundry facilities near the water source, the need to transport water will be reduced. This will enhance proper utilization of water.

Step by step improvement of provision of water

In the initial stage of a disaster, it is difficult to meet all the water needs of the community. Therefore, initially, the basic survival needs of the community are fulfilled. With time as resources allow, other services can be provided gradually.

Time from initial intervention	Quantity of water (L/person/day)	Maximum distance from shelters to water points (km)
2 weeks to 1 month	5	1
1 to 3 months	10	1
3 to 6 months	15(+)	0.5

Table 3. Suggested quantities of water and distance of water points from shelters at different stages of an emergency response

Calculating water demand

Calculating the quantity of water required is of a difficulty due to several reasons. Most of the time, basic statistical information about the population is not available and the situation changes frequently. Therefore, a large number of assumptions have to be made in calculating the water requirement.

Usually, the staff involved in carrying out relief work is not included in the calculation. Water is only provided for the basic needs and in the initial period water for crops will not be provided. About 10% of water supplied is assumed to be wasted from leaks and spillage. This calculation also differs depending on the stage of the disaster.

However much accurate the calculation is, the demand can be much higher or lower than estimated because of which the providers should be flexible enough in supplying water.

Ensuring the desired outcome

It is important to ensure that, supply of water has a good impact on the affected population. For this purpose, the whole system of water supply has to be frequently evaluated and weak points have to be identified.

It is important to make sure that people have easy access to the site of provision of water and they have enough ways in which water can be transported and stored. If there are no adequate water containers to transport and store water, those will also have to be provided. The Sphere has set standards for provision of domestic water containers. According to that, there should be two vessels of 10-20 liters for collecting water plus one 20 liter vessel for water storage, (narrow necks and covers) per 5-person household.

It is also important to make sure that water is used in a way which will enhance and stabilize their health status . Along with that, there should also be adequate facilities to dispose used water. This is because providing more water to a place where there are no adequate facilities to dispose used water, will cause drainage problems which can ultimately lead to adverse health outcomes.

Sources

1. How much water is needed in emergencies available at http://www.who.int/water_sanitation_health/publications/2011/tn9_how_much_water_en.pdf?ua=1

Compiled by Dr. S.A.I.K. Sudasinghe of the Epidemiology Unit

Table 1: Selected notifiable diseases reported by Medical Officers of Health 04th - 10th June 2016 (24th Week)

