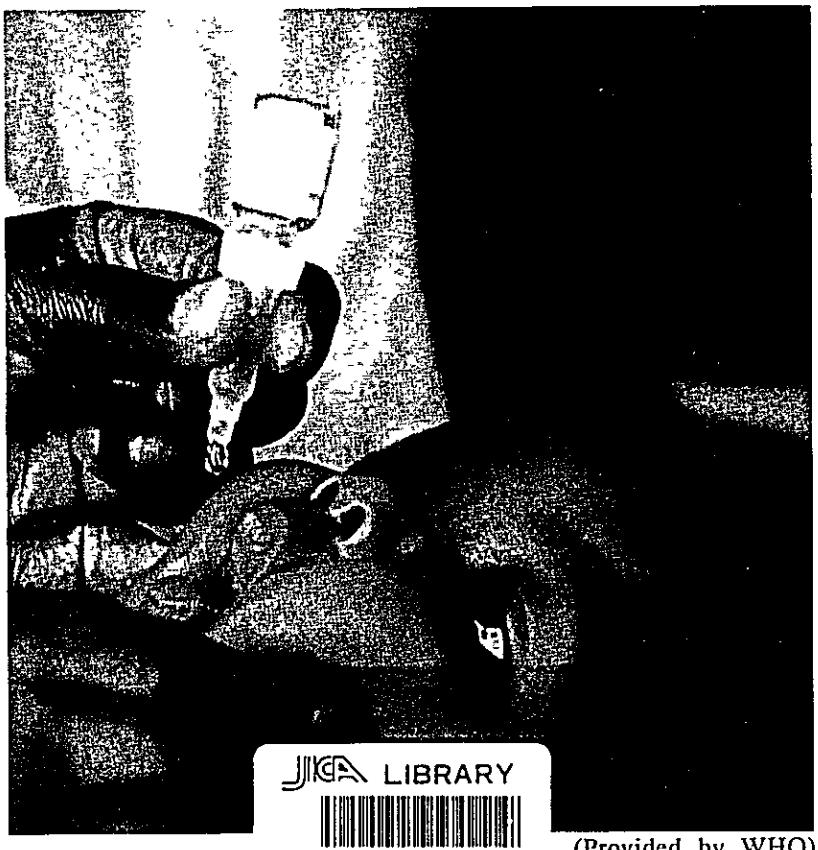
1994

- SUMMARY -

SEMINAR ON POLIO ERADICATION, ITS THEORY AND PRACTICE

KUMAMOTO NATIONAL HOSPITAL MEDICAL TRAINING CENTRE
KUMAMOTO, JAPAN
January 24 – March 4, 1994



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KUMAMOTO NATIONAL HOSPITAL
AGENCY FOR COOPERATION IN INTERNATIONAL HEALTH (ACIH)
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

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第５回 小児麻痺根絶計画の理論と実際 閉校式
KUMAMOTO NATIONAL HOSPITAL 1994.3.4

Left to right,

Front row: L.Nareth(Cambodia), A.B.Benegas(Philippines), Y.Asahara,
Y.Umezawa, I.Arita, H.I.R.Roespandi(Indonesia), T.K.Dung(Vietnam)
N.Kohagura(Japan)

Second row: S.Arita, Zhou Jun(China), A.Ideta, Y.M.H.Mostafa(Egypt)
C.Savatchirang(Laos), F.Tayphasavanh(Laos), C.Natpratan(Thailand)
C.Kuroiwa(Japan), Y.Takashima(Japan), R.Araki, S.Kawashima,
S.Seto, H.Nakata

Preface

The fifth Seminar on Polio Eradication, its Theory and Practice was held from January 24 to March 4, 1994. A total of twelve experts participated in the seminar. The methodology of epidemiological surveillance and its assessment were the focus of discussions. The seminar also recognized the progress made by the countries of North, Central and South America. In that vast continents in the Western hemisphere, the last paralytic case of poliomyelitis caused by wild poliovirus was discovered in September 1991, and since then, despite the intensive surveillance of acute flaccid paralysis, no case caused by wild virus has been detected until now. Lesson-learned from the successful programme in Americas was fully discussed.

It was also noted that the Asian countries including China and Philippines have had a substantial progress with expectations that the transmission might be interrupted in the next 18 months.

