



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiological Unit,

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HOW PALATABLE ARE OUR NUTRITIONAL INTERVENTIONS?

The month of May has been declared the 'Nutritional Month' by the Government and the Ministry of Health. The idea is to generate integrated efforts among various stakeholders to work towards improving the nutritional status of mothers and children in Sri Lanka. The existing nutritional problems have been highlighted, discussed and debated over the years at all levels of the health infrastructure. In spite of methods, guidelines and activities that have been advocated in order to address these issues, it is pertinent to ask ourselves whether the expected outcomes have been achieved regarding maternal and child nutrition in Sri Lanka. In this article, we make an effort to identify the realities that coexist with our best efforts to improve their nutrition.

The main maternal and child nutritional problems of Sri Lanka are known to us.

- Low birth weight (prevalence 16.9%)
- Anaemia among pregnant mothers (30.3%)
- Underweight (29.4%) and anaemia (29.9%) among children under 5 years
- Anaemia among adolescents (22.3%)
- Malnutrition among school children

Low birth weight, which has been consistently high, has been regarded as one of the biggest nutrition-related challenges in Sri Lanka. Neonatal complications in terms of mortality and morbidity as well as chronic diseases during adulthood have been considered to be associated with low birth weight. Although several medical causes of low birth weight exist, the

problem is mainly considered to have a psychosocial aetiology as well as such consequences in our set up.

It is thought that the nutrition of the pregnant mother is a key determinant of the weight of the newborn at birth. In Sri Lanka, research have shown that nearly one-third of the pregnant mothers suffer from anaemia and more than a quarter show under-nutrition. Specific activities highlighted to be carried out during the nutritional month in order to improve the nutritional status of mothers show excellent programmatic relevance, but whether their impact will reduce maternal under nutrition and alleviate low birth weight in real terms is a matter of debate.

Enhanced detection of those at higher risk of delivering babies with low birth weight and improved reporting of low birth rates at local levels augurs well for a major overhaul of the situation. But the real impact in the end will come only if those mothers with poor nutrition are fed adequately with nutritional food. This intervention is multi-faceted with substantial social interactions. It is important to ask 'Do they have the purchasing power to supplement their nutritional intake?' If so, 'Why did they neglect it for so long?' If not, 'What support have we to offer?'

These supportive measures would have to go beyond the traditional health education and screening into more resource-oriented activities, perhaps in collaboration with other major sectors like food and agriculture, animal husbandry, social services and finance.

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So far our endeavours to improve maternal and child health care in the country have brought in enormous successes especially in terms of lives saved and diseases averted. In spite of such achievements, results of best efforts to alleviate nutritional deficiencies have been mixed. This is while we provide adequate screening, sufficient micronutrients and medicine like antimalarial and worm treatment during antenatal care. It perhaps demonstrates that the 'maximalist' approach where series of interventions with the potential for cumulative improvements may have come to show their inherent limitations. In such a scenario, innovative measures that are cost-effective and with the potential for improving food availability, purchasing power and food safety may be necessary.

The nutritional problems of children and adolescents in the country too have been highlighted in recent surveys. It is thought that stunting, wasting and micronutrient deficiency are among the major nutritional problems in these age groups. The irony is that today's school children are tomorrow's adults and especially with regards to girls, they will get entangled in the vicious cycle that involves maternal under nutrition and low birth weight once they attain adulthood. This makes efforts to improve the nutrition of children and adolescents more relevant than any other target group.

Activities targeted towards enhancing age appropriate measuring of height and weight for clinical interpretation and comparison across population subgroups as well as education on breast feeding and *ECCD* will take precedence in the effort to raise awareness of nutritional problems of children and adolescents. Making weighing centres more accessible to the clients and standardizing the procedure are important towards assessing the problem accurately.

The successes regarding established practices like breast feeding, complementary feeding and food hygiene have been achieved due to the relentless efforts of the public health personnel at centre and in the periphery over the past several years. The next phase of that effort will face challenges of a different nature with the changing socio-demographic nature of the Sri Lankan population. The migration of rural masses to the city, working mothers and female labour migration for employment coupled with the powerful negative influences of the market-driven economy especially through mass media pose a huge challenge towards improving the food-related practices of the people. Non-practice or the early cessation of breast feeding, unhealthy complementary foods, 'junk' food, use of canned and processed food and unhealthy lifestyle practices should be tackled early before they take root within vulnerable population subgroups especially if we are to avert a major nutritional calamity among the children and adolescents of the country. Our counter-efforts should come in the form of glamour-attached attractive social marketing packages or interventions with the aid of legislation. These would need to be different to the more traditional campaigns that are filled with monotony and lack of appeal.

