



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Healthcare and Nutrition

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Flashback 2009 (part 1)

In the annals of the entire history of the Epidemiology Unit, Year 2009 could be considered as the most exigent year. Pressure was mounting on the epidemiologists as the pandemic influenza H1N1 started sweeping across the globe. In an unprecedented manner, dengue outbreak was exerting its pressure on all spheres in the country. Leptospirosis too was being reported in large numbers challenging the health system to prevent a leptospirosis outbreak, similar to the outbreak which occurred in the previous year. Expanded Programme on Immunization (EPI) was undergoing the most difficult period of its proud history as unfounded allegations against it started inflicting cracks in its solid foundation. While destined to counter all these challenges, the biggest concentration of displaced inhabitants in the Northern province at the height of the concluding phase of the civil war hurled probably the greatest challenge to Sri Lankans and epidemiologists were no exception. Organizing rapid response to all these calamities had to be shouldered by the Epidemiology Unit while performing its countless routine functions effectively with stretched resources. Today, on the brink of the dawning of a new year, Epidemiology unit looks back at accomplishments of 2009 with a great sense of pride and satisfaction.

In 2009, country experienced the biggest dengue outbreak in its entire history. The magnitude of the outbreak is reflected in 35007 suspected cases and 346 reported deaths. National incidence rate of reported dengue cases for 2009 was as high as 169 cases per 100,000 population at the national level. Highly populated, socially and economically significant Western Province and the Central Province were highly affected with incidence rates of 518 cases and 782 cases per 100,000 population respectively.

Multi pronged attack on dengue was a pre requisite for containing this massive outbreak. Epide-

miology Unit spearheaded the risk communication campaign with the Health Education Bureau as the premiere disease surveillance agency. Realizing its socially responsible role, Epidemiology Unit informed general public about the disease situation in a manner so as not to make them panicked. This leading role played by the EU enabled social mobilization of a wide cross section of the society to control the outbreak. It focused on strengthening the quality and effectiveness of medical management of dengue to prevent increasing deaths. With a view to identifying important epidemiological variables to control the outbreak, special active surveillance was strengthened through soliciting support of infection control nurses. Doctors and other relevant staff were updated with regular Continued Medical Education type training programmes on effective management of more complicated cases of the disease, with the help of both local and foreign experts. Epidemiology Unit took the leading role in organizing national level Consultative meetings of senior clinicians and other relevant experts throughout the year 2009.

Epidemiology Unit facilitated reviewing and updating the National Guidelines on Clinical Management of Dengue/ Dengue Haemorrhagic fever published in 2005 for doctors by an expert panel of clinicians. Considering the fact that in-depth analysis of cases and deaths were useful for identifying areas for further strengthening clinical management, audits were also facilitated during the outbreak. Special attention was diverted to early healthcare seeking among fever patients, in particular adults and those with underlying comorbidities.

Among other activities, the National Task Force chaired by the Secretary of the Ministry of Health was convened to strengthen inter-sectoral coordination and solicit the support of other relevant sectors. Biannually the Dengue situation and

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proposed action plans were reviewed with stakeholders to control and prevent the disease. In high risk areas, effective implementation of proposed activities were evaluated. Regional Epidemiologist's quarterly review meeting was used as a forum for a national review of the situation. For forecasting outbreaks, control and prevention, regular vector surveillance activities were used as supplementary measures in all high-risk areas. Fulfilling a long felt need, year 2009 saw the distribution of fogging machines and other equipments including microhaematocrit machines to all high-risk areas. Death reviews were made an essential component at institutional and district levels with the participation of experts to study possible reasons for deaths. Media seminars/ briefings were regular features for risk communication by the Health Education Bureau, Epidemiology Unit and the Dengue Control Unit.

National immunization program has been identified as a long term investment by the Sri Lankan government. Its value, over the years, has been very strongly internalized in Sri Lankan parents. However, events in 2009 practically demonstrated that this positions could not be taken for granted. A new situation has dramatically arisen and is further evolving in a scenario where devastating vaccine preventable diseases are no longer existent or appear in very negligible numbers. It has further been compounded by the increased negative electronic and media coverage.