The report presents the current country programmes as well as future plan taking into consideration the technical discussions which covered the above-mentioned situation of the polio eradication programme.

Lastly I thank the participants, lecturers and those who assisted in this seminar for their keen interest as well as cooperation given to the seminar.

Isao Arita, M.D.
Chairman,
Agency for Cooperation in
International Health

SUMMARY

POLIO ERADICATION,

ITS THEORY AND PRACTICE

INDEX

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LIST OF VISITED ORGANIZATIONS

KUMAMOTO PREFECTURAL OFFICE

KUMAMOTO UNIVERSITY, SCHOOL OF MEDICINE

THE CHEMO-SERO-THERAPEUTIC
RESEARCH INSTITUTE (KAKETSUKEN)

RESEARCH INSTITUTE FOR
MICROBIAL DESEASES, OSAKA UNIVERSITY

JAPAN POLIOMYELITIS RESEARCH INSTITUTE

NATIONAL INSTITUTE OF HEALTH

KUMAMOTO KINOH HOSPITAL

ASO PUBLIC HEALTH CENTER

KUMAMOTO NATIONAL HOSPITAL

THE 5TH SEMINAR ON POLIO ERADICATION, ITS THEORY AND PRACTICE

NO. 1

DATE		9:00-10:30	10:40-12:10	13:30-15:00	15:30-17:00	LOCATION	ACCOMODATION
1/24	MON		ORIENTATION	VISIT TO KUMAMOTO PREFECTURAL OFFFICE		ACIH	KUMAMOTO
1/25	TUE	CVI RELATED ACTIVITY (KOBAYAKAWA)	DISCUSSION (KOBAYAKAWA)	CVI RELATED ACTIVITY (KOBAYAKAWA)	DISCUSSION (KOBAYAKAWA)	ETI	KUMAMOTO
1/26	WED	VIROLOGY OF POLIO VIRUS (M. ARITA)	DISCUSSION (M. ARITA)	PATHOLOGY OF POLIOMYLITIS (KURATA)	DISCUSSION (KURATA)	ETI	KUMAMOTO
1/27	THRS	PREPARATION OF REPORTS					KUMAMOTO
1/28	FRI	PREPARATION OF REPORTS					KUMAMOTO
1/29	SAT	HOLIDAY					KUMAMOTO
1/30	SUN	HOLIDAY					KUMAMOTO

KIC (JICA Kyusyu International Center), ETI (Kumamoto National Hospital Training Institute)

DATE		9:00-10:30	10:40-12:10	13:30-15:00	15:30-17:00	LOCATION	ACCOMODATION
1/31	MON	COUNTRY REPORTS (I. ARITA, FUTATSUKA, TANGERMANN)				ETI	KUMAMOTO
2/ 1	TUE	COUNTRY REPORTS (I. ARITA, FUTATSUKA, TANGERMANN)				ETI	KUMAMOTO
2/ 2	WED			GUILAIN-BARRE SYNDROME (UCHINO)	DISCUSSION (UCHINO)	KUMAMOTO UNIVERSITY	KUMAMOTO
2/ 3	THRS	POLIO ERADICATION PROGRAM INTRODUCTION (TANGERMANN)	DISCUSSION (TANGERMANN)	SURVEILLANCE FOR ACUTE FLACCID PARALYSIS (TANGERMANN)	DISCUSSION (TANGERMANN)	ETI	KUMAMOTO
2/ 4	FRI	MAINTAINIG THE COLD CHAIN AND ASSURING THE QUALITY OF POLIO VACCINE (TANGERMANN)	DISCUSSION (TANGERMANN)	PRACTICE OF SAMPLING (TANGERMANN)		ETI	KUMAMOTO
2/ 5	SAT	POLIO ERADICATION INFORMATION SYSTEM AND EVALUATION (TANGERMANN)	DISCUSSION (TANGERMANN)			ETI	KUMAMOTO
2/ 6	SUN	HOLIDAY					KUMAMOTO

