VACCINATION COVERAGE SURVEY
BANGALORE (URBAN) DISTRICT

MARCH 1991

DEPT. OF PREVENTIVE & SOCIAL MEDICINE
BANGALORE MEDICAL COLLEGE
BANGALORE

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Date 11-04-1991.

The Coverage Evaluation Survey in Bangalore (Urban) District was carried out during March 1991 as one of the Surveillance activities for Vaccine Preventable Diseases. The study is co-ordinated by Indian Council of Medical Research.

I am once again proud of my colleagues and post-graduate students who worked enthusiastically for conducting this survey. An exemplary team spirit was exhibited.

We are grateful to Dr.Kumarswamy and all the health workers who extended co-operation in conducting the study.

I am sure the finding of this study will help improve the implementation of the Universal Immunisation Programme and related activities for better Maternal and Child Health activities.

(DR (MRS) M.K. VASUNDHRA).

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DATED....08-04-1991.....

I am pleased to go through the report on Coverage Evaluation Survey in Bangalore (Urban) District conducted by the Department of Preventive and Social Medicine. This Survey is a part of ICMR - Government of India initiated Disease Surveillance Programme of Vaccine Preventable Diseases.

The Survey has been conducted under severe constraints of staff and time, since the examinations were scheduled for this period. The fact that it has still been conducted efficiently and accurately can be attributed to the leadership of Dr (Mrs) M.K.Vasundhra, Professor and Head of the Department of P & S Medicine.

I congratulate all the team members for the excellent work turned out and I am sure the report will contribute to improving the UIP of this state.

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TEAM OF INVESTIGATORS WHO CONDUCTED THE SURVEY

1. Dr.(Mrs) M.K.Vasundhra
   Prof. & HOD of P&S Medicine, Chief Co-ordinator.

2. Dr.(Mrs) H.S.Sheela
   Asst.Professor, Dept.of P&S Medicine, Resource person.

3. Dr. S.A.Vastrad
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POSTGRADUATES

4. Dr. Yarnal, S.S
5. Dr. Gangadharaswamy, G.O
6. Dr. Satish H.V
7. Dr. Somashekar.S.N
8. Dr. Hooli .B.A
9. Dr. Das .T.S
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12. Dr. Abdul Rahim
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14. Dr. Manjunath K.R
15. Dr. Vijay Kumar K.Y

METHODOLOGY :

The Bangalore District Census Report of 1981 was procured from the Directorate of Health Services (Urban) District along with a list of modified area limits of the Urban District. 30 clusters were selected from this utilising the WHO approved cluster sampling Technique. The list of selected clusters along with the area map is appended (APPENDIX - I).

The survey was conducted as part of ongoing UIP Disease surveillance programme of I.C.M.R. New Delhi, and was financed by I.C.M.R.

The survey was preceeded by a briefing session on 18-01-1991 The clusters were divided into 2 groups based on geographical convenience and a Team Leader assigned to each group.

The survey was conducted over a period of 4 days (12th March to 15th March).

DEFINITIONS :

1. Fully Immunised : A child, who has received 1 dose of BCG from 0-12 months, 3 doses each of DPT & OPV from 6 weeks to 12 months and 1 dose of Measles from 9-12 months.

2. Partially Immunised : A child who has received one or more antigen but has not received all doses.

3. Not Immunised : A child who has not received even a single dose of any antigen.

GENERAL INFORMATION

1. Total No.of houses visited in 30 clusters - 1946
2. Minimum No.of houses visited - Mothers 21, Children 25
3. Maximum No.of houses visited - Mothers 105, Children 120
4. Average No.of houses visited per cluster - Mothers 51.23, Children 52.73
5. Minimum time spent (in minutes) - 90
6. Maximum time spent (in minutes) - 260
7. Average time spent (in minutes) per cluster - 178.16 Min.
8. No. of house-holds visited to get 210 children - 1582
9. Total population enumerated to get 210 children - 8905
10. No. of house-holds visited to get 210 Mothers of infants-1537
11. Total population enumerated to get 210 Mothers of Infants - 9167
12. Average size of family - 5.36
13. Total No. of infants - 211
14. Crude birth rate - 22.91 (1990)
15. Total No. of 0 - 5 year old children - 10,209
16. Total live births in last on year - 2334

COVERAGE FIGURES (12 - 23 MONTHS CHILDREN)

Total No. of 12 - 23 months children - 210 (Male 119, Female 91)

IMMUNISATION CARD AVAILABLE - 81 (38.57%)

NOT AVAILABLE - 129 (61.43%)

Antigen	No. (%)
B.C.G	193 (91.90%)
Scar present	185 (88.10%)
D.P.T - 1	200 (95.24%)
D.P.T - 2	186 (88.57%)
D.P.T - 3	172 (81.90%)
DROP OUT RATE (1-3)	28 (14.00%)
O.P.V - 1	200 (95.24%)
O.P.V - 2	185 (88.10%)
O.P.V - 3	172 (81.90%)
DROP OUT RATE (1-3)	28 (14.00%)
MEASLES	140 (66.66%)
Fully Immunised	134 (63.81%)
Partially Immunised	71 (33.81%)
Not Immunised	5 (2.38%)

Fully immunised children form 63.81%, when immunisation as per the schedule is the criteria. However, when 6 children who were given measles antigen within 15 months are also considered, the coverages is 66.66% .