Key Messages on Complementary Feeding to be Disseminated During Nutritional Month

1. Exclusive breast feeding until the completion of 6 months will facilitate optimal growth and development of infants.
2. Introduce complementary food from the beginning of the seventh month while continuing to breast feed for 2 years or longer to facilitate growth and development. Introduction of complementary food at the beginning of the seventh month will also teach the child to get used to eating family foods by one year.
3. Complementary food given in thick form will have more energy and therefore will facilitate growth.
4. Adding animal food such as chicken, chicken liver, fish and sprats within 7 to 10 days of introducing complementary food will facilitate child's growth and development by providing proteins, vitamins and iron which is essential for optimal growth and development. In addition, eggs and milk products such as yoghurt and curd will also provide proteins, vitamins and other minerals.
5. Peas, beans and lentils also provide proteins, vitamins and minerals needed by children.
6. Dark green leaves and yellow-coloured fruits and vegetables help a child to have healthy eyes and fewer infections.
7. A growing child 6-8 months old needs 2-3 meals a day, 9-24 months old needs 3-4 meals a day, plus additional 1-2 snacks if the child is hungry. Give a variety of foods.
8. A growing child needs increasing amounts of food.

Age	Texture	Frequency	Amount/meal
7-8 months	Well mashed food. Start with mashed rice. Add pulses, animal sources, vegetables gradually.	2-3 meals per day plus frequent breast feeds. 1-2 snacks may be offered.	Start with 2-3 tablespoonfuls per feed increasing gradually to 3/4 of a cup of 200 ml.
9-11 months	Finely chopped or mashed food and foods baby can pick.	3-4 meals plus breast feeds. Depending on appetite, 1-2 snacks may be offered.	3/4 - 1 cup of a 200 ml cup/bowl.
12-23 months	Family foods chopped or mashed coarsely if necessary.	3-4 meals plus breast milk. Depending on appetite, 1-2 snacks may be offered.	1 full or little more of a 200 ml cup/bowl.

9. A young child needs to learn to eat: encourage and give help. Avoid giving snacks immediately before a main meal.
10. Encourage children to drink and eat during illness and provide extra food after illness to help them recover quickly.

Table 1: Vaccine-preventable Diseases & AFP

21st - 27th April 2007 (17th Week)

Disease	No. of Cases by Province								Number of cases during current week in 2007	Number of cases during same week in 2006	Total number of cases to date in 2007	Total number of cases to date in 2006	Difference between the number of cases to date between 2007 & 2006
	W	C	S	NE	NW	NC	U	Sab					
Acute Flaccid Paralysis	01 GM=1	01 KD=1	00	00	00	00	00	00	02	02	31	45	-31.1%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00.0%
Measles	00	03 NE=3	00	00	00	00	00	00	03	00	24	07	+242.9%
Tetanus	00	00	00	00	00	00	00	00	00	02	11	19	-42.1%
Whooping Cough	00	00	00	00	00	00	00	00	00	02	14	28	-50.0%
Tuberculosis	20	04	18	28	00	15	18	00	103	298	3265	3537	-7.7%

Table 2: Diseases under Special Surveillance

21st - 27th April 2007 (17th Week)

Disease	No. of Cases by Province								Number of cases during current week in 2007	Number of cases during same week in 2006	Total number of cases to date in 2007	Total number of cases to date in 2006	Difference between the number of cases to date between 2007 & 2006
	W	C	S	NE	NW	NC	U	Sab					
DF/DHF*	10	03	05	10	08	04	00	00	27	133	1671	3348	-50.1%
Encephalitis	00	01 NE=1	01 MT=1	00	00	00	00	00	02	03	75	44	+70.5%
Human Rabies	00	00	00	00	00	00	00	00	00	00	22	21	+4.8%

Table 3: Newly Introduced Notifiable Diseases

21st - 27th April 2007 (17th Week)

