



# WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Health

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The National Strategic Plan for Dengue Prevention and Control in Sri Lanka 2011 – 2015  
(Part I)

This is the first in a series of three articles on the National Strategic Plan for Dengue Prevention and Control.

### Global Situation

Dengue ranks as the most important mosquito-borne viral disease in the world with significant morbidity and mortality. The global prevalence of dengue has grown dramatically in recent decades. It is endemic in many countries of the Asian Pacific region and has threatened the health of more than 2.5 billion people in the world.

### Sri Lankan Situation

Dengue has become a significant health problem to the country with a huge social and economic impact. Dengue viruses are transmitted throughout the year in many parts of the island, with greater intensity in more urban, densely populated areas. Increase in the number of cases has been observed in the middle of the year (May-July) with the South West monsoon rains and towards the end of the year (October-January) with the North East monsoon rains.

### The National Strategic Plan for Dengue Prevention and Control in Sri Lanka 2011 – 2015

The "National Strategic Plan for Dengue Prevention and Control in Sri Lanka 2011-2015" was prepared by the National Dengue Control Unit with a core group comprising national and local representatives and partners. This strategic plan is aimed at utilizing the available interventions optimally based on evidence and at the same time, advocating and strengthening the response to dengue within the health sector. It harmonizes with the Asia-Pacific Dengue Strategic Plan 2008-2016, by the World Health Organization (WHO).

Six strategies have been identified in this strategic plan namely,

1. Vector surveillance and integrated vector control

2. Disease surveillance
3. Case management
4. Social mobilization and inter-sectoral coordination
5. Outbreak response
6. Research

### 1. Vector surveillance and integrated vector control

**Vector Surveillance :** Vector surveillance is important to forecast possible outbreaks and to initiate early measures to prevent the occurrence or to limit the spread of outbreaks. In addition, it would also facilitate the study of the bionomics of vectors involved in dengue transmission, the role played by individual species of vector mosquitoes in disease transmission and aspects of vector ecology and biology important to carry out effective control programmes.

Strengthening of vector surveillance activities as well as continued vector surveillance throughout the year, irrespective of disease transmission is recommended.

### Recommended Activities for Vector Surveillance

- Sentinel site surveys based on clearly defined national criteria to gather information on vector species and their bionomics.
- Environmental surveys to determine the presence of potential breeding sites.
- Conduct spot checks to determine the impact of source reduction.
- Recruit necessary cadre for vector surveillance and environmental surveys.

**Integrated Vector Management :** The subcommittee emphasized the need for strengthening social mobilization and environmental sanitation as the preferred methods for sustainable vector control. It recommends the utilization of resources provided through the Presidential Task

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Force, active participation of persons from other departments, security forces and civil society organizations in carrying out effective source reduction programmes.

**Proposed Dengue Vector Control Activities based on Integrated Vector Management (IVM)**

- Increase capacity to implement Integrated Vector Management (IVM) including training and recruitment of public health staff.
- Enhance political commitment and support of other sectors.
- Mobilize inter-sectoral support for IVM.
- Organize workshops on geographic information system (GIS) or basic mapping to identify high risk areas.
- Develop National Policy on vector resistance monitoring.
- Draft legal framework and legislation for judicious use of chemical insecticides.
- Provide training on vector resistance monitoring.
- Update maps showing recorded changes in effectiveness of insecticides.

**2. Disease surveillance in Dengue Fever (DF) / Dengue Haemorrhagic Fever (DHF)**

Surveillance is a key strategy in prevention and control of DF/DHF. It helps to identify impending and current epidemics, plan interventions, monitor and evaluate control programmes.

The strategic plan 2011 – 2015 has identified four key areas under the disease surveillance. These are,

**Passive Surveillance**

It is important to strengthen the passive surveillance system or the routine reporting which is mandatory under the "Quarantine and Prevention of Disease Ordinance (1897) as DF/DHF are notifiable diseases since 1996.

**Special surveillance**

Special surveillance is carried out to obtain information on clinical presentation, severity and outcome of DF/DHF cases treated in hospitals in all parts of the country.

**Sentinel site surveillance and Early Warning System**

An early warning system is essential as it can identify impending epidemics and therefore, prevention and control measures can be implemented in a timely manner. An integral component of the early warning system should be prompt and meticulous laboratory testing.