SOURCE OF IMMUNISATION

ANTIGEN	HOSPITAL	H.C	OUTREACH	PRIVATE
B.C.G (193)	116(60.10%)	40(20.73%)	8(4.15%)	29(15.03%)
DPT (200)	63(31.50%)	47(23.50%)	15(7.50%)	75(37.50%)
DPT 2 (186)	58(31.18%)	45(24.19%)	12(6.45%)	71(38.17%)
DPT 3 (172)	53(30.81%)	41(23.84%)	10(5.81%)	68(39.53%)
OPV 1 (200)	64(32.00%)	47(23.50%)	17(8.50%)	72(36.00%)
OPV 2 (185)	62(33.51%)	45(24.32%)	12(6.49%)	66(35.68%)
OPV 3 (172)	54(31.40%)	41(23.84%)	10(5.81%)	67(38.95%)
Measles(140)	48(34.29%)	25(17.86%)	12(8.57%)	55(39.29%)

Hospital and Health Centre were together the leading source of B.C.G (80.83%) Hospital & Private sources accounted for 70.34% of DPT 3, 70.35% of OPV 3 & 73.58% of Measles.

REASONS FOR IMMUNISATION FAILURE

		PI (33) BCG/DPT/OPV	P.I (38) MEASLES	N.I (6)
I.	**LACK OF INFORMATION**			
1.	Unaware of need	3 (9.09%)	8 (21.05%)	3 (50.00%)
2.	Unaware of need to return for 2/3 dose	6 (18.18%)	1 (2.70%)	0
3.	Place/time of immunisation unknown	0	0	0
4.	Fear of side reactions	2 (6.06%)		0
5.	Wrong ideas about Contra-indication	1 (3.03%)	1 (2.70%)	0
6.	Others	0	0	0
II.	**LACK OF MOTIVATION**			
1.	Postponed till another time	4 (12.12%)	1 (2.70%)	1 (16.66%)
2.	No faith in immunisation	0	0	1 (16.66%)
3.	Rumours	0	0	0
4.	Others	0	0	0

III. OBSTACLES

1.	Place too far	1 (3.03%)	0	0
2.	Time inconvenient	0	2 (5.41%)	0
3.	Vaccinator not present	1(3.03%)	0	0
4.	Vaccine not available	0	0	0
5.	Mother too busy	0	11(29.73%)	1 (16.66%)
6.	Family problems	0	3 (8.11%)	0
7.	Child ill, not brought for immunisation	9 (27.27%)	3 (8.11%)	0
8.	Child ill, brought, not immunised	4 (12.12%)	1 (2.70%)	0
9.	Long waiting time	1 (3.03%)	0	0
10.	Child afraid of injection	1 (3.03%)	0	0
11.	Lost Card	0	1 (2.70%)	0
12.	Wrong timing - Late	0	6 (16.22%)	0
	Early	0	0	0

Children who were partially immunised due to not having received one of the 3 antigens (BCG/OPV/DPT) numbered 33 (46.88%) and the most common reason was 'child being ill and not taken for immunisation'.

Partially immunised children who had not received measles numbered 38 (53.52%) and the most common reason was 'Mother too busy'.

DROP OUT RATES

	D.P.T	O.P.V
I & II dose	14 (7.00%)	15 (7.50%)
II & III	14 (7.53%)	13 (7.03%)
I & III dose	28 (14.00%)	28 (14.00%)

INITIATION OF ANTIGENS

	0 - 1 1/2 M	1 1/2 - 3 M	4M	5 M	6 M	7M	8M	9M	10 M	11 M	12 M
B.C.G (193)	154(79.79%)	15(7.77%)	4(2.07%)	7(3.63%)	1(0.52%)	2(1.04%)	2(1.04%)	1(0.52%)	4(2.07%)	2(1.04%)	1(0.52%)
D.P.T 1 (200)	0	154(77.00%)	29(14.50%)	6(3.00%)	5(2.50%)	1(0.50%)	3(1.50%)	0	1(0.50%)	0	1(0.50%)
O.P.V 1 (200)	0	154(77.00%)	29(14.50%)	6(3.00%)	5(2.50%)	1(1.50%)	3(1.50%)	0	0	0	0
Measles (140)	0	0	0	0 0	0	0 0	0	0	102(72.86%)	17(12.14%)	15(10.71%)

The number of children receiving immunisation with B.C.G., D.P.T.1, O.P.V.1 & Measles at the earliest recommended age was respectively (79.79%, 77.00%, 77.00% and 72.86%)

COMPLETION OF IMMUNISATION (Fully immunised).