Disease	No. of Cases by Province								Number of cases during current week in 2007	Total number of cases to date in 2007
	W	C	S	NE	NW	NC	U	Sab		
Chickenpox	16	07	06	03	01	04	05	08	50	1119
Meningitis	00	00	00	00	00	00	00	00	00	49
Mumps	07	01	01	01	02	00	00	03	15	380

*DF / DHF refers to Dengue Fever / Dengue Haemorrhagic Fever.
NA= Not Available.
Sources:
Weekly Return of Communicable Diseases:
Diphtheria, Measles, Tetanus, Whooping Cough, Human Rabies, Dengue Haemorrhagic Fever, Japanese Encephalitis, Chickenpox, Meningitis, Mumps.
Special Surveillance:
Acute Flaccid Paralysis.
National Control Program for Tuberculosis and Chest Diseases:
Tuberculosis.
Details by districts are given in Table 5.

Provinces:

W=Western, C=Central, S=Southern, NE=North & 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.

Table 4: Laboratory Surveillance of Dengue Fever

21st - 27th April 2007 (17th Week)

Samples	Number tested	Number positive *	Serotypes				
			D ₁	D ₂	D ₃	D ₄	Negative
Number for current week	01	00	00	00	00	00	00
Total number to date in 2007	242	12	00	04	02	00	05

Source: Genetech Molecular Diagnostics & School of Gene Technology, Colombo.

* Not all positives are subjected to serotyping.

Table 5: Selected notifiable diseases reported by Medical Officers of Health
21st - 27th April 2007 (17th Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Returns Received Timely**
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
Colombo	05	464	03	74	00	03	01	30	00	42	00	54	00	01	01	14	54
Gampaha	02	186	01	77	00	10	00	26	00	27	01	112	00	06	01	38	43
Kalutara	03	121	06	90	00	01	01	19	00	11	02	47	00	01	00	29	55
Kandy	03	199	08	77	00	03	00	23	00	05	00	35	03	32	04	109	50
Matale	00	52	00	69	00	03	00	05	00	03	00	17	00	03	00	70	33
Nuwara Eliya	00	18	05	71	01	01	01	31	00	366	00	06	00	19	03	84	29
Galle	00	45	00	44	00	05	00	04	00	03	00	26	00	16	00	08	56
Hambantota	00	23	00	22	00	03	00	09	00	07	00	17	01	18	00	07	64
Matara	05	61	06	83	01	04	00	18	00	07	11	77	03	102	00	11	94
Jaffna	00	09	00	41	00	02	00	252	00	00	00	00	00	78	00	11	00
Kilinochchi	00	00	00	00	00	00	00	02	00	00	00	00	00	02	00	02	00
Mannar	00	07	00	11	00	00	00	35	00	00	00	00	00	00	00	04	00
Vavuniya	00	10	01	20	00	02	00	09	01	10	00	02	00	00	00	03	100
Mullaitivu	00	00	01	06	00	04	00	12	00	00	00	00	00	00	00	00	40
Batticaloa	01	20	01	91	00	04	00	12	00	02	00	00	00	00	00	143	18
Ampara	00	01	00	31	00	00	00	03	00	00	00	00	00	00	00	08	00
Trincomalee	00	35	04	48	00	01	00	11	00	22	00	01	00	02	04	31	56
Kurunegala	03	145	04	91	00	00	00	24	00	04	00	10	00	23	01	12	39
Puttalam	01	63	02	28	00	09	02	27	00	00	01	13	00	00	01	49	44
Anuradhapura	01	24	00	29	00	07	00	16	00	06	00	10	02	16	01	21	21
Polonnaruwa	03	31	00	42	00	02	00	04	00	01	00	15	00	00	00	08	71
Badulla	00	14	06	145	00	00	01	31	00	08	01	21	00	45	00	84	47
Monaragala	00	06	05	83	00	00	00	16	00	00	01	20	03	26	01	10	60
Ratnapura	00	69	05	225	00	07	00	26	00	07	01	22	00	06	01	34	44
Kegalle	00	66	02	71	00	04	00	19	00	03	01	38	00	10	00	19	36
Kalmunai	00	02	00	35	00	00	00	05	00	00	00	00	00	02	01	70	46
SRI LANKA	27	1671	60	1604	02	75	06	669	01	534	19	543	12	408	19	879	45

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 5 May 2007. Total number of reporting units = 290. Number of reporting units data provided for the current week: 130.

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

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