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EXPANDED PROGRAMME ON IMMUNIZATION

(E P I)

A REVIEW OF ACTIVITIES IN 1984 AND PROGRAMME FOR 1985

BY

H.C. SMITH, IMMUNISATION OFFICER, PAHO/WHO

15-11

EXPANDED PROGRAMME ON IMMUNIZATION (EPI) IN THE
CAREC - SERVED CARIBBEAN AREA - 1984

1.0 INTRODUCTION

1.1 The primary target group for immunization was children under one year of age in accordance with PAHO/WHO Global Strategy. Children over one year of age who did not receive all their immunizations were given second priority as well as expectant mothers who were given tetanus toxoid after their first trimester of pregnancy.

 A booster dose of DT and TOPV vaccines is generally given to children entering school for the first time (4 to 5 years of age) and a second booster of TT and TOPV to those leaving school at 10 to 11 years of age. Most of the 19 countries served by CAREC require all children to be fully immunized before they are allowed admission into school.

 Training and evaluation activities have increased but deficiencies occur at operational levels where more support and assistance in commitment and practical application are required. Standardized procedures and norms and guidelines need to be further improved in accordance with current practices and applied as the national accepted policy. There are about 20% of children who receive their first dose of DPT and TOPV immunizations in a few countries who do not return for their third dose. More effort is required to reduce this number of defaulters.

 An area of continued weakness is inadequate budgetary provision for transportation of personnel, vaccines and equipment. This also affects supervision and the maintenance of the cold chain at the national level.

 The Revolving Fund through which vaccines are purchased has continued to assist in the reliability and quality of vaccines available to the programmes. In addition, the cost and system of payment are most economical and convenient and therefore have contributed to more effective and increased immunization coverage.

 There are rare occasions when vaccines do not arrive on schedule. These may continue to occur due to transshipment of vaccines, especially to those islands which are not situated within any international air route. The Revolving Fund will have to continue searching for the most reliable possibilities of shipping vaccines with precise advance information to their respective destinations.

2.0 THE SIX TARGET DISEASES FOR PREVENTION THROUGH IMMUNIZATION

2.1 Routine immunizations against diphtheria, pertussis, tetanus and poliomyelitis continued in all 19 countries. Two countries have added measles vaccine to their schedule for 1984. Therefore, all 19 countries are now giving this vaccine as part of their routine programme and 11 are giving BCG as usual (See Table 1).

Diphtheria had been notified from 2 countries in 1983 and 1 country in 1984. The lower annual incidence rate in 1983 was 0.3 per 100,000 population in Suriname and the higher was 0.4 in Jamaica. In 1984 there were 7 cases reported in Jamaica with an incidence rate of 3.0 per 100,000. Eighteen countries did not report any diphtheria cases in 1984.

Pertussis had been notified from 5 countries in 1983 and 6 countries in 1984. The lowest annual incidence rate was 0.6 per 100,000 population in 1983 in Guyana and the highest was 14.0 in Dominica. In 1984 the lowest rate was 0.4 in Bahamas and the highest was 20.0 per 100,000 in Cayman Islands.

Neonatal Tetanus one case was notified from Dominica for the year 1983. There was no reported cases of neonatal tetanus in 1984. Tetanus (non-neonatal) was notified from 7 and 9 countries in 1983 and 1984 respectively. The lowest incidence rate in 1983 was 0.6 in Guyana and the highest 2.4 in Barbados. In 1984 the lowest rate was 0.2 in Jamaica and the highest 2.3 per 100,000 in Saint Lucia.

Poliomyelitis was notified from Jamaica and Suriname in 1982. The one case in Suriname was classified as Type 111 vaccine induced.

In Jamaica there were 58 cases of type 1 which occurred from March to June before a mass immunization campaign brought the outbreak under control. In 1981 prior to the outbreak Jamaica had an immunization coverage of only 37% against poliomyelitis among children under one year of age and other age groups were similarly unprotected.

There have been no cases of poliomyelites reported from any of the 19 CAREC member countries since 1982.

