



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health

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Vol. 39 No.13

24th – 30th March 2012

The National Immunization Programme – Financial Aspects (Part I)

This is the first in a series of two articles on the financial aspects of the National Immunization Programme (NIP).

Immunization is a process in which the immune system of a person is enhanced to fight against a disease causing organism by way of inoculating the person with a less dangerous form of the disease causing organism or a product of that organism.

The world has witnessed a dramatic reduction in disease and deaths due to immunization. The first vaccine was introduced by Sir Edward Jenner in 1798 against smallpox. Today, we have human vaccines against over 32 infectious agents out of 70 known infectious agents causing diseases among humans. Vaccines against Dengue, Malaria, Tuberculosis, HIV are in the development stage and may be available in the coming years.

NIP of Sri Lanka is one of the most successful programmes of its kind in the world. As a result, Sri Lanka has observed a remarkable reduction in diseases and deaths among infants and children due to vaccine preventable diseases. In fact this programme has been a model and a case study to many other developing countries.

Currently the EPI programme provides Immunization against eleven killer childhood diseases. They are Tuberculosis, Polio, Measles, Haemophilus influenzae type b (Hib) disease, Mumps, Japanese Encephalitis, Rubella, Congenital Rubella Syndrome, Diphtheria, Pertusis, Tetanus and Hepatitis B. The programme was started with the introduction of BCG vaccination in 1949. The Expanded Programme on Immunization (EPI) was started in 1978 to strengthen NIP further. The newest vaccine introduced to the EPI was MMR vaccine in 2011.

Figure 1 Immunization Financing Form 1978 – 2010

1978	1990	1995	2003	2008
All EPI vaccines were donated by UNICEF	GOSL started financing with gradual increase	EPI vaccines were fully financed by the GOSL	Routine vaccines were funded by the GOSL	Co-financed by the GAVI & GOSL
TT, BCG, DPT, OPV, Measles	TT, BCG, DPT OPV, Measles MR, DT, aTd Rubella, Live JE, Typhoid		Hepatitis B + INS support (Provided as a donation under the GAVI Phase I)	DPT-HBV-Hib

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Objectives of the EPI Programme

- Eradication of Poliomyelitis
- Elimination of measles, Neonatal Tetanus and Diphtheria
- Reduction of morbidity and mortality due to Whooping cough, Hepatitis B, Haemophilus influenza B, Mumps, Tetanus, Tuberculosis and Japans encephalitis.
- Prevention of outbreaks, reduction of morbidity and mortality due to Rubella and Congenital Rubella Syndrome (CRS).
- Prevention and control of burden of selected diseases through the introduction of new vaccines.

The success of the EPI programme is well reflected on the health statistics over the past decades.

- Not a single vaccine preventable disease is a major public health issue in the country
- Last polio case in 1993
- Not a single case of diphtheria since 2000
- 1 case of Neonatal Tetanus & 2 cases of Pertusis in 2010
- Significantly low mortality due to Vaccine Preventable Diseases (VPD), closer to that of developed countries
- Low level of Infant Mortality rate (IMR)-(11/1000 live births)
- Low <5 Mortality (16/1 000 live births)

Sri Lanka is one of the first among developing countries in the world to introduce a vaccine safety surveillance system. All reported cases are investigated at different levels according to the severity of the problem. All serious AEFI (e.g. Anaphylaxis, deaths) are investigated at national level by MoH with the assistance of the MOOH and REE (Both Epidemiology unit and National expert committee on vaccine safety are involved in this process). When necessary, international assistance (e.g. from WHO) is sought. Follow-up actions are always based on the findings of the investigation to ensure vaccine safety.

These surveillance reports are used to strengthen the National immunization programme.

Sustainable financing by the Government of Sri Lanka (GOSL) is the key factor behind its success. Because in Sri Lanka, total health care service is provided free of charge to all areas of the country. Sri Lankan government is funding all the vaccines in the NIP, except GAVI funded Hepatitis B vaccine in 2004-2007 & Pentavalent vaccine since 2008 to date. Private sector contribution to the Immunization programme is insignificant and minimal.