	10 - 12 Months	12 + Months
Male - 119	72 (60.50%)	3 (2.52%)
Female-91	62 (68.13%)	3 (3.30%)
Total	134	6

72 of the fully immunised were males (60.60% of all males) and 62 of the fully immunised were females (68.13% of all females) Completion after 12 months by 6 children was considered as partially immunised.

MOTHER COVERAGE

Total No. of pregnant Women	211
Card available	120 (56.87%)
Not available	91 (43.13%)

	CARD	HISTORY	TOTAL
TT - 1	105	84	189 (89.59%)
TT - 2	100	83	183 (86.73%)
Booster	3	1	4 (1.90%)

Fully immunised	187 (88.63%)
Partially immunised	10 (4.74%)
Not immunised	14 (6.63%)

Out of 120 pregnant mothers who had a card 17 (14.16%) remained unimmunised and 5 (4.16%) partially immunised.

SOURCE OF IMMUNISATION

	TT - 1 (189)	TT - 2/B(187)
HOSPITAL	78 (41.27%)	74 (39.57%)
HEALTH CENTRE	15 (7.94%)	16 (8.56%)
OUT REACH	11 (5.82%)	8 (4.28%)
PRIVATE	85 (44.97%)	89 (47.59%)

Hospital & Private sources together accounted for 87.16% of TT 2/B dose.

ANTENATAL CONTACTS

No. of contacts	Number (Percentage)
3 or more than 3	153 (72.51%)
1 - 3	39 (18.48%)
0	19 (9.01%)

SERVICES DURING A.N.C

No.of Times	Urine examination	B.P. Check up	Hb%
0	50 (23.70%)	33 (15.64%)	48 (72.75%)
1	48 (22.75%)	35 (16.59%)	76 (36.02%)
2	29 (13.74%)	38 (18.01%)	40 (18.96%)
3	52 (24.64%)	43 (20.38%)	27 (12.80%)
4	9 (04.27%)	11 (5.21%)	6 (2.84%)
5	23 (10.90%)	51 (24.17%)	14 (6.64%)

Pregnant women who had at least 3 or more antenatal contacts numbered 153 (72.51%) while the minimum criteria of atleast 3 investigations each, was true of only 84 (39.81%), 105 (49.76%) and 47 (22.27%) for Urine Examination, B.P checkup and Hb% estimation respectively.

IRON & FOLIC ACID TABLETS CONSUMED

	Number (%)
100 or more	107 (50.71%)
1 - 100	67 (31.75%)
No tablets	37 (17.54%)

Totally 174 (82.46%) pregnant women consumed Iron and Folic Acid tablets and 107 (61.49%) of these took 100 or more tablets.

PLACE OF DELIVERY

PLACE	Number (%)
Hospital/Health Centre	125 (59.24%)
Home	44 (20.85%)
Private Nursing Home	42 (19.91%)
Others	0

DELIVERY ATTENDED BY

	Number (%)
Doctors	104 (49.29%)
Health Staff	65 (30.81%)
Trained dai	6 (2.84%)
Untrained dai	14 (6.64%)
Others	22 (10.43%)

Delivery was conducted at equipped centres for 167 (79.15%) of the deliveries with doctors attending 104 (62.28%) of these.

Qualified personnel conducted the delivery of 175 (82.94%) infants. The 'Others' category refers to a relative staying at home or some one passing by or even no attendants.

INITIATION OF TT IMMUNISATION

MONTHS OF PREGNANCY -	3	4	5	6	7	8	9	Total
TT - 1 (189)	11(5.82%)	9(4.76%)	64(33.86%)	56(29.63%)	44(23.28%)	5(2.65%)	0	-

COMPLETION OF IMMUNISATION

MONTHS OF PREGNANCY	3	4	5	6	7	8	9	Total
TT - 2 (183)	0	0	12(6.56%)	35(19.13%)	57(31.15%)	58(31.69%)	14(7.65%)	
Booster (4)	0	0	1(25.00%)	0	2(50.00%)	1(25.00%)	0	

84 (39.81%) of mothers had been initiated by 5th month, which is usually the period of initiation. But only 47(55.95%) of these were immunised by 6th month indicating a greater than 1 month dosage interval.

COVERAGE FIGURES (1 1/2 to 11 month Infants)

Total No. of infants - 196 (Male - 88 & Female - 108)

Card available 118 (60.20%)

Not available 78 (39.80%)

ANTIGEN	No.(%)
B.C.G	175 (89.29%)
Scar present	165 (84.18%)
OPV 1	166 (84.69%)
OPV 2	143 (72.96%)
OPV 3	113 (57.65%)
DPT 1	166 (84.69%)
DPT 2	143 (72.96%)
DPT 3	113 (56.65%)
Measles	30 (15.31%)
Fully Immunised	26 (13.27%)
Partially immunised upto date	99 (50.51%)
Less than due	66 (33.67%)
Not immunised	5 (2.55%)

The number of fully immunised plus the number who are immunised upto date together form 125 (63.78%) of infants.

