



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
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EPI Coverage Assessment Survey - Nuwara Eliya District, 2016

Introduction

Infections due to diverse organisms such as viruses, bacteria, parasites, fungi etc. account for innumerable deaths among children and adults in the world. Immunization is the most cost effective way of controlling these infections, which has been one of the greatest success stories in the past.

The National Immunization Programme has an excellent record with extremely low incidence of Vaccine Preventable Diseases and high coverage of EPI vaccines.

The coverage of immunization is monitored by the routinely reported data forwarded by the MOOH through the EPI quarterly return. Conducting scientific surveys helps to validate the routine information, evaluate the performances and find ways and means to improve immunization activities. Coverage survey provides additional information such as private sector contribution for immunization, reasons for non or partial immunization etc.

Study setting

Nuwara Eliya district is one of the three districts in the Central Province of Sri Lanka.

The district has an area of 1741.5 square kilometers and inhabits 706,505 populations. The average density of population is 406 per square kilometers and the population of the district consists mostly of Tamils (57.6%) out of which 53% being Indian Tamils. Most of the Tamil population (87%) lives in the estate sector. The district spreads in 1000 to 8000 feet from the sea level including the highest hilly area in the country. Nuwara Eliya District is divided into five Divisional Secretary's Divisions and 491 Grama Niladari divisions.

Table 1: Infant immunization coverage

Antigen	With cards		Card + History		AEFI		Not immunized /Not protected	
	No.	%	No.	%	No	%	No	%
B.C.G.	299	99.6	300	100	92	30.7	0	0.0
PVV 1	299	99.6	300	100	190	63.5	0	0.0
PVV 2	299	99.6	300	100	179	59.8	0	0.0
PVV 3	299	99.6	300	100	175	58.5	0	0.0
OPV. 1	299	99.6	300	100	191	63.8	0	0.0
OPV 2	299	99.6	300	100	175	58.5	0	0.0
OPV 3	299	99.6	300	100	171	57.1	0	0.0
LJEV	298	99.3	299	99.6	142	47.4	1	0.3
MCV 1	298	99.3	299	99.6	148	49.4	1	0.3

1. Leading Article – EPI Coverage assessment survey - Nuwaraeliya district — 2016

2. Summary of selected notifiable diseases reported - (18th – 24th March 2017)

3. Surveillance of vaccine preventable diseases & AFP - (18th – 24th March 2017)

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Justification for the survey

Public health services including the immunization programme were conducted in Nuwara Eliya district by the estate trust and the provincial ministry of health. However, in keeping with the government decision to deliver health services in the district, all health institutions including the public health services were fully provided by the government. Accordingly Nuwara Eliya district was selected to carry out the 2016 survey, to understand any impact on the immunization programme due to the change of service delivery in the district.

Objectives of the Survey

*To assess the, BCG, DPT, OPV, HBV, Hib, Live JE and MCV1 immunization coverage and protection for CRS and NNT among 12 to 23 month old children

*To assess the DPT and OPV4 given at 18 months MMR at 3 years,, DT and OPV booster given at year five and JE immunization among the 72 to 84 month old children

* To assess the aTd Immunization coverage among 13 to 15 year adolescents

*To assess the Rubella immunization coverage among the 16 to 44 year old females

*To assess the source of immunization to ascertain the role of private sector in immunization

To understand the reasons for non-or partial immunization and reasons for receiving **Survey methods**

WHO recommended 30-cluster sampling technique for EPI coverage survey was used.

The survey contains 30 clusters in the RDHS area (30 Grama Niladari divisions/RDHS area) selected using probability proportionate to the size method.

Target population

Infant immunization

12 to 23 month old infants and mothers of these index children to be assessed their protection against neo natal tetanus at birth, rubella coverage for the protection against congenital rubella-10 infants per cluster.

Childhood immunization

72 to 83 month old children to be assessed DPT and OPV4, MMR, DT and OPV booster and JE immunization coverage - 10 children per cluster

Adolescents Immunization

13 to 15 year old children to be assessed aTd immunization coverage

Women in child bearing age

16 – 44 Year old females to be assessed rubella immunization coverage – 40 women per cluster

Source of information

During the survey interviewers record the immunizations recorded in the immunization card or when the immunization card is not available those immunizations which the parents or any responsible guardian provided were received accordingly in the survey forms.