In the year 2009, the biggest challenge to the National Immunization Program surfaced in the aftermath of the death of a child following rubella vaccination due to anaphylactic shock in Matara in the school health programme. This is the first event of this nature experienced in the annals of the national program of immunization. Following the untimely demise of this child, both print and electronic media and some section of the society were up in arms against the Ministry Of Health accusing and criticizing it for importing and providing services with inferior quality vaccines. Another criticism was the poor preparedness and non availability of relevant equipment to manage immediate life threatening emergencies after vaccinations in field settings. Responding to the raised concerns of a wide cross section of interested establishments, the rubella vaccination programme was temporarily suspended subject to resumption following a through investigation.

Two independent investigations were conducted by local experts and experts from the WHO. An independent investigation by the WHO experts was meant to provide an unbiased, second opinion as regard the situation. It further ensured boosting the image of the investigation in the eyes of the general public. The outcome of the investigation was that the death was not linked to the inferior quality of the vaccine and a system was not in place for response to such an eventuality in a timely manner. Based on conclusions of investigations, the rubella vaccination was resumed a few weeks later.

Events were to take a different twist a few months later. Letting all efforts of damage control run down drains, another recipient of the rubella vaccine in Kurunegala died in circumstances similar to the death in Matara. The trust of the general public on immunization appeared to be immensely eroding. Not only lay persons but also health professionals started raising questions regarding the quality of vaccines used in the EPI

and safety of mechanisms in place for response to serious adverse events following immunization. Epidemiology Unit in collaboration with the vaccinologist at the MRI and Director Medical Technology and Supply hastened to have the incriminated vaccine vials tested at the Technical Advisory Group (TAG) which is a center of excellence in Australia in relation to pharmaceutical testing. The report confirmed that the vaccine vials were consistent with global accepted standards. In response to the event, the Director General of Health services appointed a multi disciplinary expert committee to investigate the second death following rubella vaccination. The report of this expert committee chaired by the professor of paediatrics, University of Colombo is yet to be released and will shed light on scientific evidence on circumstances that led to the death following rubella vaccine. Currently, the Epidemiology Unit has shouldered the responsibility of introducing system changes to counter emerging issues related to immunization with relevant stakeholders in the health sector.

Epidemiology Unit contemplates on ways and means that are required to regain the confidence and the trust of everyone in EPI. In the coming year, Epidemiology Unit will think about strategies which may include extensive IEC campaigns over a prolonged period of time. Unless EPI section of the Epidemiology Unit shoulders this responsibility, reversal of these unparalleled milestones achieved by the EPI will be imminent.

Pandemic influenza H1N1 was devastating the countries in the Northern and Southern hemisphere. No sooner had the news broken out that a novel influenza virus was circulating than the epidemiologists started plotting measures to mitigate the impact of the outbreak in Sri Lanka. On the same day, stakeholders from the WHO were summoned and support required was informed. From that day onwards, Epidemiology Unit was incessantly working with many counterparts in many fronts to counter the threat of the pandemic. As the initial step, quarantine measures consistent with international health regulations were introduced. A subcommittee on H1N1 was formed under the technical Expert Group of Avian and pandemic influenza with a view to effectively responding to the emerging infection. For the purpose of creating awareness among medical fraternity, a fact sheet focusing on all aspects of the new variant of influenza was developed and circulated. Two circulars on the disease and specimen collection were also circulated among hospitals in the country. Twenty selected sentinel hospitals were alerted to be prepared to respond to a possible pandemic. Epidemiology Unit was in touch with the WHO to procure antiviral medications and personal protective equipment. Along with the Medical Supplies Division, a system was developed to ensure their procurement and distribution them to hospitals in the country under the supervision of the Epidemiology Unit. Meanwhile, disease and laboratory surveillance was strengthened to detect initial cases in Sri Lanka. The country has been on the threshold of testing the hard labour pumped in since 2004 in enhancing the capacity of laboratory diagnosis of influenza A. Medical Research Institute was prepared to respond to the need of confirming influenza A (H1N1) using the Real Time Polymerase Chain Reaction (RT-PCR) technique.