Measles was notified from 17 and 16 countries in 1983 and 1984 respectively. The lowest annual incidence rate in 1983 was 1.2 in Dominica and highest was 1300 cases per 100,000 population in Turks and Caicos Islands. In 1984 the lowest rate was 1.3 in Antigua/Barbuda and the highest was 300 cases per 100,000 population in Trinidad and Tobago.

Tuberculosis of all types was reported from 15 countries in 1982 and 16 countries in 1984. The lowest annual incidence rate in 1983 was 3.6 in St Vincent and the Grenadines and the highest 91.0 per 100,000 in Belize. In 1984 the lowest rate of 3.8 occurred in Antigua and Barbuda while the highest of 43.0 per 100,000 was notified from St Lucia. There were no cases of tuberculosis reported among infants during the period 1983 to 1984. Those reported were mainly in adults whose immunization status were nil or unknown (See Table 2 for cases and incidence rates of the six target EPI diseases).

3.0 VACCINE COLD CHAIN

3.1 Sufficient advance notice concerning the arrival of vaccines from the Revolving Fund continue to be received by all participating countries. However, on rear occasions the vaccines do not arrive on the schedule flight but turn up a day or two later. This may even result in the vaccine arriving on a weekend which creates problems to collect since the Central Vaccine Stores are usually closed after mid-day on Saturday. Therefore the Revolving Fund will have to continue searching for most reliable carriers and routes for transporting vaccines to their destinations efficiently.

Storage facilities, methodology and routine monitoring of vaccine storage temperatures continue to improve through supervision and practical corrective measures. Packing and distribution of vaccines from central to peripheral levels will continue to need more attention to ensure that vaccines arrive at their destinations in the best possible cold chain maintenance condition.

Electric power failures and voltage fluctuations continue as major threats to the cold chain maintenance. Damage to a consignment of vaccines was confirmed by laboratory analysis for one country. About 30% of countries have an emergency supply of electricity attached to their central vaccine stores.

Monitoring of vaccine storage temperatures is being done in 85% of all central vaccine stores. A number of health centres are also doing the same as part of the maintenance of the vaccine cold chain. Others are preparing to do so as thermometers become available.

4.0 MEMBERSHIP OF PAHO/WHO REVOLVING FUND FOR VACCINES

4.1 Eighteen of the 19 countries served by CAREC continue to be members of the Fund for the purchase of vaccines (See Table 3). In this way the countries are assured of a reliable source of quality vaccines. In addition, the cost and system of payment is most economical and convenient.

5.0 IMMUNIZATION COVERAGE

5.1 Emphasis has been on achieving maximum coverage among children under one year of age. Those over one year and up to five years of age are given second priority. Expectant mothers are given 2 doses of tetanus during first pregnancy. The first dose is given after the first trimester followed by the second dose 4 to 8 weeks later. For subsequent pregnancies only a booster dose is usually given.

From reports received at CAREC the less populated countries continue to achieve higher immunization coverage than the more populated ones (See Tables 4 and 5 and Figures 1 and 2).

There were also more countries achieving higher levels of coverage in 1984 as compared with the previous years 1983, as shown on the following table:

Levels of Coverage with 3 doses of
DPT and TOPV Immunizations
Among the 19 CAREC Member Countries
1983 and 1984

Levels of Coverage Under 1 Year of Age	Number of Countries			
	DPT		TOPV	
	1983	1984	1983	1984
Under 25%	0	0	0	0
25 - 49%	1	1	2	1
50 - 74%	8	6	6	6
Above 75%	10	12	11	12
Total	19	19	19	19

Immunization coverage reflected in this report represents achievements by the various governments' health services as part of primary health care. Only two countries - British Virgin Islands and Cayman Islands have succeeded in obtaining immunization figures from private practitioners.

6.0 MONITORING OF IMMUNIZATION COVERAGE

6.1 At least 80% of countries continue to monitor their immunization coverage among children under one year of age from the central level at monthly or quarterly intervals. The main tool for this purposes is a graphic form which was developed here at CAREC in 1979 and is now being used by other programmes in other parts of the world. It shows the estimated target population to be immunized during the course of the calendar year. This is further broken down into monthly targets by dividing by 12. At the end of each month the EPI manager records the total number of fully immunized infants on the form as well as plot the result in the space provided.