At least one major government hospital will be selected as a sentinel site in all 25 districts. They will act as focal points/centers for specialized management, laboratory testing, training and research in each district and they will be equipped with necessary recourses for special surveillance. Private hospitals will also be included.

**E-based surveillance**

An e-mail based reporting system has been established in parallel with the existing passive surveillance system in order to ensure the timely investigation of epidemics and implementation of interventions. E-based reporting is expected to originate at sentinel sites and to include both regional and central authorities.

**The Proposed Activities in Disease surveillance**

- Strengthening the surveillance process (Laboratory surveillance and sentinel site surveillance) and the field investigation process
- Establishing early warning system for each district/division
- Co-operate with other relevant sectors (MOH, Epidemiology Unit, MRI etc)
- Establishing e-based surveillance

**3. Management of Dengue Fever (DF) / Dengue Haemorrhagic Fever (DHF)**

Five key areas have been identified under Case Management in the strategic plan. These are,

**1. National Guidelines on case management to care providers :** The new knowledge gained by clinicians trained in Thailand under the guidance of experts of international repute and over 4 decades of experience in case management has been utilized in the development of national guidelines. Inputs from experienced local clinicians have ensured the applicability of these guidelines to the local setting.

These guidelines detail the refinements on fluid management and include chapters on the management of complications, place for adjuvant therapy as well as guidance on the avoidance of interventions detrimental to recovery.

**2. Education on case management :** Training programmes should be properly planned and phased out to target all care providers.

**3. Facilities to provide care :** Facilities to provide care as per guidelines should be made available for early diagnosis and treatment.

**4. Monitor the application of guidelines and conduct clinical audits to identify and rectify the deficiencies :** Impact of the training and use of guidelines has to be monitored by regular planned audits.

**5. Death evaluation and fact finding inquiries in all suspected dengue deaths :** Detailed evaluation of all dengue related deaths is essential to determine the cause of deaths and address areas which need improvement.

**The Proposed Activities in Case Management**

- Make guidelines available for all care providers
- Make facilities available to apply guidelines
- Monitor the use and proper application of the guidelines
- Educate and train consultants and middle grade doctors, primary health care clinicians, intern house officers, medical students, nurses, public and media
- Provision of laboratory facilities and availability of essential supplies for management of dengue
- Conduct clinical audits in major hospitals (base and above) in all the provinces and centers with consistently high Case Fatality Rate (CFR) and where training has been done
- Conduct death audits on all confirmed or suspected dengue deaths
- Post mortem made mandatory by internal circular
- Conduct National/Regional review meetings