DATE		9:00-10:30	10:40-12:10	13:30-15:00	15:30-17:00	LOCATION	ACCOMODATION
2/ 7	MON	LESSON-LEARNT FROM THE SUCCESS;GLOBAL SMLALL POX ERADICATION PROGRAM (I.ARITA)	DISCUSSION (I. ARITA)	ERADICATION OF WILD TYPE POLIOVIRUSES AND ITS DIFFICULTIES (YOSHIKURA)	DISCUSSION (YOSHIKURA)	ETI	KUMAMOTO
2/ 8	TUE	POLIO CLINICAL DIAGNOSIS MANUAL (YAMAMOTO)	DISCUSSION (YAMAMOTO)	EPIDEMIOLOGY AND CLINICAL ASPECTS (CHIBA)		ETI	KUMAMOTO
2/ 9	WED	THE CHEMO-SERO THERAPEUTIC RESEARCH INSTITUTE				CHEMO-SERO RESEARCH INSTITUTE	KUMAMOTO
2/10	THRS	LABORATORY DIAGNOSIS MANAGEMENT OF SPECIMENS (NONAKA)		PRACTICE (NONAKA, YOSHIKAWA)		CHEMO-SERO RESEARCH INSTITUTE	KUMAMOTO
2/11	FRI	NATIONAL HOLIDAY					KUMAMOTO
2/12	SAT	HOLIDAY					KUMAMOTO
2/13	SUN	HOLIDAY					KUMAMOTO

DATE		9:00-10:30	10:40-12:10	13:30-15:00	15:30-17:00	LOCATION	ACCOMODATION
2/14	MON	KUMAMOTO TO OSAKA					OSAKA
2/15	TUE	RESEARCH INSTITUTE FOR MICROBIAL DISEASES, OSAKA UNIVERSITY		OSAKA TO KYOTO		OSAKA UNIVERSITY	KYOTO
2/16	WED	KYOTO TO TOKYO				POLIO RESEARCH INSTITUTE	TOKYO
2/17	THRS	JAPAN POLIOMYELITIS RESEARCH INSTITUTE				NATIONAL INSTITUTE OF HEALTH	TOKYO
2/18	FRI	NATIONAL INSTITUTE OF HEALTH					TOKYO
2/19	SAT	TOKYO TO KUMAMOTO					KUMAMOTO
2/20	SUN	HOLIDAY					KUMAMOTO

DATE		9:00-10:30	10:40-12:10	13:30-15:00	15:30-17:00	LOCATION	ACCOMODATION
2/21	MON	PREPARATION OF PRESENTATION		PRINCIPAL STRATEGIES FOR THE ERADICATION INITIATIVE (DOI)		ETI	KUMAMOTO
2/22	TUE	POLIO ERADICATION, ITS PROGRESS AND PROBLEMS (SOUTH AMERICA) (QUADROS)	POLIO ERADICATION, ITS PROGRESS AND PROBLEMS (WESTERN PACIFIC) (QUADROS)	POLIO ERADICATION PROGRAM AND EXAMINATION OF VACCINATION COVERAGE	DISCUSSION (QUADROS)	ETI	KUMAMOTO
2/23	WED	POLIO ERADICATION SURVEILLANCE (QUADROS)		PRESENTATION; POLIO ERADICATION PROGRAM IN FUTURE (I. ARITA, QUADROS)		ETI	KUMAMOTO
2/24	THRS	PRESENTATION; POLIO ERADICATION PROGRAM IN FUTURE (I. ARITA, QUADROS)				ETI	KUMAMOTO
2/25	FRI	PREPARATION OF EVALUATION					KUMAMOTO
2/26	SAT	HOLIDAY					KUMAMOTO
2/27	SUN	HOLIDAY					KUMAMOTO

DATE		9:00-10:30	10:40-12:10	13:30-15:00	15:30-17:00	LOCATION	ACCOMODATION
2/28	MON	KUMAMOTO KINOH HOSPITAL				KUMAMOTO KINOH HOSPITAL	KUMAMOTO
3/ 1	TUE	ASO PUBLIC HEALTH CENTER				ASO PUBLIC HEALTH CENTER	KUMAMOTO
3/ 2	WED			KUMAMOTO NATIONAL HOSPITAL			KUMAMOTO
3/ 3	THRS	PREPARATION OF EVALUATION					KUMAMOTO
3/ 4	FRI	EVALUATION (I. ARITA)			CLOSING CEREMONY		KUMAMOTO
3/ 5	SAT	MOVING TO KIC					

Annex-1

Country Report

Country Report should be typewritten on A4 Sheets as double-spaced, less than 10 sheets. Figures and Tables can be attached separately.