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	67	6076	0	59	0	1	0	27	0	19	1	87	0	3	0	15	0	0	0	1	198	0	22	0	0	6	6
Gampaha	0	1983	0	33	0	5	0	12	0	5	0	124	0	7	0	16	0	0	0	0	184	0	20	0	3	0	0
Kalutara	0	1229	0	37	0	3	0	16	0	16	0	242	0	4	0	12	0	0	0	0	109	0	33	0	0	0	14
Kandy	1	952	1	89	0	12	0	9	0	26	1	72	0	55	0	37	0	0	0	0	89	0	25	0	6	13	91
Matale	0	184	0	21	0	1	0	9	0	2	0	48	0	12	0	13	0	1	0	0	22	0	45	0	14	0	92
Nuwareliya	5	146	0	50	0	1	1	27	0	15	3	25	1	44	0	20	0	0	0	1	71	0	26	0	0	54	100
Galle	0	791	0	36	0	8	0	2	0	2	0	149	0	45	0	6	0	0	0	0	158	0	24	0	1	0	95
Hambantota	0	322	0	23	0	1	0	2	0	50	1	71	0	35	0	17	0	0	0	0	131	0	10	0	17	92	
Matara	22	404	2	55	3	6	0	5	0	34	6	99	0	25	0	16	0	0	0	4	100	1	10	3	119	88	94
Jaffna	14	1264	0	107	0	3	1	46	0	35	0	8	1	526	0	8	0	0	0	0	104	1	27	0	1	67	100
Kilinochchi	0	49	0	23	0	0	0	24	0	4	0	11	0	17	0	0	0	0	0	3	0	7	0	0	0	25	75
Mannar	0	90	0	10	0	4	1	14	0	3	0	8	1	37	0	0	0	0	0	0	7	0	1	00	0	20	100
Vavuniya	0	149	1	6	0	2	0	26	0	26	0	11	0	8	0	6	0	0	0	0	19	0	3	0	3	50	100
Mullaitivu	0	99	0	12	0	0	0	13	0	35	0	22	0	5	0	0	0	0	0	0	9	0	5	0	4	20	100
Batticaloa	1	296	1	138	0	0	1	17	0	85	1	28	0	4	0	9	0	0	0	0	62	0	5	0	1	7	93
Ampara	0	98	0	16	0	0	0	0	0	17	0	23	0	0	0	6	0	0	0	0	69	0	1	0	5	0	29
Trincomalee	2	267	0	28	0	0	0	9	0	23	0	19	0	17	0	30	0	1	0	0	103	0	7	0	3	25	75
Kurunegala	9	884	4	117	0	7	0	1	0	6	1	81	0	10	0	16	0	2	0	1	160	1	30	0	46	14	97
Puttalam	1	572	0	26	0	2	0	4	0	0	0	30	0	57	0	0	0	0	0	0	42	0	25	0	1	8	77
Anuradhapura	0	279	0	32	0	1	0	3	0	21	0	176	0	19	0	11	0	0	0	0	126	0	20	0	100	0	74
Polonnaruwa	0	190	0	14	0	2	0	9	0	5	0	68	0	1	0	2	0	0	0	0	66	0	11	0	74	14	100
Badulla	11	291	1	60	0	10	0	5	0	19	2	77	2	49	0	74	0	0	0	3	96	0	100	0	2	18	94
Monaragala	0	164	0	29	0	1	0	2	0	9	0	137	2	66	0	95	0	2	0	0	34	0	16	0	20	27	100
Ratnapura	30	1057	12	176	0	18	0	17	0	15	7	274	0	17	0	76	0	0	0	0	100	1	73	0	1	33	83
Kegalle	0	635	0	37	0	12	0	16	0	41	0	107	0	13	0	14	0	0	0	0	172	0	26	0	0	9	100
Kalmune	0	352	0	38	0	3	0	4	2	39	0	11	0	0	0	2	0	4	0	0	52	0	13	0	0	8	92
SRILANKA	163	18823	22	1272	3	103	4	319	2	552	23	2008	7	1076	0	501	0	10	10	2286	4	585	4	550	4	19	79

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 10th June, 2016. Total number of reporting units: 339. Number of reporting units data provided for the current week: 272. C**=Completeness
A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

04th - 10th June 2016 (24th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2016	Number of cases during same week in 2015	Total number of cases to date in 2016	Total number of cases to date in 2015	Difference between the number of cases to date in 2016 & 2015
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	01	00	00	00	00	00	00	00	00	01	03	27	33	-18.1%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	00	00	00	00	00	00	00	00	01	01	04	196	189	+4.1%
Measles	00	01	00	00	00	00	00	00	00	01	47	271	1169	-77.1%
Rubella	00	00	00	00	00	00	00	00	00	00	00	06	06	0%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Tetanus	00	00	00	00	00	00	00	00	00	00	02	03	09	-66.6%
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	00	07	-100%
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	30	37	-19.1%
Tuberculosis	154	18	14	07	19	19	12	05	16	264	111	4386	4267	+3.1%

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

PRINTING OF THIS PUBLICATION IS FUNDED BY THE WORLD HEALTH ORGANIZATION (WHO).

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

ON STATE SERVICE

Dr. P. PALIHAWADANA
 CHIEF EPIDEMIOLOGIST
 EPIDEMIOLOGY UNIT
 231, DE SARAM PLACE
 COLOMBO 10