



WEEKLY EPIDEMIOLOGICAL REPORT

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EPI Coverage Survey in Gampaha District 2006

A cross-sectional survey to assess the coverage of the Expanded Programme on Immunization (EPI) in the District of Gampaha was carried out in November, 2006. This was conducted by the office of the Deputy Provincial Director of Health Services (DPDHS) for Gampaha. The World Health Organization (WHO) recommended 30 cluster technique was employed to select individual households. A standard questionnaire was used to collect immunization details of the following age cohorts from 3964 households for the given antigens:

- Age 12-23 months for BCG, DPT1, DPT2, DPT3, OPV1, OPV2, OPV3, HEP1, HEP2, HEP3 and Measles
- Age 24-35 months for DPT4 and OPV4
- Age 48-59 months for MR
- Age 72-83 months for DT, OPV5 and JE
- Age 9 - 15 years for Rubella
- Age 16 - 19 years for aTd/TT
- Age 17 - 44 years for Rubella

In addition, coverage of antenatal women for TT and Rubella vaccines was also assessed. The national coverage (with actual births as denominator) and the coverage for Gampaha District (with DPT1 immunizations performed in the district as denominator) based on routinely reported data in 2005 for the corresponding antigens were considered for comparison.

Survey findings for immunization coverage are given in the Tables in page 2. As shown in Table 1, high coverage was seen for all antigens during infancy. The BCG scar was present in

276 (91.5%) of the children, a measure of the quality of the vaccination procedure.

The coverage was also high for the 4th dose of DPT and OPV received at 18 months (Table 2). The MR given at 3 years assumes its significance not only for the immunity it gives, but also as it provides the point of contact between the 4th dose of DPT/OPV at 18 months and the DT/OPV5 at 5 years. High MR coverage (Table 3) therefore, is an encouraging outcome from the point of view of the EPI programme managers.

As shown in Tables 1 to 4, it is evident that the coverage from infancy till school entry has marginally dropped although the coverage at 5 years still continues to be high. The rates of coverage found in the survey were comparatively better for all these antigens compared to the national and district rates. As expected, the booster dose of JE showed low coverage because most of the students in this cohort were eligible for their booster dose only in 2007 (Table 4).

In addition to the coverage data, the survey assessed the proportion of children receiving immunization from the private sector service providers. For example, out of the children assessed for the 4th dose of DPT and OPV, 290 (96.7%) had received their immunization from government health institutions.

As shown in Tables 5 and 6 respectively, the coverage of Rubella (at 8 years) and aTd/TT (at 12 years) was found to be comparatively low, but were comparable with the rates reported for the district as well as for the country.

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Table 1. Infant immunization coverage (n=301)

Antigens	EPI survey				Routine data	
	Card		Card + History		Gampaha 2005 (%)	National 2005 (%)
	No	%	No	%		
BCG	299	99.3	301	100.0	100.8	92.9
DPT 1	298	99.0	301	100.0	100.0	94.2
DPT 2	297	98.7	300	99.7	100.5	94.0
DPT 3	296	98.3	299	99.3	98.9	92.5
OPV 1	298	99.0	301	100.0	100.0	94.2
OPV 2	297	98.7	300	99.7	100.5	94.0
OPV 3	296	98.3	299	99.3	98.9	92.5
Hep 1	298	99.0	301	100.0	98.3	91.2
Hep 2	297	98.7	300	99.7		87.2
Hep 3	296	98.3	299	99.3	97.2	83.3
Measles	295	98.0	298	99.0	103.1	95.4
All antigens	295	98.0	298	99.0		

Table 2. Immunization coverage at 18 months (n=300)

Antigens	EPI survey				Routine data	
	Card		Card + History		Gampaha 2005 (%)	National 2005 (%)
	No	%	No	%		
OPV4	296	98.7	298	99.3	94.2	91.8
DPT4	296	98.7	298	99.3	94.2	91.8

Table 3. Immunization coverage at 3 years (n=300)

Antigen	EPI survey				Routine data	
	Card		Card + History		Gampaha 2005 (%)	National 2005 (%)
	No	%	No	%		
MR	287	95.7	297	99.0	99.0	89.5

Table 4. Immunization coverage at 5 years (n=300)

Antigens	EPI survey				Routine data	
	Card		Card + History		Gampaha 2005 (%)	National 2005 (%)
	No	%	No	%		
OPV5	279	93.0	287	95.7	96.6	93.0
DT	279	93.0	287	95.7	96.6	93.0
JE1	288	96.0	294	98.0	96.3	96.7*
JE2	287	95.7	293	97.7	88.0	90.7*
JE3	282	94.0	288	96.0	81.5	79.1*
JE Booster	71	23.7	74	24.7		

* DPT1 as denominator

Table 5. Immunization coverage at 8 years (n=300)

Antigen	EPI survey				Routine data	
	Card		Card + History		Gampaha 2005 (%)	National 2005 (%)
	No	%	No	%		
Rubella	177	59.0	246	82.0	71.8	68.2

Table 6. Immunization coverage at 10-14 years (n=300)

Antigens	EPI survey				Routine data	
	Card		Card + History		Gampaha 2005 (%)	National 2005 (%)
	No	%	No	%		
aTd/TT	51	17.0	196	65.3	66.4	70.9

Table 7. Immunization coverage of eligible females aged 16-44 years for Rubella (n=300)

Antigen	EPI survey			
	Card		Card + History	
	No	%	No	%
Rubella	81	+27.0	251	83.7

The coverage of eligible females aged 16-44 years for Rubella was satisfactory, but needed further improvement. In the assessment of coverage of antenatal women for TT and Rubella, encouraging results were seen. All newborns were reported to be protected against neonatal Tetanus. In the sample, 85.4% were found to be protected against Congenital Rubella Syndrome.