1. Title of seminar: POLIO-ERADICATION

2. Name of participant: LY NARETH

3. Participant's position: E.P I progr mmer : logistic-cold chaine

4. Organizational structure in the participant's country, dealing with national poliomyelitis eradication programme:

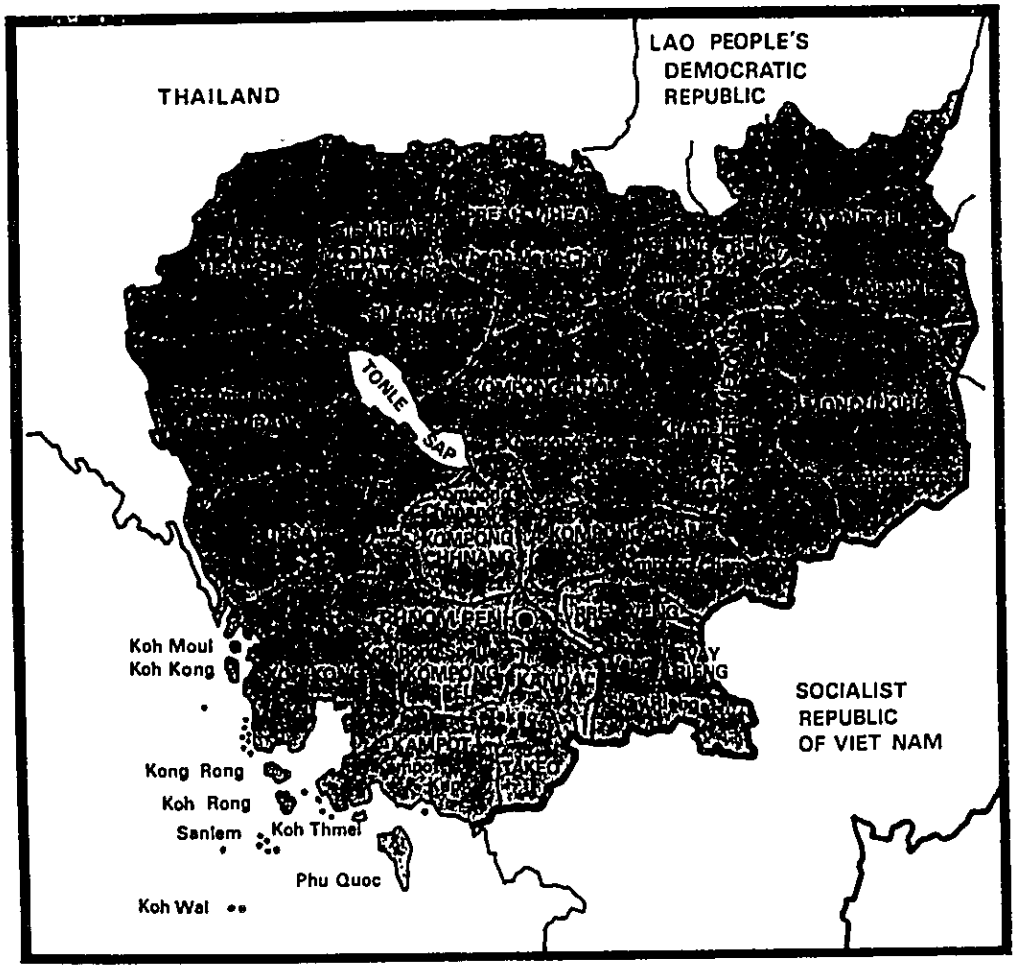
5. Current status of national polio eradication programme.
   - 5.1 Incidence and epidemiological surveillance
   - 5.2 Clinical diagnosis of the disease
   - 5.3 Laboratory diagnosis of the disease
   - 5.4 Vaccine supply and its quality control
   - 5.5 Vaccination programme-routine and vaccination days
   - 5.6 Target year of eradication in your country