The total government expenditure for health has increased from Rs. 44 billion in 2005 to Rs. 74 billion in 2010, which is about 1.7% of the GDP. About 94% of the health budget is provided through the Consolidated Fund of Sri Lanka, with only about 6% coming through internationally funded projects.

Sri Lanka government’s contribution to the National Immunization Programme is substantial. GOSL had to allocate a large portion of the national budget annually to the EPI programme. Government has doubled the allocation for drugs and medical supplies during the same period [i.e. Rs 7.1 bn (15%) in 2005 and Rs 14.0 bn (19%) in 2010]. A separate budget line has been established since 2007 for EPI to ensure the predictability of funds.

In addition, GAVI is also providing a significant financial contribution to the EPI Programme.

[GAVI - Global Alliance for Vaccines and Immunization was created in 2000 as a partnership between WHO, UNICEF, the World Bank, donor governments, developing country governments, private industry, private foundations, the financial community, technical agencies and non-governmental organizations (NGOs). Now it is called the GAVI alliance]

The author wishes to appreciate the guidance provided by Dr. Ananda Amarasinghe (Assistant Epidemiologist) in preparation of this article.

Compiled by Dr. Asanka Gamage of the Epidemiology Unit

Figure 2 Immunization Programme Cost

Category	2005	2010	2011
Purchase of vaccine	247	840	900
Purchase of injection supply	30	40	45
Personnel	Shared with other programmes		
Other capital cost	13	20	25
Other recurrent cost	20	30	40
Total (Rs in Million)	310	930	1010
Total (US\$ in Million)	2.9	9.1	9.9

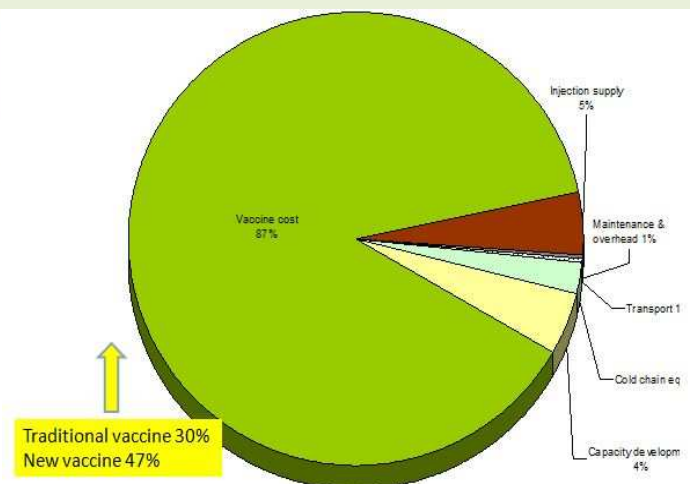


Table 1: Vaccine-preventable Diseases & AFP

17th – 23rd March 2012 (12th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2012	Number of cases during same week in 2011	Total number of cases to date in 2012	Total number of cases to date in 2011	Difference between the number of cases to date in 2012 & 2011
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	00	00	00	01	00	00	00	01	00	02	01	22	23	- 04.3 %
Diphtheria	00	00	00	00	00	00	00	00	00	-	-	-	-	-
Measles	00	00	00	00	00	00	00	00	00	00	02	17	26	- 34.6 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	02	06	- 66.6 %
Whooping Cough	01	00	00	00	00	00	00	00	00	00	02	21	10	+ 110.0 %
Tuberculosis	11	29	53	22	21	36	52	04	08	236	83	2118	1962	+ 07.9 %