When progress is less than the target set by the programme, corrective action should be taken to improve coverage during the following month.

At present several countries are also using the graphic form at health centre level. It is planned to introduce this monitoring system to all health centres gradually.

7.0 STORAGE OF YELLOW FEVER VACCINE

7.1 Yellow fever vaccine which was kept for emergency purposes since the outbreak of yellow fever in Trinidad in 1979 is currently out of stock. Our last consignment expired in September, 1984. A request was made to PAHO Washington in August for another supply which is usually provided free of cost to us through the generosity of Instituto Nacional de Salud, Colombia.

About 9,000 doses of the last consignment of 15,000 doses received by us were supplied to several of our member countries in small quantities free of charge upon request. A number of countries continue to request small quantities but we are unable to meet their request.

8.0 USAID Grant

8.1 As in the past, USAID through CAREC continued to assist the EPI effort in the caribbean. The assistance provided in 1984 was much appreciated and satisfied some critical needs in the various programmes.

<u>Country</u>	<u>Cold Chain Appliances Provided by USAID - 1984</u>		
	<u>Refrigerators</u>	<u>Freezer</u>	<u>Cost (US\$)</u>
Jamaica	3	0	1,839.00
Suriname	2	0	1,872.95
Belize	3	0	2,660.00
Bahamas	1	1	1,514.00
Barbados	2	0	2,200.00
TOTAL	11	1	10,085.95

One hundred (100) Bi metal dial thermometers were also provided by USAID for distribution to deserving countries at an estimated cost of 300.00
So far, 51 of these thermometers have been distributed among 11 countries .

Two local level EPI workshops were held in June and July in St. Christopher and Nevis respectively. As a result of a special request from the Government, USAID through CAREC assisted with some local funding which amounted to 449.00

Total assistance from USAID for 1984 is 10,834.95

9.0 Programme For 1985

9.1 Continue to improve the quality of, and increase immunization coverage among children under one year of age.

9.2 Encourage health centres to estimate their target population of children under 1 year of age for immunization at the beginning of each calender year, and monitor progress of coverage on a monthly ongoing basis.

9.3 Each EPI Programme Manager in collaboration with the statistics office should use the recommended graphic chart to monitor EPI coverage on a monthly or quarterly ongoing basis at the national level. The most important age group to be monitored is children under 1 year. Any simple realistic monitoring technique other than the one recommended can also be used.

9.4 Immunization boosters at school entry and leaving ages usually (4 to 5 and 10 to 11 years respectively) will also be encouraged.

9.5 Promote preventive maintenance of refrigerators and freezers such as regular defrosting, proper levelling, locating and setting to obtain maximum efficiency.

9.6 Improve monitoring and recording of vaccine storage temperatures. Morning and afternoon temperatures in vaccine refrigerators, freezers and other storage facilities are to be monitored and recorded daily.

9.7 More supervision to ensure proper storage, handling and utilization of vaccines at all levels of the EPI.

9.8 Continue emphasis for a standard and adequate reporting form in each country and prompt submission of reports at the end of each month through a well-defined and efficient procedure to one central authority (EPI Manager) in the Ministry of Health.

9.9 Health education to encourage parents to bring their children for immunization at the optimal age; how many visits are required before the child's course of immunizations are completed, what reactions may occur, why, and what to do.

9.10 Promote community participation to assist in increasing coverage. This to be pursued in collaboration with health education units in the respective Ministries of Health. Remote areas and those of difficult access to be given priority.

9.11 Possibility of providing emergency electric power supply to central vaccine store should be explored in those countries where this does not exist. Linking the vaccine store to the emergency electric power supply of the General Hospital may be a solution. A standby generator may also be a consideration.