6. Estimate of the quantity of the vaccine required during 1992~1995.

7. Problems being encountered in the participant's country when the activities mentioned in 5 are being carried out:

8. Any special remarks:

Figure 1. Map of Cambodia



181035 Sq.Km

T.P = 8633300

4. ORGANIZATIONAL STRUCTURE OF NATIONAL EPI AND POLIOMYELITIS ERADICATION IN CAMBODIA

The poliomyelitis eradication initiative is an integral part of the national Expanded Programme on Immunization (EPI). The Ministry of Health manages the EPI through the National Centre for Hygiene and Epidemiology (CNHE). The EPI is managed within the CNHE by the vice director who is also responsible for disease surveillance and epidemiology. All activities relating to poliomyelitis eradication are the responsibility of the CNHE. Vaccine supplies, cold chain and logistical operations are the responsibility of the Central Medical Stores, which is directly controlled by the Ministry of Health. At present, vaccine and supplies are provided by UNICEF and JICA.
There are 21 provinces in Cambodia, these are subdivided into 172 districts and 1546 communes. Each province has an EPI supervisor, in some provinces, the vice-director of health has charge of the EPI.
The central level decides on policy and provides information, training, supplies and supervision to the provinces.
Immunizations are mostly provided by outreach sessions at villages, conducted by commune health staff.

5. CURRENT STATUS OF POLIOMYELITIS ERADICATION PROGRAMME

The EPI was initiated in Cambodia in 1986 with the support of UNICEF. Despite the achievements since then, national coverage for infants for three doses of oral poliovirus vaccine (OPV) was 35% in 1992, which is still considerably lower than some of Cambodia's neighbours who have more mature programmes.
The burden of vaccine preventable diseases is particularly heavy in Cambodia where the development of an accessible health infrastructure for curative facilities and, in the case of poliomyelitis, for rehabilitative facilities, is still poor, and under 1% of the population have access to sanitation. Thus in Cambodia, many children die, or remain crippled, from diseases that are being successfully controlled in neighbouring countries through reliable and sustainable immunization programmes.

The number of reported cases of vaccine preventable diseases in Cambodia (see Table 1 showing reported cases 1987-1992) is underestimated in published data because the reporting and surveillance systems are not yet sufficiently developed, however, estimates of the incidence of poliomyelitis and neonatal tetanus can be made from assumed attack rates and reported immunization coverage. A comparison between the reported and expected numbers of cases of these two diseases by province is presented in Table 2.

There is immediate concern for the EPI in Cambodia, apart from the widespread transmission of disease, it appears that immunization coverage has recently fallen, with 12 out of 21 provinces reporting a lower coverage for OPV 3 in 1992 than in 1991 (see Table 3

showing coverage by province 1990-1992).

Even when access to immunization is available, many children remain only partially immunized, 'dropping-out' (see Table 4 showing coverage and drop-out rates 1992) of the immunization schedule which should be completed by the infant's first birthday.

There are many factors involved in the high level of drop-outs, but the inability of the health service to provide sustained, reliable immunization sessions has often been found to be more prevalent than an assumed 'ignorance' on the part of the mother. Interviews at community level have found a high level of awareness and demand for immunization in Cambodia that frequently remains unmet.

Cambodia forms a contiguous epidemiological unit with the southern region of Viet Nam, where progress towards the eradication of poliomyelitis by 1995 is well advanced. Thus it is important to the whole region that Cambodia should accelerate poliomyelitis eradication activities without delay, as part of the Regional initiative.

The interruption of transmission of the wild poliovirus can be achieved in Cambodia by raising routine immunization coverage for infants and conducting supplementary immunization activities for all children under 5 years of age throughout the country.

TABLE 1. REPORTED CASES OF IMMUNIZABLE DISEASES IN CAMBODIA 1987 - 1992

CASES/YR	1987	1988	1989	1990	1991	1992
ALL TETANUS	415	259	272	219	128	84
POLIO	115	55	179	91	115	146
MEASLES	9281	4934	9256	2473	4402	2759
TB	11338	4036	5793	8703	6984	4306
PERTUSSIS	5672	3902	4220	1690	917	995
DIPHTHERIA	88	13	70	179	13	13
PROVINCES REPORTING (TOTAL 21)	17/21 81%	17/21 81%	18/21 86%	13/21 62%	16/21 76%	