**Compiled by Dr. H. A. Shanika Rasanjalee of the Epidemiology Unit**

Table 4: Selected notifiable diseases reported by Medical Officers of Health 22<sup>nd</sup> - 28<sup>th</sup> March 2014 (13<sup>th</sup> 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	60	2404	2	33	0	6	1	26	0	147	3	33	0	0	2	10	0	0	1	125	1	17	0	3	75	25
Gampaha	8	1045	1	52	0	3	0	14	0	9	1	70	0	5	0	26	0	2	1	131	0	20	0	2	27	73
Kalutara	18	536	2	40	0	3	1	16	1	42	2	93	0	0	0	5	0	0	3	84	0	23	0	0	69	31
Kandy	9	169	0	34	0	1	0	4	0	1	0	10	0	20	2	34	0	0	10	74	1	11	0	1	96	4
Matale	4	84	0	20	0	1	0	7	0	1	1	14	0	2	13	45	0	0	0	10	0	3	1	5	85	15
NuwaraEliya	1	45	6	57	0	1	1	9	0	8	0	0	1	21	0	10	0	0	1	35	0	6	0	0	85	15
Galle	3	218	3	27	0	5	0	0	0	3	3	53	1	23	0	0	0	0	7	122	0	18	0	2	60	40
Hambantota	2	84	1	12	0	3	0	6	1	1	3	38	0	37	0	5	0	0	2	55	0	14	1	76	83	17
OMatara	1	92	2	21	1	2	1	19	0	5	1	21	1	21	0	13	0	0	7	80	0	17	0	21	100	0
Jaffna	7	298	3	129	0	3	5	84	0	27	0	5	5	217	0	7	0	0	2	45	0	12	0	0	92	8
Kilinochchi	0	20	0	48	0	1	0	9	0	0	0	0	0	11	0	0	0	0	0	2	0	3	0	4	0	100
Mannar	0	3	0	10	0	8	0	19	0	0	0	4	2	18	0	1	0	0	1	1	0	1	0	1	40	60
Vavuniya	0	23	0	14	0	0	0	4	0	3	0	6	0	3	0	0	0	0	0	4	0	3	0	0	25	75
Mullaitivu	0	42	0	16	0	0	0	6	0	8	0	6	0	5	0	0	0	0	0	4	0	3	0	4	0	100
Batticaloa	39	252	6	86	0	1	0	15	0	11	2	5	0	1	0	5	0	0	0	14	0	3	0	0	79	21
Ampara	1	44	0	20	0	0	0	0	0	4	0	8	0	7	0	1	0	1	1	32	0	2	1	5	86	4
Trincomalee	27	159	1	9	0	1	0	0	0	0	0	5	2	8	0	0	0	0	4	29	0	1	0	0	92	8
Kurunegala	11	333	1	25	0	9	1	8	3	5	0	32	0	29	0	8	0	0	15	143	1	24	2	48	67	33
Puttalam	6	174	1	15	0	0	1	5	0	9	3	43	0	18	0	1	0	0	0	37	0	1	0	1	62	38
Anuradhapura	4	139	1	41	1	1	0	0	2	5	5	39	1	22	0	2	0	0	4	80	0	18	3	94	89	11
Polonnaruwa	0	90	0	12	0	1	0	1	0	0	0	9	0	0	0	1	0	0	0	29	0	2	0	23	0	100
Badulla	4	131	0	28	0	3	0	2	0	2	0	18	1	21	0	12	0	0	0	25	0	21	0	0	53	47
Monaragala	2	67	0	21	1	2	0	2	0	27	4	37	7	41	4	52	0	1	2	29	0	6	1	8	91	9
Ratnapura	4	179	1	51	0	11	0	6	2	7	5	84	2	31	11	111	0	0	5	57	0	9	1	9	72	28
Kegalle	8	187	2	37	1	3	1	12	1	3	6	48	4	22	1	22	0	0	5	87	1	18	0	1	91	9
Kalmune	4	38	1	37	0	1	0	3	0	10	0	1	0	0	0	0	0	0	9	52	0	2	0	0	62	38
<b>SRILANKA</b>	<b>223</b>	<b>6856</b>	<b>34</b>	<b>895</b>	<b>4</b>	<b>70</b>	<b>12</b>	<b>277</b>	<b>10</b>	<b>338</b>	<b>39</b>	<b>682</b>	<b>27</b>	<b>583</b>	<b>33</b>	<b>371</b>	<b>0</b>	<b>4</b>	<b>79</b>	<b>1386</b>	<b>4</b>	<b>258</b>	<b>10</b>	<b>308</b>	<b>71</b>	<b>29</b>

Source: Weekly Returns of Communicable Diseases (WRCD).

\*T=Timeliness refers to returns received on or before 28<sup>th</sup> March, 2014. Total number of reporting units 337. Number of reporting units data provided for the current week. 243. C\*\*\_Completeness  
A = Cases reported during the current week. B = Cumulative cases for the year.

**Table 1: Vaccine-Preventable Diseases & AFP**

**22<sup>nd</sup> – 28<sup>th</sup> March 2014 (13<sup>th</sup> Week)**

Disease	No. of Cases by Province									Number of cases during current week in 2014	Number of cases during same week in 2013	Total number of cases to date in 2014	Total number of cases to date in 2013	Difference between the number of cases to date in 2014& 2013
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	01	00	00	00	00	01	01	23	15	+53.3%
Diphtheria	00	00	00	00	00	00	00	00	00	00	-	00	-	%
Mumps	00	00	01	01	02	01	01	00	01	07	29	210	414	-49.3%
Measles	11	02	17	01	02	13	09	01	09	65	19	1217	144	+745.2%
Rubella	00	00	00	00	01	00	00	00	00	01	-	06	-	%
CRS**	00	00	00	00	00	01	00	00	00	01	-	03	-	%
Tetanus	00	00	00	00	00	00	00	00	00	00	00	06	06	0%
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	-	00	-	%
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	-	17	-	%
Whooping Cough	00	00	00	00	00	00	01	00	00	01	00	16	18	-11.1%
Tuberculosis	99	47	14	02	20	04	00	05	23	214	96	2752	2220	+24.0%

**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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