IMMUNISATION STATUS OF INFANTS AT THE TIME OF STUDY

Eligibility for Immunisation	AGE 6-10weeks	10-14weeks	14weeks	10-12 mnths	TOTAL
Partially immunised upto date	6(4.80%)	13(10.40%)	80(64.00%)	26(20.80%)	125
Partially immunised less than due	4(6.06%)	6(9.09%)	39(59.09%)	17(25.76%)	66
Not immunised	0	0	4(80.00%)	1(20.00%)	5

The number of children who were partially immunised due to not receiving B.C.G/DPT/OPV totalled 49(25.00%).

SOURCE OF IMMUNISATION

ANTIGEN	HOSPITAL	HEALTH CENTRE	OUTREACH	PRIVATE
BCG (175)	96 (54.96%)	43 (24.57%)	12 (6.86%)	24 (13.71%)
DPT-1(166)	67 (4.36%)	37 (22.29%)	14 (8.43%)	48 (28.92%)
DPT-2(143)	52 (36.36%)	34 (23.77%)	12 (8.39%)	45 (31.47%)
DPT-3(113)	38 (33.63%)	27 (23.89%)	6 (5.31%)	42 (37.17%)
OPV-1(166)	67 (40.36%)	37 (22.29%)	13 (7.83%)	49 (29.52%)
OPV-2(143)	52 (36.36%)	34 (23.77%)	12 (8.39%)	45 (31.47%)
OPV-3(113)	38 (33.63%)	27 (23.89%)	7 (6.19%)	41 (36.28%)
Measles(30)	9 (30.00%)	5 (16.66%)	4 (13.33%)	12 (40.00%)

K.A.P OF RELIABLE RESPONDENTS (12-23 month children)

		FI (134)	PI (71)	NI (9)
I.	**USE OF INJECTION/DROPS**			
1.	Maintains health	22 (16.42)	20 (28.17)	0
2.	Prevent sickness	64 (47.76)	36 (50.70)	1 (20.00)
3.	Prevent disability	19 (14.18)	9 (12.68)	1 (20.00)
4.	Prevent death	13 (9.70)	0	0
5.	Others	7 (5.22)	1 (1.41)	1 (20.00)
6.	Don't know	9 (6.72)	5 (7.04)	2 (40.00)
II.	**DISEASES PREVENTED BY THESE INJECTIONS/DROPS**			
1.	Polio	76 (56.72)	37 (52.11)	2 (40.00)
2.	Tuberculosis	43 (32.09)	20 (28.17)	1 (20.00)
3.	Diptheria	26 (19.40)	8 (11.27)	0
4.	Pertussis	18 (13.43)	7 (9.86)	0
5.	Tetanus	31 (23.13)	13 (18.31)	1 (20.00)
6.	Measles	29 (21.16)	11 (15.49)	0
7.	Others	17 (12.69)	14 (19.71)	1 (20.00)
8.	Don't know	11 (8.21)	8 (11.27)	2 (40.00)
III.	**SOURCE OF IMMUNIZATION SERVICES**			
1.	Government Hospital	74 (55.22)	37 (52.11)	3 (60.00)
2.	Outreach	16 (11.94)	12 (16.90)	0
3.	Private	49 (36.57)	24 (33.80)	2 (40.00)
IV.	**DAY OF AVAILABILITY OF IMMUNIZATION SERVICES**			
1.	Any day	44 (32.84)	21 (29.58)	2 (40.00)
2.	Fixed day	87 (64.93)	47 (66.20)	3 (60.00)
3.	Don't know	3 (2.24)	3 (4.23)	0
V.	**CORRECT AGE FOR GIVING INJECTIONS/DROPS**			
1.	OPV	92 (68.66)	39 (54.99)	2 (40.00)
2.	DPT	90 (67.16)	38 (53.52)	2 (40.00)
3.	BCG	103 (76.87)	49 (69.01)	3 (60.00)
4.	Measles	79 (58.96)	37 (52.11)	1 (20.00)

VI. CORRECT NO. OF DOSES OF INJECTIONS/DROPS

1.	OPV	99 (73.88)	36 (50.70)	2 (40.00)
2.	DPT	97 (72.39)	34 (47.89)	2 (40.00)
3.	BCG	103 (76.87)	47 (66.20)	2 (40.00)
4.	Measles	77 (57.46)	35 (49.30)	1 (20.00)

VII. DECISION MAKER IN THE FAMILY

1.	Mother	89 (66.42)	49 (69.01)	2 (40.00)
2.	Father	26 (19.40)	18 (26.32)	2 (40.00)
3.	Mother-in-law	8 (5.97)	6 (8.45)	0
4.	Father-in-law	7 (5.22)	0	0
5.	Others	9 (6.72)	2 (2.82)	1 (20.00)

VIII. SOURCE OF INFORMATION

1.	Health worker	33 (24.63)	10 (14.08)	1 (20.00)
2.	Anganawadi worker	6 (4.48)	0	0
3.	Medical practitioner	40 (29.85)	27 (38.03)	2 (40.00)
4.	Newspaper/Poster	29 (21.64)	19 (26.76)	0
5.	Relatives/Neighbours	15 (11.19)	1 (1.41)	0
6.	Others (TV)	42 (31.34)	14 (19.72)	0
7.	No information	0	0	2 (40.00)

- Reliable Respondents of 12-23 month old children who felt that Antigens prevented sickness numbered 101 (48.10%), while 16 (7.62%) did not know their utility.