TABLE 2 REPORTED AND EXPECTED CASES OF POLIO, NNT IN INFANTS UNDER ONE YEAR BY PROVINCE IN CAMBODIA 1991

PROVINCE	TOTAL POPN	INFANT (4)% POPN	REP. COV. % OPV3	REP. POLIO	EXPECT POLIO	REP. TET	EXPECT NNT
PPENH	659363	26375	57	22	58	17	212
KANDAL	852860	34114	50	36	85	3	272
KG CHAM	1369799	54792	25	20	202	7	445
SVAY RIENG	409998	16400	77	1	21	0	132
PREY VENG	908636	36345	61	0	71	0	284
TAKEO	662189	26488	25	4	94	0	207
KG THOM	489603	19584	35	6	60	24	152
SIEM REAP	598179	23927	28	0	83	5	189
BATTAMBANG	445688	17828	54	2	48	0	166
PURSAT	248386	9935	23	5	36	7	78
KG CHHNANG	295991	11840	46	1	32	0	95
KG SOM	77937	3117	53	4	8	33	28
KAMPOT	477506	19100	18	1	74	8	151
KOH KONG	50678	2027	43	6	7	0	19
KG SPEU	559299	22372	25	0	67	0	147
STEUNG TRENG	55190	2208	29	1	8	0	18
RATTANKIRI	65272	2611	24	0	9	0	20
MONDULKIRI	21168	847	28	0	3	0	7
KRATIE	209811	8392	32	6	27	0	66
B MEANCHEY	390770	15631	9	0	66	17	121
TOTAL	8929993	357200	39	115	1069	121	2838

TABLE 3: COVERAGE BY PROVINCE, CAMBODIA 1990-1992

PROVINCE	BCG%			DPT3/OPV3%			MEAS%		
	1990	91	92	1990	91	92	1990	91	92
PPENH	97	55	70	94	63	67	90	51	56
KANDAL	80	83	68	76	50	50	73	61	46
KG CHAM	30	36	39	18	20	23	20	19	23
SVAY RIENG	88	87	37	86	80	27	66	82	25
PREY VENG	74	70	37	67	62	30	62	62	36
TAKEO	78	48	55	47	24	33	34	26	31
KG THOM	19	43	59	36	35	29	23	35	41
SIEM REAP	67	50	30	30	28	18	16	24	15
BATTAMBANG	77	29	78	60	54	63	54	49	67
PURSAT	75	49	95	45	33	25	25	40	33
KG CHHNANG	68	75	73	36	46	41	23	42	37
KG SOM	27	88	54	15	53	25	11	54	22
KAMPOT	23	25	26	21	18	12			15
KOH KONG	99	89	36	83	67	42	83	60	20
KG SPEU	67	53	58	54	25	29	53	26	36
PREAH VIHEAR			...			...			...
STEUNG TRENG	28	70	46	15	29	40	6	39	35
RATTANKIRI	10	30	33	10	24	24	8	21	31
MONDULKIRI			...			...			...
KRATIE	20	30	30	16	28	12	10	20	20
B MEANCHEY	21	31	38	5	11	12	7	16	18

TABLE 4: COVERAGE AND DROP-OUT RATES BY PROVINCE, CAMBODIA 1992

PROVINCE	TOTAL POPN	INFANT (4)% POPN	REP. COV. % OPV3	DROP OUT % BCG-MEAS
PPENH	659363	26375	67	25
KANDAL	852860	34114	50	33
KG CHAM	1369799	54792	23	42
SVAY RIENG	409998	16400	27	33
PREY VENG	908636	36345	30	...
TAKEO	662189	26488	33	43
KG THOM	489603	19584	29	31
SIEM REAP	598179	23927	18	38
BATTAMBANG	445688	17828	63	11
PURSAT	248386			
KG CHHNANG	295991	11840	41	49
KG SOM	77937	3117	25	59
KAMPOT	477506	19100	12	41
KOH KONG	50678	2027	42	43
KG SPEU	559299	22372	29	38
PREAH VIHEAR	85518	3421	44	...
STEUNG TRENG	55190	2208	40	22
RATTANKIRI	65272	2611	24	...
MONDULKIRI	21168	847	28	...
KRATIE	209811	8392	12	33
K MEANCHEY	390770	15631	12	52
TOTAL	8933841	357354		

5.1 INCIDENCE AND EPIDEMIOLOGICAL SURVEILLANCE

The national surveillance system for communicable diseases has reported poliomyelitis cases since 1980. A system for reporting cases of acute flaccid paralysis (AFP) was initiated in Cambodia in January 1993. This AFP surveillance system is still in the early stages of development, however, weekly reports of suspected poliomyelitis cases are obtained from the major paediatric hospital in Phnom Penh, where case investigation forms are completed by CNHE personnel. Stool specimens have been sent for virological investigation at the Pasteur Institute in Ho Chi Minh City, Viet Nam, with intratypic differentiation in NIH, Tokyo. Routine reports of poliomyelitis cases are received from provinces, together with more detailed data from sentinel sites at provincial hospitals. Although the completeness and timeliness of reporting has improved in 1993, the majority of poliomyelitis cases are still unreported, and may never seek medical attention. Thus the national total of 146 poliomyelitis cases for 1992, may only represent 10 to 15% of the true annual number of cases.

