



# WEEKLY EPIDEMIOLOGICAL REPORT

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## Can we relax in the post pandemic period of the Novel Influenza A (H1N1)?

### Beginning of the pandemic of novel Influenza A/H1N1

After early outbreaks in North America in April 2009, a new influenza virus started spreading rapidly around the world. This influenza virus type A belonging to the sub type H1N1 was a unique combination of influenza virus genes not previously identified in either animals or people. Hence, influenza caused by this new virus was named **Novel Influenza A/H1N1**. On Saturday, April 25, 2009, under the rules of the International Health Regulations, the Director-General of the WHO declared the 2009 H1N1 outbreak a Public Health Emergency of International Concern and recommended that countries intensify surveillance for unusual outbreaks of influenza-like illness and severe pneumonia. By the time WHO declared a pandemic in June 2009, a total of 74 countries and territories had reported laboratory confirmed infections. To date, most countries in all continents in the world have confirmed cases due to **novel Influenza A/H1N1**

The patterns of the illness and deaths caused by this new infection were not normally seen in infections due to seasonal influenza. Most of the influenza specific deaths had occurred among younger people, including those who were otherwise healthy. Pregnant women, younger children and people of any age with certain chronic lung or other medical conditions appeared to be at a higher risk of more complicated or severe illness. Many of the severe cases had been due to viral pneumonia, which was harder to treat than bacterial pneumonias usually associated with seasonal influenza. Many of these patients had required medical intensive care. According to the figures released by the WHO, H1N1 infection has claimed globally more than 16000 human lives up to now. Of these, 4572 deaths were confirmed by laboratory tests.

### Sri Lankan Situation

According to the Epidemiological Unit of the Ministry of Health, the first confirmed case of Novel Influenza A/H1N1 was reported in Sri Lanka on 16th June 2009. One hundred and ten (110) lab confirmed cases had been reported by 15th October 2009. All of these were imported cases. The sustained community transmission was established in the country by 16th October 2009. So far, Sri Lanka has reported 642 laboratory confirmed cases at the end of February 2010 with 48 laboratory confirmed deaths. These deaths consisted of four maternal deaths. One fourth of these deaths had occurred in the age group of 21 to 30 years. Geographically, cases had been reported from all districts except Jaffna and Kilinochchi. Non reporting of cases from these districts may have been due to limited surveillance activities in the Northern area. Based on the laboratory data released by the Medical Research Institute (MRI), the Epidemiological Unit has announced on 01st of March 2010 that there was no current activity of the H1N1 pandemic in the country.

### The chronological order of the response to the H1N1 pandemic in Sri Lanka was as follows,

1. With the announcement of the H1N1 pandemic situation by the WHO, an awareness campaign was launched targeting general public as well as health personnel.
2. Surveillance activities at the Ports of entry were strengthened to identify infected persons early with a view to directing them for proper case management. The aim of this exercise was to delay the establishment of community transmission as long as possible.

WEBER SRI LANKA - 2010

Contents	Page
1. Article : Can we relax in the post pandemic period of the Novel Influenza A (H1N1)?	1
2. Surveillance of vaccine preventable diseases & AFP (18 <sup>th</sup> – 24 <sup>th</sup> September 2010)	3
3. Summary of newly introduced notifiable diseases (18 <sup>th</sup> – 24 <sup>th</sup> September 2010)	3
4. Summary of selected notifiable diseases reported (18 <sup>th</sup> – 24 <sup>th</sup> September 2010)	4

3. Twenty hospitals situated all over the country were identified as sentinel sites for surveillance as well as for management of cases. Necessary equipment and drugs were distributed to these institutes to improve the capacity in relation to management and isolation of cases and infection control.
4. With the aid of the WHO extra stocks of antiviral drugs and pandemic influenza vaccines for H1N1 was brought to the country.
5. Continued surveillance activities were carried out under the Influenza Like Illnesses (ILI) surveillance programme.

### What is post pandemic period?

As stated earlier and is evident from the name "Novel Influenza", H1N1 is a totally new virus against which human immunity was non-existent. This posed the threat of rapid spread of this variant of influenza over other circulating seasonal influenza viruses. The outcome was considerable morbidity and mortality due to the new influenza A variant. With the time communities developed immunity against this novel virus either by exposure to the natural infection or pandemic vaccines. This phenomenon explained the declining disease burden due to novel influenza A H1N1 as opposed to cases due to other strains of seasonal influenza viruses. This phenomenon marked the **beginning of the post pandemic period**. Consequent upon this, based on currently available data the WHO has declared on 10<sup>th</sup> of August 2010 that the pandemic status of H1N1 influenza has declined and entered the post pandemic status. But a few countries, namely India and New Zealand still experience the clusters of novel influenza A/H1N1 cases. This suggests that some pockets of communities are still virgin for this virus and are in risk of the disease and possible complications. It is necessary to remember that influenza A/H1N1 will continue to circulate as a seasonal influenza virus for some period of time in the post pandemic period.