- Awareness of Vaccine preventable diseases was maximum for polio (54.76%) and least for Pertussis (11.90%). 21 (10.00%) did not know any of the diseases prevented by Vaccine.

- The commonest source of immunisation services was Government Hospital or Health centre for 114 (52.29%) of respondents and was available on a fixed day, 137 (65.24%).

- The knowledge of correct age and number of dose was highest with regard to BCG (73.81% & 72.38% respectively). It was lowest for Measles (55.71% & 53.81% respectively).

- The decision to immunise 140 (66.66%) of the infants was taken by the mother herself and the commonest source of information was the Medical Practitioner (32.86%).

K.A.P OF RELIABLE RESPONDENTS (0-12 MONTHS CHILDREN)

I.	USE OF INJECTION/DROPS	FI (187)	PI (10)	NI (14)
1.	Maintains health	32 (17.11)	2 (20.00)	3 (21.43)
2.	Prevent sickness	84 (44.92)	4 (40.00)	6 (42.86)
3.	Prevents disability	14 (7.49)	1 (10.00)	2 (14.29)
4.	Prevents death	16 (8.56)	0	0
5.	Others	21 (11.23)	2 (20.00)	0
6.	Don't know	20 (10.70)	1 (10.00)	3 (21.43)
II.	DISEASES PREVENTED BY THESE INJECTIONS/DROPS			
1.	Polio	74 (39.57)	5 (50.00)	6 (42.86)
2.	Tuberculosis	41 (21.93)	2 (20.00)	3 (21.43)
3.	Diptheria	23 (12.30)	2 (20.00)	0
4.	Pertussis	11 (5.88)	2 (20.00)	2 (14.29)
5.	Tetanus	46 (24.60)	4 (40.00)	3 (21.43)
6.	Measles	47 (25.13)	3 (30.00)	4 (28.57)
7.	Others	22 (11.76)	2 (20.00)	2 (14.29)
8.	Don't know	30 (16.04)	1 (10.00)	2 (14.29)
III.	SOURCE OF IMMUNISATION SERVICES			
1.	Government Hospital	96 (51.34)	5 (50.00)	7 (50.00)
2.	Outreach	25 (13.37)	0	2 (14.29)
3.	Private	69 (36.90)	4 (40.00)	3 (21.43)

IV. DAY OF AVAILABILITY OF IMMUNISATION SERVICES

1.	Any day	63 (33.69)	3 (30.00)	3 (21.43)
2.	Fixed day	118 (63.10)	7 (70.00)	10(71.43)
3.	Don't know	6 (3.21)	0	1 (7.14)

V. CORRECT AGE FOR GIVING INJECTION/DROPS

1.	OPV	117 (62.57)	6 (60.00)	8 (57.14)
2.	DPT	108 (57.75)	6 (60.00)	7 (50.00)
3.	BCG	140 (74.87)	7 (70.00)	9 (64.29)
4.	Measles	102 (54.55)	5 (50.00)	5 (35.71)

VI. CORRECT DOSE OF INJECTION/DROPS

1.	OPV	107 (57.22)	5 (50.00)	8 (57.14)
2.	DPT	101 (54.01)	5 (50.00)	6 (42.86)
3.	BCG	132 (75.59)	7 (70.00)	9 (64.29)
4.	Measles	96 (51.34)	5 (50.00)	4 (28.57)

VII. DECISION MAKER IN THE FAMILY

1.	Mother	98 (52.41)	7 (70.00)	8 (57.14)
2.	Father	39 (20.86)	2 (20.00)	4 (28.57)
3.	Mother-in-law	9 (4.81)	0	4 (28.57)
4.	Father-in-law	11 (5.88)	0	0
5.	Others	32 (17.11)	1 (10.00)	1 (7.14)

VIII. SOURCE OF INFORMATION

1.	Health worker	39 (20.86)	3 (30.00)	3 (31.43)
2.	Anganawadi worker	21 (11.23)	2 (20.00)	2 (14.29)
3.	Medical Practitioner	52 (27.81)	3 (30.00)	1 (7.14)
4.	Newspaper/Poster	28 (14.97)	2 (20.00)	2 (14.29)
5.	Relatives/Neighbour	14 (7.49)	2 (20.00)	3 (21.43)
6.	Others (TV)	29 (15.51)	1 (10.00)	1 (7.14)
7.	No information	6 (3.21)	1 (10.00)	3 (21.43)

IX. INTENTION

1.	Yes	186 (99.47)	8 (80.00)	13(92.86)
2.	Already started	169 (90.37)	6 (60.00)	6 (42.86)
3.	Completed	17 (9.09)	3 (30.00)	6 (42.86)
4.	No	0	1 (10.00)	1 (7.14)
5.	Others	1 (0.53)	0	1 (7.14)

Reliable respondents of 0-12 months old infants who stated that the antigens prevented sickness numbered 94 (44.55%), while 16 (7.62%) did not know their utility.