9.12 Surveillance of the EPI diseases to be increased. Case detection with accurate diagnosis followed by investigation, analysis and prompt reporting through an efficient procedure to the appropriate authority in the Ministry of Health are to be emphasized.

Table 1

VACCINES BEING ADMINISTERED IN THE
CAREC-SERVED CARIBBEAN AREA

1984

NO.	COUNTRY	DPT	TOPV	BCG	MEASLES	DT	TT
1	Anguilla	x	x	x	x	x	x
2	Antigua and Barbuda	x	x	-	x	x	x
3	Bahamas	x	x	-	x	x	x
4	Barbados	x	x	x	*	x	x
5	Belize	x	x	x	x	x	x
6	Bermuda	x	x	-	*	x	x
7	British Virgin Islands	x	x	-	x	x	x
8	Cayman Islands	x	x	x	*	x	x
9	Dominica	x	x	x	x	x	x
10	Grenada	x	x	-	x	x	x
11	Guyana	x	x	x	x	x	x
12	Jamaica	x	x	x	x	x	x
13	Montserrat	x	x	x	*	x	x
14	St. Kitts/Nevis	x	x	x	x	x	x
15	Saint Lucia	x	x	x	x	x	x
16	St. Vincent/Grenadines	x	x	-	x	x	x
17	Suriname	x	x	-	x	x	x
18	Trinidad and Tobago	x	x	-	x	x	x
19	Turks and Caicos	x	x	x	x	x	x
	Total	19	19	11	19	19	19

x = Vaccine is being administered

- = Vaccine is not being administered

* = Measles vaccine is administered in MMR form (Measles Mumps and Rubella)

TABLE 2

Diphtheria, Pertussis, Tetanus, Poliomyelitis, Measles and Tuberculosis (all types)
cases reported by number and rate per 100,000, 1983 and 1984

NO.	COUNTRY (in order of population size)	DIPHTHERIA		PERTUSSIS		TETANUS		POLIOMYELITIS		MEASLES		TUBERCULOSIS	
		1983 NO.	1984 RATE	1983 NO.	1984 RATE	1983 NO.	1984 RATE	1983 NO.	1984 RATE	1983 NO.	1984 RATE	1983 NO.	1984 RATE
1	Anguilla	-	-	-	-	-	-	-	-	-	-	-	-
2	Turks and Caicos Islands	-	-	-	-	-	-	-	-	-	-	-	-
3	Virgin Islands (UK)	-	-	-	-	-	-	-	-	-	-	-	-
4	Montserrat	-	-	-	-	-	-	-	-	-	-	-	-
5	Cayman Islands	-	-	-	-	-	-	-	-	-	-	-	-
6	St. Christopher/Nevis	-	-	-	-	-	-	-	-	-	-	-	-
7	Bermuda	-	-	-	-	-	-	-	-	-	-	-	-
8	Antigua and Barbuda	-	-	-	-	-	-	-	-	-	-	-	-
9	Dominica	-	-	11	14	1	1.2	1	1.2	1	1.3	10	13
10	Grenada	-	-	-	-	-	-	1	1.0	-	-	1	1.2
11	St. Vincent & the Grenadines	-	-	-	-	-	-	-	-	-	-	1	1.2
12	Saint Lucia	-	-	-	-	-	-	2	1.6	3	2.3	4	4.8
13	Belize	-	-	-	-	1	0.7	-	-	-	-	4	2.6
14	Bahamas	-	-	8	3.4	1	0.4	6	2.4	36	15	58	25
15	Barbados	-	-	-	-	-	-	5 ^a	2.0	4 ^a	1.6	17	6.7
16	Suriname	1	0.3	-	-	-	-	8 ^a	2.2	40 ^a	11	78	22
17	Guyana	-	-	5	0.6	-	-	9	1.1	294	35	125	15
18	Trinidad & Tobago	-	-	-	-	22	1.8	15	1.3	2392	210	3556	112
19	Jamaica	9	0.4	7	3	65	2.7	27	1.1	4	0.2	-	-