### What should we do in the post pandemic period and why?

In an environment of continued circulation of the influenza A/H1N1 virus for some period, what should we do in Sri Lanka?

Surely, we cannot relax as health personnel or members of the community. The activities that should be adopted in the post pandemic period are as follows:

#### 1. Disease surveillance

It is **mandatory** to persist with continued surveillance activities in the post pandemic period. For this purpose, following surveillance strategies could be used;

- At selected sentinel hospitals, at the OPD level, surveillance of ILI cases to detect an observed increase in ILI over the expected baseline needs continuation. Similarly sending clinical specimens (oro-pharyngeal swabs) of patients presenting to OPDs of the identified sentinel sites with history and clinical features suggestive of influenza like illness to the MRI is also essential. The inclusion criteria of the case definition for patients with ILI include fever more than 38°C, cough or sore throat without any other diagnosis. This will help identify currently circulating strains of influenza

viruses including influenza A/H1N1 and initiate control and preventive action in the event of detecting novel influenza A/H1N1 cases.

- An increased number of severe acute respiratory infection cases in medical wards in hospitals too act as a signal for possible re-introduction of novel influenza A/H1N1 infections in the country.
- Under the event based surveillance system, any outbreaks /clusters of community acquired ILI/pneumonia reported to the area Medical Officer of Health (MOH) through formal and informal channels should be investigated for influenza A/H1N1 with a view to taking early control and preventive action.

#### 2. Early diagnosis and treatment (secondary prevention)

This is very important because early diagnosis gives the chance to start the antiviral treatment for those who are indicated for it. Early start of treatment prevents complications as well as the spread of the disease to other susceptible persons. Therefore, **every physician should still be on alert**. Though there have been no cases of influenza A/H1N1 since of late, being alert is justified as there is a risk of the virus being circulated among susceptible communities in the country. The threat of re-introduction of the virus to the country is possible as clusters of influenza A/H1N1 are present in neighbouring India and the influx of tourists to the country has increased with possible more arrivals in the future.

#### 3. Personal Hygiene

H1N1 is a contagious disease which can spread via direct contact or indirectly via droplets. Therefore, consistent use of simple personal hygiene measures like hand washing with soap and water, covering the nostrils and mouth while sneezing and coughing is **highly encouraged**. These hygienic measures should be promoted in the community as a strategy to prevent respiratory infections.

#### 4. Use of pandemic influenza vaccines

Adhering to the recommendations of the WHO Strategic Advisory Group of Experts (SAGE) on Immunization, the Epidemiology Unit has highly encouraged vaccinating health personnel, other front line workers at risk of the infection and individuals with morbidities which make them highly vulnerable to complications of novel influenza A/H1N1 with the pandemic influenza vaccine. The vaccination is important as influenza A/H1N1 vaccine will circulate as a seasonal influenza virus for many more years to come in the post pandemic period. As such, clusters of influenza A/H1N1 cases are bound to occur in many countries in the post pandemic period. Thus, it is advisable for provincial, district and institutional health authorities in the country to create awareness among these target groups to accept the vaccine to minimize the possible health and economic impact in a situation of re-commencement community transmission.

#### Resources :

1. [www.who.int](http://www.who.int)
2. [www.cdc.gov](http://www.cdc.gov)
3. [www.epid.gov.lk](http://www.epid.gov.lk)

This article was compiled by Dr. Ranjan Wijesinghe, Consultant Community Physician and Dr. Chathura S Edirisuriya, registrar in Community Medicine

Table 1: Vaccine-preventable Diseases & AFP

18<sup>th</sup> - 24<sup>th</sup> September 2010(38<sup>th</sup> 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	00	00	00	00	00	66	55	+ 20.0 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	-
Measles	00	00	00	00	00	00	00	00	00	00	02	76	143	- 46.9 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	18	19	- 05.3 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	27	51	- 47.0 %
Tuberculosis	227	08	01	04	24	01	00	21	48	334	210	7104	7654	+ 07.2 %