Awareness of vaccine preventable diseases was maximum for polio (40.28%) and least for pertussis (7.11%). 33 (15.14%) did not know any of the diseases prevented.

The commonest mentioned source of immunisation services was Government Hospital or Health Centre for 108 (51.18%) of respondents and was available on a fixed day, 135 (63.98%).

The knowledge of correct age and number of doses was highest with regard to BCG (73.93% & 70.14% respectively). It was lowest for Measles (53.08% & 49.76% respectively).

The decision to immunise 113 (53.55%) of the infants was taken by the mother herself and the commonest source of information was Medical Practitioner (26.66%).

Of the 211 pregnant women, 207 (98.10%) expressed the intention to immunise the child, while 2 (0.95%) did not intend to get their child immunised.

LAMENESS SURVEY

No.of 0 - 5 year old children - 10,209

No.of Lame children - 9

Cause of Lameness	No.(%)
Poliomyelitis	4 (44.44%)
Trauma	o
Congenital	3 (33.33%)
Others (TBM)	2 (22.22%)

Lameness due to Polio - 4

Rate/1000 children - 0.39

AGE & SEX DISTRIBUTION OF POLIO LAME CHILDREN

	MALE	FEMALE	TOTAL
0 - 6 weeks	0	0	0
7 - 14 weeks	0	0	0
15 weeks - 6 months	0	0	0
7 - 12 months	0	1	1
2 years	1	0	1
3 years	0	1	1
4 years	1	0	1
5 years	0	0	0
Total :	2(50.00%)	2 (50.00%)	4

IMMUNISATION STATUS OF POLIO LAME CHILDREN AT TIME OF ATTACK

	MALE	FEMALE	TOTAL
Nil	2	1	3 (75.00%)
1st dose only	0	0	0
2nd dose	0	1	1 (25.00%)
3rd dose	0	0	0
Booster	0	0	0

PROVOCATIVE POLIOMYELITIS

History of provocation	Number (%)
Yes	0
No	4

	POLIO		OTHERS		TOTAL
	Male	Female	Male	Female	
0 - 6 weeks	0	1	2	1	4(44.44%)
7 weeks 12 months	0	0	2	0	2(22.22%)
2 years	2	0	0	0	2(22.22%)
3 years	0	1	0	0	1(11.11%)
4 years	0	0	0	0	0
5 years	0	0	0	0	0

CALENDER YEAR OF SURVEY

	Number (%)
1990	2 (50.00%)
1989	1 (25.00%)
1988	1 (25.00%)
1987	
1988	

NEONATAL TETANUS SURVEY

No.of live births in last one year - 2334

No.of Neonatal deaths-Male 6, Female-6 - 13

No.of Neonatal deaths due to Tetanus 2 (Male-1, Female -1)

Neonatal death rate - 5.56/1000 live births

Neonatal Tetanus rate - 0.86/1000 live births

BIRTH ATTENDANTS FOR NNT ONLY

	Number (%)
Health staff	0
Trained dai	0
Untrained dai	0
Family members	2 (100.00%)
Others	0
None	0

PLACE OF DELIVERY & N.N.T

Hospital/Health Centre	0
Home	2 (100.00%)
Others	0

MEDICAL CARE AT SICKNESS

	Time interval more than 1 day
Govt. Institution	1
N.G.O/Private Institution	0
Unqualified practioner	0
No treatment	1

IMMUNISATION STATUS OF MOTHERS

Not Immunised	1	(50.00%)
1st dose	0	
2nd dose	1	(50.00%)
Booster dose	0	

I. COMPARISON OF COVERAGE FIGURES WITH REPORTED PERFORMANCE

	CES - 91	89-90
B.C.G	91.90%	122.02%
OPV 3	81.90%	96.79%
DPT 3	81.90%	96.76%
Measles	66.66%	66.68%

The coverage figures agree with reported performance only in case of measles. Over-reporting is seen with respect to other antigens, especially B.C.G.