Overall survey findings suggest good immunization coverage except for Rubella and aTd/TT, which needs further improvement. The study investigators had also emphasized the need to achieve the target of 100% coverage for all antigens especially during infancy. To achieve maximum coverage for Rubella, the importance of maintaining the Rubella register by the Public Health Midwife (PHM) as well as achieving maximum coverage for Rubella during School Medical Inspections (SMI) had been discussed. Added focus on conducting well-planned SMIs with the co-operation of the teachers and parents, and making the best use of the Child Health Development Record (CHDR) had been identified as important areas to improve aTd/TT and Rubella coverage of school children.

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Table 1: Vaccine-preventable diseases & AFP

27th Jan - 2nd Feb 2007 (5th 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	00	01 KD=1	00	00	00	00	00	00	01	05	09	18	-50.0%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00.0%
Measles	00	00	00	00	00	00	00	00	00	00	00	02	-100.0%
Tetanus	00	00	00	00	00	00	00	01 KG=1	01	02	03	06	-50.0%
Whooping Cough	00	00	02 HB=1 MT=1	00	00	00	00	00	02	00	04	06	-33.3%
Tuberculosis	41	12	13	16	00	02	08	31	123	154	886	1051	-15.7%

Table 2: Diseases under Special Surveillance

27th Jan - 2nd Feb 2007 (5th 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*	93	21	11	02	08	03	01	05	144	230	876	1241	-29.4%
Encephalitis	00	01 ML=1	01 GL=1	00	00	01 PO=1	00	00	03	02	37	10	+270.0%
Human Rabies	00	00	00	02 KN=1 MN=1	00	00	00	00	02	02	12	11	+9.1%

Table 3: Newly introduced Notifiable Diseases

27th Jan - 2nd Feb 2007 (5th Week)

Disease	No. of Cases by Province								Number of cases during current week in 2007	Total number of cases to date in 2007	*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.
	W	C	S	NE	NW	NC	U	Sab			
Chickenpox	23 CB=6 GM=4 KL=13	20 KD=19 ML=1	02 HB=2	00	05 KR=4 PU=1	02 PO=2	02 BD=2	07 RP=1 KG=6	61	212	
Meningitis	00	00	00	00	00	00	00	00	00	35	
Mumps	06 CB=2 GM=1 KL=3	03 KD=2 ML=1	03 GL=1 MT=2	00	02 KR=2	00	00	03 KG=3	17	64	

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

27th Jan - 2nd Feb 2007 (5th Week)

Samples	Number tested	Number positive	Serotypes				
			D ₁	D ₂	D ₃	D ₄	Negative
Number for current week	11	01	00	00	00	00	01
Total number to date in 2007	149	07	00	01	02	00	03

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

Table 5: Selected notifiable diseases reported by Medical Officers of Health
27th Jan - 2nd Feb 2007 (5th 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	69	243	07	24	00	03	04	12	00	01	05	17	00	01	01	05	93
Gampaha	12	90	01	24	00	04	02	06	00	01	02	05	00	05	01	14	93
Kalutara	12	68	07	32	00	01	00	08	03	04	03	16	00	00	00	05	91
Kandy	16	130	03	30	00	00	02	09	00	02	00	12	01	12	02	14	91
Matale	04	32	01	26	01	03	01	01	00	00	03	09	01	02	03	19	83
Nuwara Eliya	01	14	02	24	00	00	01	11	00	00	00	03	02	06	07	40	71
Galle	04	28	01	14	01	03	00	01	00	00	00	09	01	07	01	04	69
Hambantota	01	07	04	06	00	00	00	01	00	01	01	06	01	12	00	03	90
Matara	06	30	01	26	00	01	01	05	01	01	02	16	05	30	02	03	100
Jaffna	00	00	00	07	00	00	00	16	00	00	00	00	00	13	00	01	00
Kilinochchi	00	00	00	00	00	00	01	01	00	00	00	00	00	00	00	02	50
Mannar	00	05	00	10	00	00	13	16	00	00	00	00	00	00	00	01	75
Vavuniya	00	06	00	10	00	00	02	07	00	04	00	02	00	00	00	03	100
Mullaitivu	00	00	00	03	00	01	00	06	00	00	00	00	00	00	00	00	00
Batticaloa	01	02	00	17	00	02	00	05	02	02	00	00	00	00	07	38	45
Ampara	00	00	00	16	00	00	00	00	00	00	00	00	00	00	00	02	29
Trincomalee	01	16	03	11	00	01	01	05	00	17	00	00	00	00	00	04	89
Kurunegala	06	64	02	33	00	00	01	11	00	00	00	04	02	15	00	03	72
Puttalam	02	46	01	17	00	08	03	11	00	00	01	03	00	00	01	13	100
Anuradhapura	02	09	02	14	00	04	00	09	00	00	01	06	00	04	03	11	63
Polonnaruwa	01	13	02	32	01	02	00	03	00	00	01	09	00	00	00	01	100
Badulla	01	07	08	51	00	00	00	07	00	01	01	05	01	09	04	29	93
Monaragala	00	05	03	27	00	00	00	07	00	00	00	08	01	07	00	00	90
Ratnapura	03	23	02	50	00	04	00	14	01	02	01	08	00	03	02	12	69
Kegalle	02	37	03	20	00	00	02	06	00	00	04	17	01	02	03	10	91
Kalmunai	00	01	00	00	00	00	01	03	00	00	00	00	00	00	03	28	50
SRI LANKA	144	876	53	533	03	37	35	181	07	36	25	155	16	128	40	265	76

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 10 Feb. 2007. Total number of reporting units = 290. Number of reporting units data provided for the current week: 222.

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

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