This article was compiled by Dr Ranjan Wijesinghe, Consultant Epidemiologist

Table 1: Vaccine-preventable Diseases & AFP

26th December-01st January - 2010(53rd Week)

Disease	No. of Cases by Province									Number of cases during current week in 2009	Number of cases during same week in 2008	Total number of cases to date in 2009	Total number of cases to date in 2008	Difference between the number of cases to date in 2008 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	00	00	02	00	0	00	00	00	00	02	04	78	103	-24.3 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	01	-
Measles	00	00	00	00	00	00	00	00	00	00	00	178	108	+64.8 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	29	36	-19.4 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	65	57	+14.0 %
Tuberculosis	125	05	01	14	04	23	00	11	23	206	234	10306	8181	25.9 %

Table 2: Newly Introduced Notifiable Disease

26th December-01st January - 2010(53rd Week)

Disease	No. of Cases by Province									Number of cases during current week in 2009	Number of cases during same week in 2008	Total number of cases to date in 2009	Total number of cases to date in 2008	Difference between the number of cases to date in 2009 & 2008
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	11	01	06	09	07	10	02	02	02	51	57	14407	5493	+162.3 %
Meningitis	07 CB=3 KT=4	02 ML=2	06 GL=4 MT=2	00	05 TR=3 BT=2	11 KR=11	08 PO=6 AP=2	01 BD=1	02 KG=2	42	18	1739	1300	33.8 %
Mumps	03	01	01	01	02	03	02	00	04	17	37	1718	2909	-38.8 %
Leishmaniasis	00	00	01 HB=1	00	04 TR=4	00	01 AP=1	00	00	06	Not available*	674	Not available*	-

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.

10th South East Asia Regional Scientific Meeting of the International Epidemiological Association
23rd - 26th May 2010

Colombo, Sri Lanka

Theme

"Epidemiological Methods in Evidence Based Healthcare"

Visit <http://www.episea2010.com>

Table 4: Selected notifiable diseases reported by Medical Officers of Health
26th December - 01st January - 2009(53rdWeek)

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	126	4805	8	256	0	13	2	229	0	131	12	1194	0	6	5	163	0	7	85
Gampaha	108	4589	2	177	0	23	0	53	0	38	3	485	0	10	0	270	0	6	67
Kalutara	5	1537	3	374	0	16	0	64	0	60	4	594	0	1	1	103	0	4	83
Kandy	14	4204	5	365	0	8	0	33	0	67	2	242	1	177	0	155	0	1	76
Matale	35	2061	4	169	0	4	0	34	0	39	1	338	0	5	2	98	0	2	75
Nuwara	6	297	5	423	0	2	5	204	0	803	1	48	3	84	2	104	0	0	100
Galle	12	650	4	269	0	10	0	6	1	112	0	262	0	15	0	37	0	6	89
Hambant	7	977	3	111	0	8	1	9	0	17	2	107	0	94	0	53	0	0	82
Matara	10	1159	3	275	0	9	1	13	0	27	4	251	2	157	2	73	0	1	88
Jaffna	112	386	2	149	0	3	19	386	0	30	0	1	11	156	3	210	0	5	50
Kili-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mannar	5	19	3	140	0	1	2	127	0	23	0	0	0	1	0	77	0	0	100
Vavuniya	209	1122	1	1661	0	25	1	706	0	5	0	8	0	6	0	3780	0	0	75
Mullaitivu	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Batticaloa	49	660	8	363	0	15	0	28	0	56	0	15	1	8	0	24	0	6	91
Ampara	1	264	7	156	0	1	0	12	0	8	0	16	0	3	3	108	0	1	71
Trincomal	12	377	3	250	0	4	0	25	0	10	0	23	0	19	0	62	0	1	70
Kurunega	55	2961	10	321	0	13	2	90	1	17	9	193	2	106	3	176	0	4	90
Puttalam	18	786	4	203	0	7	3	84	0	11	0	98	0	31	0	44	0	1	67
Anuradha	31	668	4	191	2	10	0	9	0	55	0	100	0	31	0	206	0	5	74
Polonnar	0	209	5	152	0	4	0	21	0	15	1	81	0	10	0	99	0	0	100
Badulla	17	401	4	442	0	5	3	72	4	41	2	103	0	137	0	325	0	1	73
Monaraga	2	196	14	196	0	2	0	25	2	40	0	18	0	68	0	94	0	2	73
Ratnapur	9	2115	4	549	1	24	0	56	0	47	4	394	1	38	5	279	0	2	83
Kegalle	24	3840	1	196	0	10	0	59	0	7	1	347	2	40	4	289	0	1	91
Kalmunai	36	376	5	139	0	2	0	16	0	12	0	7	0	3	0	26	0	0	69
SRI LANKA	903	34659	112	7529	03	219	39	2362	08	1671	46	4925	23	1206	29	6855	00	56	78

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 01st January, 2010 Total number of reporting units =311. Number of reporting units data provided for the current week: 236

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

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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.

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