II. COMPARISON OF COVERAGE FIGURES OF BANGALORE (URBAN) WITH BANGALORE (RURAL) DISTRICT.

	CES-BANGALORE(URBAN)-91	CES-BANGALORE(RURAL)-91
B.C.G	91.90%	87.62%
OPV 3	81.90%	70.48%
DPT 3	81.90%	70.00%
Measles	66.66%	55.24%

III. COMPARISON OF COVERAGE FIGURES WITH PREVIOUS COVERAGE REPORT

	CES 91	CES 89
B.C.G	91.90%	90.48%
OPV 3	81.90%	88.33%
DPT 3	81.90%	88.33%
Measles	66.66%	70.71%

IV. COMPARISON OF LAMENESS AND NEONATAL TETANUS SURVEY RESULTS WITH BANGALORE (RURAL) DISTRICT SURVEY - 91.

	Bangalore(Urban)	Bangalore(Rural)
Polio Lameness/1000 0-5 year old children	0.39	1.35
Neonatal Tetanus Rate/1000 live births	0.86	0.93

V. COMPARISON OF LAMENESS AND NEONATAL TETANUS SURVEY RESULTS WITH PREVIOUS SURVEY RESULTS

	1991	1989
Polio Lameness/1000 0-5 year old children	0.39	0.43
Neonatal Tetanus Rate/1000 live births	0.86	N.A

SUMMARY

CHILD COVERAGE SURVEY (12 - 23 months children)

1. Fully immunised children formed 63.81% of the 210 children covered and 2.38% were not immunised.

2. Hospital and private sources were the major source for all antigens.

3. Among the reasons for immunisation failure 'mother being too busy' and 'child ill, not taken for immunisation' were prominent.

4. Initiation of immunisation was as per the recommended schedule in 72.86% to 79.79% of children. Completion within the recommended period was achieved in 95.71% of fully immunised children.

5. Overall drop out rate was 14.00% and 14.00% respectively for DPT & OPV.

6. There is a significant improvement in coverage figures as compared to Bangalore (rural) District survey 1991.

7. Comparison with reported coverage during the same period shows agreement for measles antigen only.

8. Knowledge of Diseases prevented by immunisation was low, while the place (Mostly health centre) and time of immunisation (mostly fixed day) was known to a majority of respondents. The decision to immunise was mostly made by the mother.

MOTHER COVERAGE :

1. A low card availability (56.87%), 88.63% fully immunised, 6.63% not immunised with a 4.74% partially immunised are the prominent features.

2. Hospitals and private sources were the leading sources of immunisation with private sources accounting for more immunisation than hospitals.

3. Of the 211 pregnant women (72.51%) received the minimum of 3 antenatal contacts while only about 22.28% to 49.76% of them had the basic examinations (Hb% estimation, Urine examination and B.P check-up) 3 times.

4. 50.71% of the pregnant mothers consumed the requisite minimum of hundred iron and folic acid tablets. 17.54% did not receive any tablets.

5. The usual place of delivery was Hospital/Health Centre (59.24%) and it was usually attended by Doctors and Health Staff (80.10%).

6. By the 7th month 184 (87.24%) of the 211 pregnant women were given TT-1 and by 8th month 166 (78.67%) had been given 2nd/Booster dose.

INFANT COVERAGE :

1. 196 infants of the 211 pregnant women within the age group of 1 1/2 to 11 months were covered.

2. Card availability was 60.20%.

3. Taking the earliest recommended time of initiation as the criteria 99 (50.51%) of the partially immunised infants were upto-date immunised 26 (13.27%) were fully immunised.

4. The source of immunisation was mostly either the Hospital or private sources for all the antigens.

5. Respondents of about 15% of infants were ignorant of the use of injection/drops, while knowledge of diseases prevented was incomplete. Government Hospital was the commonest source cited and a fixed day of availability was widely known. Knowledge of the correct age and correct number of doses of antigens was present in about 50% of the respondents. Aided by information mostly from the Medical Practitioner the mother was the usual decider with regard to immunisation.

LAMENESS SURVEY :

1. The No. of 0 - 5 year old children enumerated was 10,209 with 9 of them being lame.

2. Lameness due to polio was found in 4 (44.44%) and polio lameness rate was 0.39/1000 0-5 year old children.

3. Polio lame children were mostly in the age group 7m - 4 years with the usual age of onset being 2-3 years.

4. Only one of the polio lame children had received OPV(2 doses) at the time of attack. History of provocation was not found in any child.

NEONATAL TETANUS SURVEY :

1. Total number of live births enumerated for last one year was found to be 2334.

2. Neonatal death occured in 13 neonates, out of which 2 were due to neonatal tetanus (N.N.T rate 0.86/1000 live births).

3. Both N.N.T deaths occured during home delivery by Family members with one mother being fully immunised and other not immunised. One neonate did receive treatment, but after 1 day of onset illness.