Table 2: Newly Introduced Notifiable Disease

18<sup>th</sup> - 24<sup>th</sup> September 2010(38<sup>th</sup> 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	20	05	09	03	04	10	16	00	07	74	66	2559	12738	- 79.9 %
Meningitis	07 CB=1 GM=1 KL=5	00	01 MT=1	01 JF=1	02 KM=1 BT=1	02 KN=2	02 AP=2	01 MO=1	02 KG=2	18	35	1274	903	+ 41.1 %
Mumps	03	00	02	00	00	07	04	00	06	22	35	885	1425	- 37.9 %
Leishmaniasis	00	00	05 HB=5	00	00	00	00	00	00	05	08	258	544	- 52.5 %

**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.

**Dengue Prevention and Control Health Messages**

**Thoroughly clean the water collecting tanks bird baths, vases and other utensils once a week to prevent dengue mosquito breeding.**

**Table 4: Selected notifiable diseases reported by Medical Officers of Health**  
18<sup>th</sup> - 24<sup>th</sup> September 2010(38<sup>th</sup> Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns received timely
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
Colombo	25	5368	11	246	0	14	3	110	1	36	6	452	0	7	0	53	0	1	62
Gampaha	23	3622	4	129	1	25	2	42	0	20	15	352	0	13	2	92	0	4	87
Kalutara	12	1696	3	201	0	13	2	24	0	74	19	290	0	2	0	31	0	1	83
Kandy	3	1494	1	255	0	4	1	25	0	14	2	89	1	115	5	115	0	1	87
Matale	2	555	3	265	0	6	0	32	0	72	2	82	1	6	1	48	0	0	92
Nuwara	1	195	0	308	0	0	2	105	0	84	1	22	0	54	0	35	0	0	69
Galle	9	1030	4	222	0	6	0	5	0	17	6	80	0	19	0	12	0	3	63
Hambantota	8	752	1	65	0	7	1	3	2	12	1	82	0	79	0	12	0	0	73
Matara	6	548	1	152	0	8	0	9	0	49	7	292	1	116	0	17	0	0	76
Jaffna	8	2684	6	225	1	4	3	483	0	8	0	1	0	112	2	57	0	2	75
Kilinochchi	2	38	0	14	0	0	0	10	0	1	0	3	0	0	0	1	0	0	100
Mannar	12	520	4	42	0	2	0	41	0	10	0	0	0	1	0	16	0	0	50
Vavuniya	4	568	3	43	0	3	1	41	1	10	0	2	0	1	0	10	0	1	75
Mullaitivu	1	21	0	6	0	0	0	2	0	0	0	0	0	2	0	1	0	0	17
Batticaloa	0	1176	2	148	0	4	1	33	0	36	1	11	0	3	0	4	0	2	93
Ampara	0	143	1	81	0	1	0	8	0	65	0	30	0	1	0	11	0	0	71
Trincomalee	4	935	8	132	0	14	1	7	0	11	0	20	0	18	0	14	0	1	73
Kurunegala	7	1315	3	256	0	18	0	34	0	14	6	258	1	51	0	102	0	3	90
Puttalam	8	937	4	120	0	6	0	48	0	124	1	67	0	1	0	21	0	1	78
Anuradhapura	6	991	1	69	1	11	0	11	1	38	0	73	0	25	0	43	0	3	79
Polonnaruwa	3	377	0	85	0	1	0	6	0	8	0	53	1	2	0	41	0	0	86
Badulla	8	1213	1	170	0	1	3	76	0	27	1	69	1	85	0	87	0	0	67
Monaragala	3	935	3	152	0	1	0	33	1	7	1	32	2	72	1	72	0	3	73
Ratnapura	25	2589	5	412	0	5	0	16	0	26	9	322	3	55	3	87	0	2	78
Kegalle	4	838	4	124	1	15	2	55	0	21	12	228	1	22	3	94	0	0	100
Kalmunai	1	506	4	241	0	3	0	7	0	6	0	3	0	0	0	11	0	1	54
<b>SRI LANKA</b>	<b>185</b>	<b>31046</b>	<b>77</b>	<b>4163</b>	<b>04</b>	<b>172</b>	<b>22</b>	<b>1265</b>	<b>06</b>	<b>790</b>	<b>90</b>	<b>2913</b>	<b>12</b>	<b>862</b>	<b>17</b>	<b>1087</b>	<b>00</b>	<b>29</b>	<b>76</b>

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 24<sup>th</sup> September, 2010 Total number of reporting units =311. Number of reporting units data provided for the current week: 247

A = Cases reported during the current week. B = Cumulative cases for the year.

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