- = No cases

... = Insufficient information

a = estimate

Based on reports received at CAREC by 31st March, 1985

Table 3

EPI REVOLVING FUND PARTICIPANTS
IN THE CAREC-SERVED CARIBBEAN AREA 1984

NO.	COUNTRY	STATUS	
		Participant	Non-Participant
1.	Anguilla	x	
2.	Antigua and Barbuda	x	
3.	Bahamas	x	
4.	Barbados	x	
5.	Belize	x	
6.	Bermuda		x
7.	British Virgin Islands	x	
8.	Cayman Islands	x	
9.	Dominica	x	
10.	Grenada	x	
11.	Guyana	x	
12.	Jamaica	x	
13.	Montserrat	x	
14.	St.Christopher/Nevis	x	
15.	Saint Lucia	x	
16.	St. Vincent/Grenadines	x	
17.	Suriname	x	
18.	Trinidad and Tobago	x	
19.	Jamaica	x	
TOTAL		18	1

IMMUNIZATION COVERAGE BY COUNTRY
1983 - 1984

Percentage of Children Under One Year Old
Fully Immunized (3 Doses or More)
With DPT and TOPV

NO.	COUNTRY (In order of population size from smallest to largest)	COVERAGE			
		1983		1984	
		DPT	TOPV	DPT	TOPV
1	Anguilla	97	+101	85	92
2	Turks and Caicos	70	79	60	62
3	British Virgin Islands	90	75	85	85
4	Montserrat	95	95	84	82
5	Cayman Islands	89	90	90	90
6	St. Christopher/Nevis	90	91	97	97
7	Bermuda	48	48	40	41
8	Antigua and Barbuda	+104	100	94	92
9	Dominica	93	92	84	82
10	Grenada	68	72	76	75
11	St. Vincent and the Grenadines	80	84	86	90
12	Saint Lucia	81	80	83	84
13	Belize	59	61	54	54
14	Bahamas	65	65	69	69
15	Barbados	69	62	83	77
16	Suriname	85	83	80	79
17	Guyana	58	62	70	67
18	Trinidad and Tobago	60	61	65	66
19	Jamaica	51	47	58	57

Figures are rounded off to the nearest whole number and based on reports received at CAREC by 31st March, 1984

+ = Reported number of immunizations performed exceeded target population.

Table 5

IMMUNIZATION COVERAGE BY COUNTRY

Percentage of children under one year of age fully immunized

1984

NO.	(In order of population size mid-year 1984)	POPULATION		PERCENTAGE FULLY IMMUNIZED			
		Total	Target Group Chn < 1yr	DPT Total %	TOPV 78-1 %	BCG	Measles
1	Anguilla	6,600	200	85	92	75	72
2	Turks and Caicos Islands	7,800	210	60	62	90 107*	44
3	British Virgin Islands	14,000	235	85	85	- +	89
4	Montserrat	14,000	226	84	82	81	88
5	Cayman Islands	20,000	382	90	90	64	75*
6	St Christopher/Nevis	48,000	1,029	97	97	> 5yrs	85
7	Bermuda	56,000	996	40	41	-	42*
8	Antigua and Barbuda	78,000	1,165	94	92	-	73
9	Dominica	83,000	1,980	84	82	84	85
10	Grenada	101,000	2,811	76	75	-	31
11	St Vincent/Grenadines	114,000	3,200	86	90	x32	92
12	Saint Lucia	128,000	3,185	83	84	80	60
13	Belize	156,000	5,136	54	54	77	44
14	Bahamas	235,000	5,840	69	69	-	63
15	Barbados	255,000	4,501	83	77	> 5yrs	84
16	Suriname	356,000	11,000 14,000	80	79	-	79
17	Guyana	850,000	16,000	70	67	85	56
18	Trinidad and Tobago	1,200,000	27,000	65	66	-	10
19	Jamaica	2,500,000	57,533	58	57	50	62

- = Vaccine not being administered

* = MMR vaccine is used

Fully immunized means a course of 3 or more doses of DPT and TOPV vaccines and 1 or more doses of BCG and Measles vaccines have been given to the individual.

<5yrs = Only children 5 years of age and above are immunized.