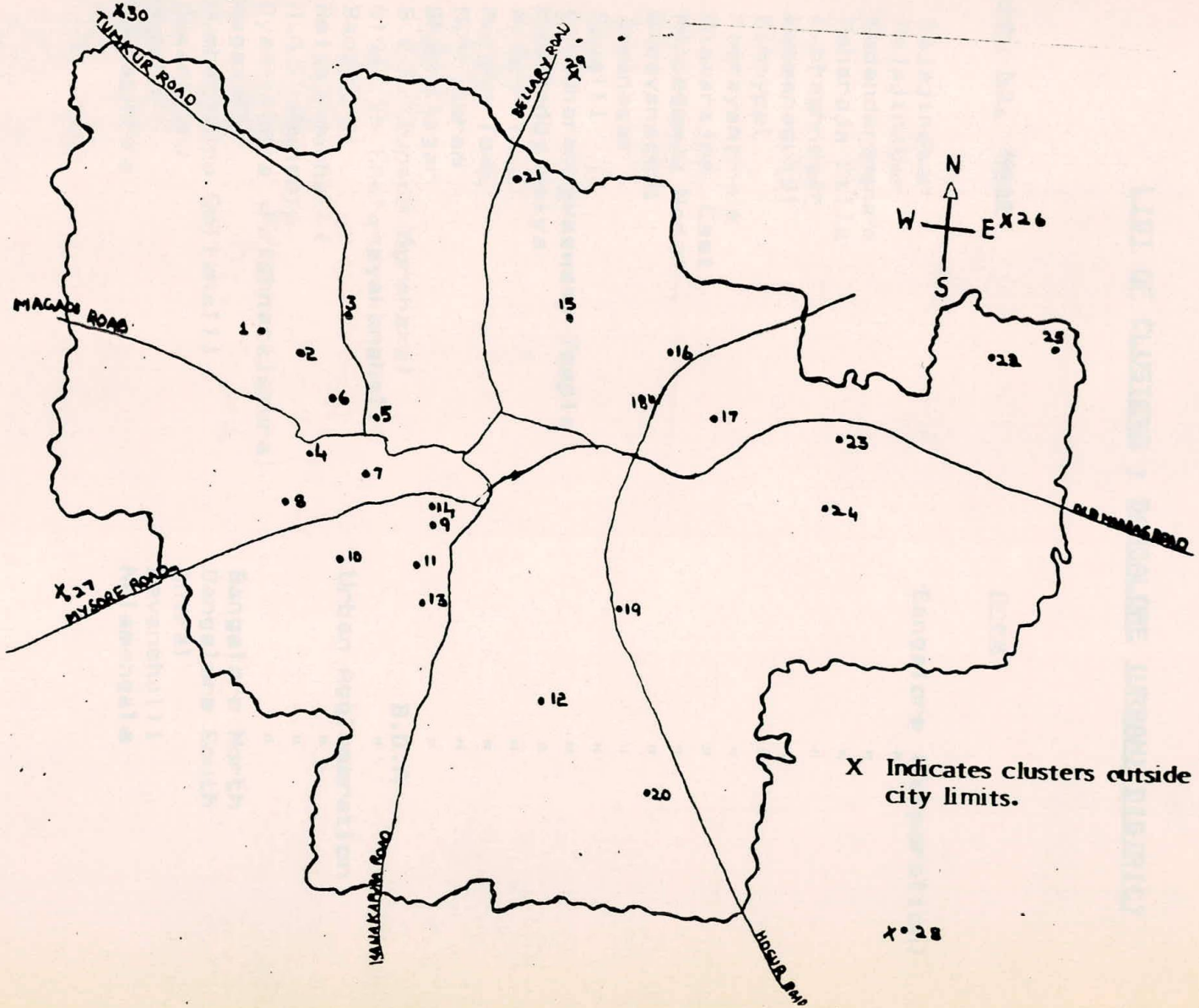
RECOMMENDATIONS

1. It is essential to stress to the Health Workers the need to distribute cards to all beneficiaries including pregnant mothers.

2. It is essential to improve outreach activities to increase coverage to desired levels.

3. A simultaneous effort to increase health education activities and research,to elicit reasons for low utilisation of available services is needed to improve Antenatal care.

4. It is essential to involve private practitioners to improve coverage and in health education of the community.



AREA MAP OF BANGALORE CITY

LIST OF CLUSTERS I BANGALORE (URBAN) DISTRICT

Cluster No.	Name	Area
1.	Rajajinagar	Bangalore (Corporation)
2.	Rajajinagar	"
3.	Kodandarampura	"
4.	Maharaja Mills	"
5.	Subhashnagar	"
6.	Kemmanagundi	"
7.	Binnypet	"
8.	Padrayanapura	"
9.	Chamarajpet East	"
10.	Kempegowda Nagar	"
11.	Basavanagudi	"
12.	Jayanagar	"
13.	Mavalli	"
14.	Sri.Dharmarayaswamy Temple	"
15.	Munireddy palya	"
16.	Fraser Town	"
17.	Murphy Town	"
18.	Nehrupuram	"
19.	Shantinagar	"
20.	B.D.A (Rupena Agrahara)	B.D.A
21.	Slums in Cholanayakanahalli	"
22.	Bansavadi	Urban Agglomeration
23.	Baiyappanahalli	"
24.	H.A.L Township	"
25.	Dyavasandra (Krishnarajapura)	Bangalore North
26.	Nagavara	Bangalore South
27.	Kumbalagodu Gollahalli	Anekal
28.	Dasanapura	Devanahalli
29.	Unachur	Nelamangala
30.	Kammasandra	