Survey teams

Thirty senior nursing students of the Kandy Nurses’ Training School were deployed as surveyors. Each surveyor was given two days to complete each cluster and one surveyor had to complete one cluster. The PHM guided the survey team through homes within the cluster. One supervisor was assigned to assist and oversee the work of two survey teams. Seven Medical Officers from the Epidemiological Unit, Regional Epidemiologists and Medical Officers (Maternal and Child Health) were employed for this survey as supervisors.

Training

The surveyors were given a basic training on EPI at the Kandy NTS prior to the survey. The surveyors and supervisors were given one day’s class room type training and one day’s field training on how to identify the first household, subsequent households, how to interview parents, guardians, adolescents and how to complete the forms etc.

Results

During the period of two days of the survey 2777 houses were visited by the survey teams. There were 12,277 person living in these houses surveyed. On average one cluster consisted of 92 houses and average household in a cluster were four.

Table 2:Immunization coverage among 72 to 83-month old children

Antigen	With cards		Card + History		Not immunized		AEFI	
	No.	%	No.	%	No	%	No	%
DPT4	290	96.6	299	99.6	1	0.3	152	52.4
OPV4	290	96.6	299	99.6	1	0.3	148	51.0
MMR	290	96.6	298	99.3	2	0.6	119	41.0
DT	289	96.3	298	99.3	2	0.6	79	27.3
OPV 5	287	95.6	296	98.6	4	1.3	77	26.8

Key observations

Coverage, Infant Immunization

- All surveyed infants had received three doses of PVV and OPV
- Presence of scar rate, 97% among children immunized with BCG vaccine is satisfactory and it indicates that the technique used in administration of BCG vaccine is of acceptable quality.
- All surveyed children except two children in the districts have retained their CHDR during the 2nd year of life.
- Out of 300 children surveyed only one child (0.3%) has missed the LJEV and MCV 1 on completion of one year.
- Except two children, all infants (299) surveyed had their immunizations from the government sector.
- Eleven mothers (3.6%) of the surveyed children were not protected against Tetanus at the time of delivery while 17(5.6%) were not protected against Rubella.

Coverage, Childhood Immunization

- Recording of presence or absence of AEFI in the CHDR was found only in 69.0 % of the infant immunization cards observed
- DPT/OPV4, vaccine administered on completion of 18 months ,MR/MMR vaccine administered on completion of 3 years and DT/OPV5 vaccines administered for five year old children also has achieved high coverage of 99.6%, 99.3 % and 99.3 % for the respective antigens
- The other remarkable feature observed was that even up to the 7th year of life, 96.6 % parents retaining CHDR as an important document in spite of lot of constraints
- Out of 300 children surveyed 8.6% (n=26) were not protected against JE
- Service provider for the infant and childhood immunization is the government preventive health care sector and for BCG vaccination, government hospitals.

The Chief Epidemiologist, Coordinator of the survey, and Epidemiology Unit team acknowledge;

- * Children, their caregivers, and others who participated in the survey.
- * PDHS Central province, RDHS and RE of Nuwara Eliya districts for concurrence and all provided administrative support to conduct this survey.
- * Principal, Nursing tutors of Kandy NTS and nursing students who participated as surveyors.
- * Consultants, Medical Offices of the Epidemiology Unit, REE, and other officers who participated as supervisors.
- * Supporting staff including PHMM, drivers of all participating and supporting institutions.
- * UNICEF for financial support.
- *

Compiled by Dr. Manjula Kariyawasam of the Epidemiology Unit – Co investigator and the coordinator of the EPI survey

Table 1: Selected notifiable diseases reported by Medical Officers of Health 18th - 24th March 2017 (12th Week)