+ = reported number of doses exceeded estimated target population.

Figures are rounded off to the nearest whole number and reflect those immunizations performed by the Governments' Health Services only.

x = BCG immunization was introduced in St. Vincent only since July 1984

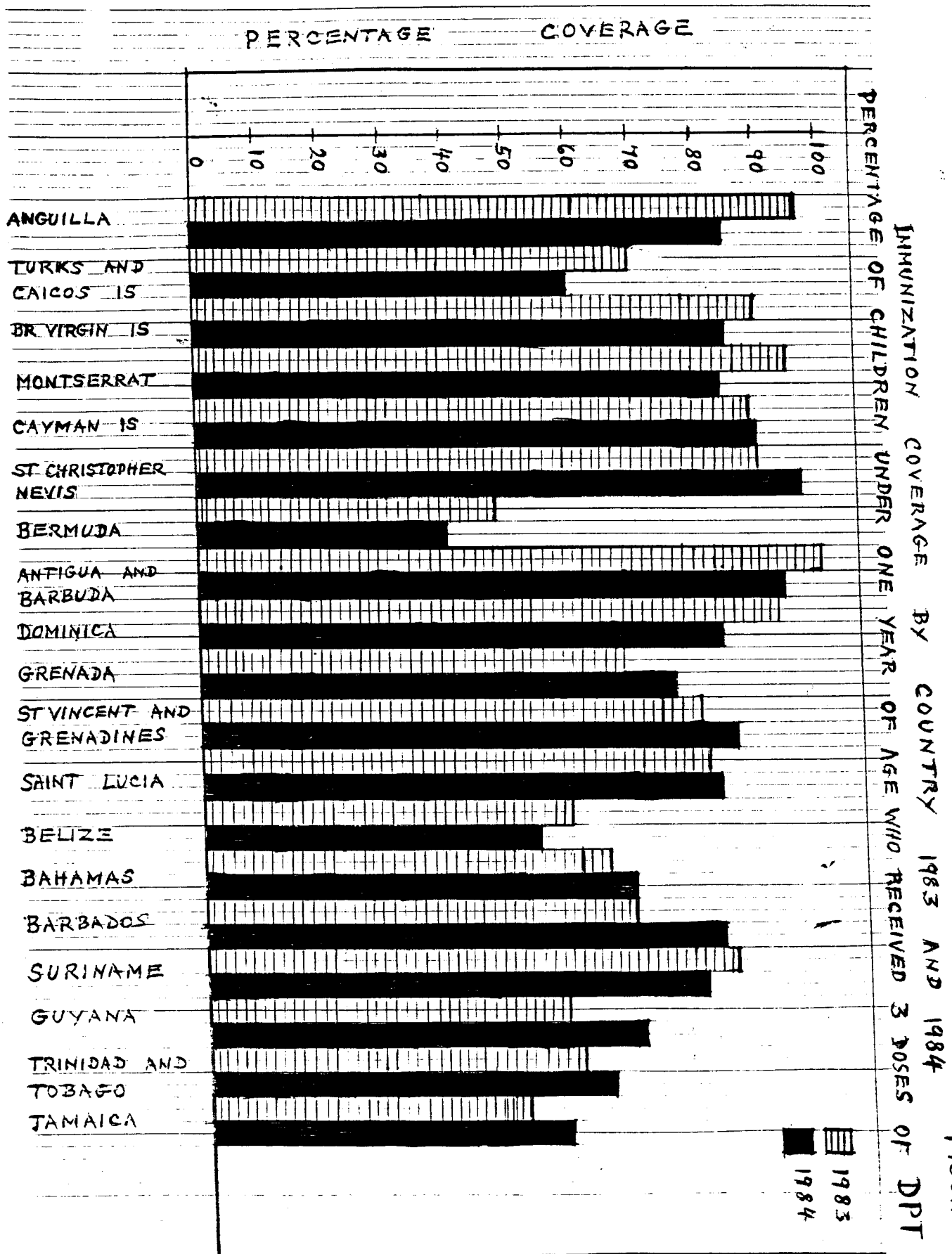


FIGURE - 1

PERCENTAGE COVERAGE

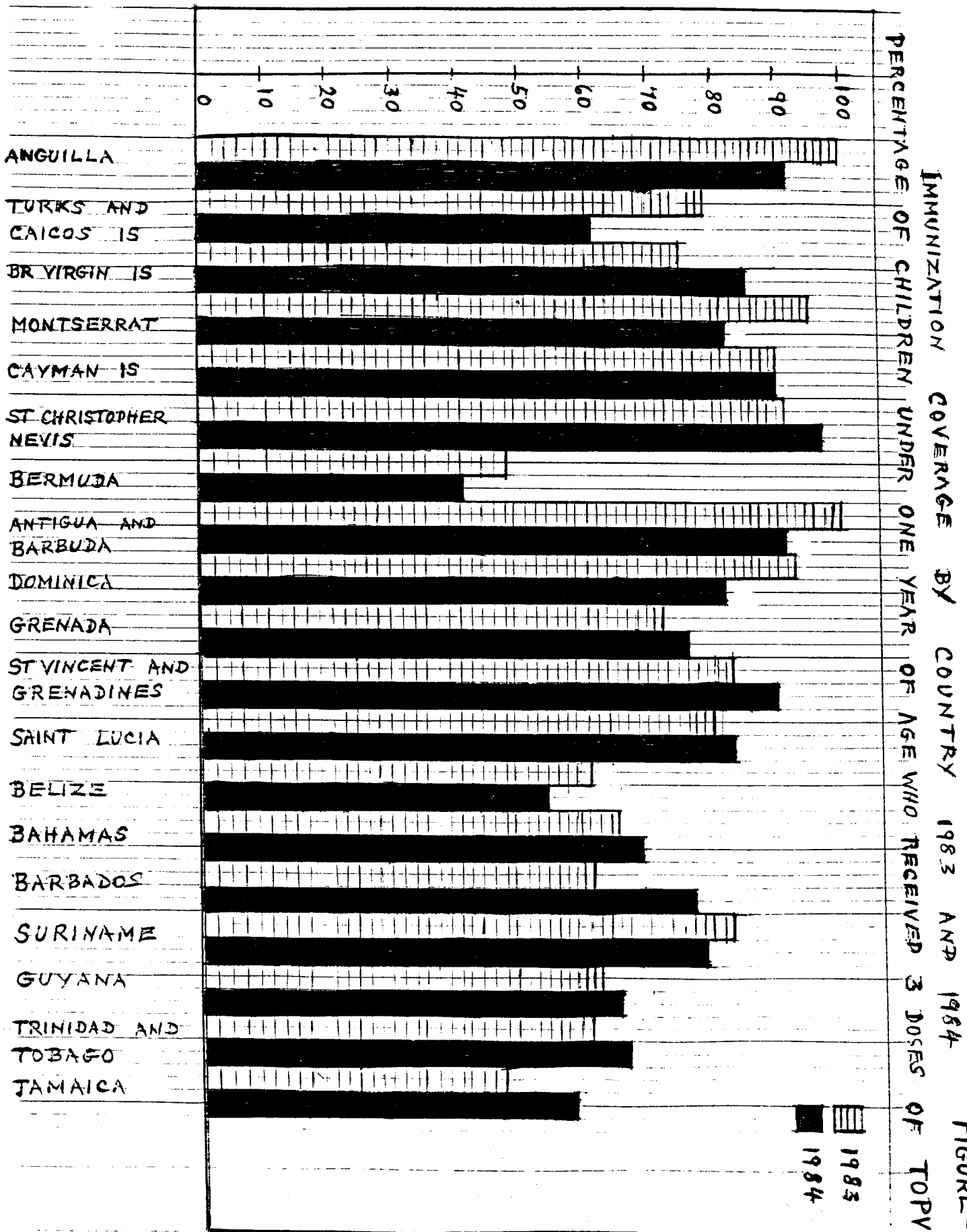


FIGURE-2