Table 2: Newly Introduced Notifiable Disease

17th – 23rd March 2012 (12th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2012	Number of cases during same week in 2011	Total number of cases to date in 2012	Total number of cases to date in 2011	Difference between the number of cases to date in 2012 & 2011
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	19	07	03	00	08	09	07	02	20	75	107	1313	1236	+ 06.2 %
Meningitis	03 CB=2 KL=1	00	03 HB=2 GL=1	01 MN=1	00	01 KR=1	00	00	01 KG=1	09	18	166	246	+ 32.5 %
Mumps	13	05	08	00	17	13	00	00	13	69	31	1122	495	+ 126.7 %
Leishmaniasis	00	00	00	00	00	00	00	00	00	00	24	187	172	+ 08.7 %

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

Check the roof gutters regularly for water collection where dengue mosquitoes could breed.

Table 4: Selected notifiable diseases reported by Medical Officers of Health
17th - 23rd March 2012 (12th Week)

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	33	2159	1	30	0	4	2	61	0	20	6	35	0	2	0	18	0	1	38
Gampaha	44	1641	1	27	0	2	2	20	0	8	0	46	0	4	2	67	0	1	40
Kalutara	3	567	0	29	0	2	0	15	0	3	0	58	0	1	0	6	0	1	15
Kandy	3	529	1	21	0	0	0	8	0	9	0	22	0	52	0	4	0	0	43
Matale	7	121	1	27	0	3	0	7	0	4	1	10	0	2	0	5	0	0	42
Nuwara	2	84	3	37	0	1	2	12	1	1	0	10	1	22	0	7	0	0	69
Galle	12	308	1	28	0	1	0	6	0	4	3	25	1	13	0	1	0	0	47
Hambantota	2	152	1	15	0	0	0	2	0	6	1	20	1	18	0	3	0	0	67
Matara	8	439	0	21	0	3	0	9	0	10	1	37	0	29	0	11	0	0	18
Jaffna	2	164	0	60	0	4	2	145	0	8	0	2	0	223	0	2	0	0	42
Kilinochchi	0	13	0	6	1	1	0	10	0	39	0	2	0	19	0	1	0	1	50
Mannar	1	60	0	7	1	2	0	7	0	13	2	14	2	27	0	1	0	0	100
Vavuniya	1	23	0	4	1	14	0	2	0	3	0	14	0	0	0	1	0	0	100
Mullaitivu	0	4	0	4	0	1	0	3	0	1	0	2	0	4	0	0	0	0	25
Batticaloa	10	446	0	40	1	1	1	9	0	5	0	4	0	0	0	3	0	1	27
Ampara	0	27	0	33	0	0	0	2	0	0	0	13	0	0	0	1	0	0	14
Trincomalee	0	55	1	39	0	1	0	15	0	1	0	16	0	1	0	1	0	0	17
Kurunegala	12	362	1	38	0	5	0	31	0	6	1	45	0	14	0	16	0	1	43
Puttalam	0	279	0	22	0	2	0	2	0	1	0	15	0	7	0	0	0	0	8
Anuradhapu	1	99	1	22	1	1	0	1	0	1	1	33	0	13	0	21	0	0	47
Polonnaruw	0	63	0	10	0	0	0	1	0	0	0	13	0	2	0	23	0	1	0
Badulla	0	67	0	26	0	2	0	9	0	1	0	11	1	13	0	13	0	0	6
Monaragala	0	57	0	21	0	1	0	7	0	0	0	24	0	28	0	28	0	0	9
Ratnapura	21	388	2	69	2	19	0	14	0	2	2	95	1	11	2	39	0	0	67
Kegalle	9	379	0	23	0	2	0	10	0	5	5	32	1	13	8	167	0	0	55
Kalmune	0	108	1	67	0	0	0	5	1	11	0	1	0	0	1	4	0	1	62
SRI LANKA	171	8594	15	726	07	72	09	413	02	162	23	599	08	518	13	476	0	08	40

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 23rd March, 2012 Total number of reporting units 329. Number of reporting units data provided for the current week: 133

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

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.

ON STATE SERVICE

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