RDHS	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food		Leptospirosis		Typhus		Viral		Human		Chickenpox		Meningitis		Leishmani-		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	528	6604	2	30	0	1	0	11	0	5	1	20	0	1	0	5	0	0	0	7	101	0	11	0	1	63	88
Gampaha	409	4083	0	15	0	10	0	10	0	8	0	21	0	5	0	5	0	1	2	70	1	15	0	4	13	53	
Kalutara	176	1702	1	17	0	2	0	2	2	17	12	63	0	2	0	1	0	0	9	164	2	31	0	0	79	100	
Kandy	66	779	2	28	0	3	0	1	0	0	4	16	2	42	0	6	0	1	6	98	0	13	0	2	83	91	
Matale	20	354	1	6	0	0	0	0	0	0	1	15	0	1	4	0	0	0	3	14	1	24	0	2	46	85	
NuwaraEliya	2	109	1	8	0	1	0	4	0	0	0	11	2	44	0	4	0	0	2	44	0	17	0	0	100	100	
Galle	110	1807	0	15	0	5	0	4	0	9	8	58	1	19	0	0	0	0	15	101	0	16	0	0	85	95	
Hambantota	89	786	1	14	0	3	0	5	0	15	1	15	1	22	0	4	0	0	4	76	1	9	5	116	83	100	
Matara	76	1078	0	15	0	4	0	0	0	2	2	23	0	9	0	2	0	1	5	59	0	2	4	36	94	100	
Jaffna	207	1792	3	83	2	6	2	15	1	25	0	17	18	308	0	4	0	0	7	96	2	18	0	0	93	100	
Kilinochchi	6	168	0	6	0	0	0	3	0	0	0	2	0	9	0	2	0	0	0	0	0	0	0	3	75	75	
Mannar	11	290	0	4	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0	4	0	0	0	0	100	100	
Vavuniya	31	248	0	7	0	0	2	12	0	2	1	12	0	2	0	1	0	0	0	14	0	0	0	6	100	100	
Mullaitivu	6	87	0	2	0	0	0	3	0	0	0	7	0	3	0	0	0	0	0	1	0	5	0	1	60	60	
Batticaloa	178	1281	1	42	0	8	0	9	0	1	0	6	0	0	0	3	0	0	2	63	1	13	0	1	43	71	
Ampara	12	149	0	8	0	1	0	1	0	0	0	5	0	1	2	0	0	0	0	52	0	7	0	2	29	100	
Trincomalee	435	2737	0	3	0	1	0	3	0	1	0	6	1	6	0	7	0	0	3	49	1	6	0	1	62	77	
Kurunegala	85	1158	1	23	0	0	0	0	0	2	0	30	0	17	0	5	0	0	19	195	0	16	2	39	69	93	
Puttalam	52	498	1	17	0	1	0	1	0	0	0	4	0	10	0	1	0	0	2	68	0	13	0	1	36	71	
Anuradhapura	68	516	0	14	0	1	0	0	0	3	0	23	0	9	0	7	0	0	8	113	0	17	8	91	32	79	
Polonnaruwa	108	1175	0	7	0	4	0	4	0	0	0	13	0	3	0	1	0	0	4	72	0	6	0	41	71	100	
Badulla	25	186	2	32	1	4	0	4	0	1	4	19	3	14	2	13	0	1	11	89	2	51	1	6	82	94	
Monaragala	36	467	0	13	0	3	0	0	0	2	3	31	2	47	1	10	0	0	0	29	0	18	0	4	36	73	
Ratnapura	39	280	1	62	1	37	0	4	0	3	6	112	0	14	0	21	0	0	9	118	1	63	0	0	44	72	
Kegalle	120	1211	1	16	0	4	0	1	1	14	0	16	4	28	1	5	0	0	10	85	0	26	0	4	64	82	
Kalmune	76	748	0	18	0	4	0	1	0	4	0	3	0	0	0	0	0	0	4	77	0	4	0	0	38	77	
SRILANKA	2983	30293	17	505	4	103	4	99	4	114	43	548	35	618	6	113	0	4	132	1852	12	401	20	361	64	86	

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 24th March, 2017 Total number of reporting units 337 Number of reporting units data provided for the current week: 300 C**-Completeness

Table 2: Vaccine-Preventable Diseases & AFP

18th – 24th March 2017 (12th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2017	Number of cases during same week in 2016	Total number of cases to date in 2017	Total number of cases to date in 2016	Difference between the number of cases to date in 2017 & 2016
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	01	00	00	00	00	01	00	25	13	92.3%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	00	01	01	00	00	02	00	00	01	05	02	83	92	- 9.7%
Measles	00	00	01	00	00	00	00	00	01	02	08	92	162	- 43.2%
Rubella	00	00	00	00	00	00	00	00	00	00	00	05	05	0%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Tetanus	00	00	00	01	00	00	00	00	00	01	00	06	02	200%
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	21	00	0%
Whooping Cough	00	00	00	00	00	00	00	00	00	00	02	04	21	- 81%
Tuberculosis	28	15	22	16	05	15	04	07	07	123	244	1573	1896	- 17.0%

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

Number of Malaria Cases Up to End of March 2017,

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All are Imported!!!

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