The CNHE is making great efforts to improve surveillance for vaccine-preventable diseases, with training workshops for provincial personnel and the establishment of more sentinel sites at provincial hospitals, as a result, it is anticipated that the number of reported cases of poliomyelitis will increase over the next few years.

Table 5 :

Reported Cases of Poliomyelitis by Province,Cambodia 1990- 1992

PROVINCES	1990	1991	1992
PHNOM PENH	11	17	28
KANDAL	26	30	23
KAMPONG CHAM	4	20	30
SVAY RIENG	---	---	2
PREY VENG	---	2	9
PURSAT	4	2	5
SIEM REAP	---	---	2
TAKEO	6	4	8
KAMPONG SPEU	7	3	6
SIHANOUK TOWN	---	3	3
KAMPONG THOM	---	---	5
RATTANAKIRI	---	---	---
KOH KONG	---	1	3
BATTAMBANG	5	1	2
KAMPOT	---	---	2
KAMPONG CHHNANG	---	---	2
KRATIE	---	1	5
MUNDULKIRI	---	---	---
STUNG TRENG	---	---	---
PREAH VIHEAR	---	---	---
BANTEAY MEANCHEY	---	---	---
T O T A L	63	84	146

--- Data not available
Source:Reports received from National Hospitals and :
7 provinces ..... in 1990
11 provinces ..... in 1991
17 provinces ..... in 1992

5.2 CLINICAL DIAGNOSIS OF POLIOMYELITIS

Cases of AFP which are initially seen at the commune or district level are referred to provincial hospitals or to one of the four

major hospitals in Phnom Penh. At the provincial level the diagnosis of poliomyelitis is made by a provincial physician, as there are currently no neurologists working outside Phnom Penh. Provincial cases are usually referred to Phnom Penh, however not all parents of children with AFP are able to afford the costs of travel and residence in the capital. It is usual for patients to be referred to the hospitals that have rehabilitation or physiotherapy facilities. Given the widespread transmission of poliovirus in Cambodia, it can be assumed the great majority of AFP cases in children under the age of 15 years are due to poliomyelitis, and clinical diagnosis is not considered to be a problem at present.

5.3 LABORATORY DIAGNOSIS OF THE DISEASE

The national laboratory in Phnom Penh (Pasteur Institute) does not have the facilities to isolate polioviruses at present. Specimens requiring virological investigation are sent to the Pasteur Institute in Ho Chi Minh City. Intratypic differentiation is conducted in the Reference laboratory in the NIH Tokyo.

5.4 VACCINE SUPPLY AND ITS QUALITY CONTROL

Cambodia does not have the capacity to manufacture vaccines and all vaccine is imported. The traditional supplier for vaccines is UNICEF, though JICA has started to provide vaccine in part of requirement from 1993. An estimated 2 million doses of OPV are required every year for routine immunization of infants. In addition approximately 3.6 million doses of OPV are required annually for national immunization days for all children under the age of 5 years (see tables 6 and 7).

5.5 IMMUNIZATION PROGRAMME - ROUTINE AND IMMUNIZATION DAYS

ROUTINE IMMUNIZATION

The routine immunization programme is discussed in section 5 above.

SUPPLEMENTARY IMMUNIZATION

Immunization days are planned for February and March 1994, these will be the first supplementary immunization activities for poliomyelitis eradication to be held in Cambodia. A plan of action has been developed for Sub-National Immunization Days (SNIDs) in two provinces (Phnom Penh and Kandal). Approximately 20% of the population of the country reside in these two provinces, it is intended that a total of 400,000 doses of OPV will be given to children aged under 5 years on each of the immunization days. In addition, tetanus toxoid will be offered to women of child bearing age, and measles vaccine to children aged between 9 and 23 months at hospitals and health centres that can ensure sterile injection practices.

5.6 TARGET YEAR FOR POLIOMYELITIS ERADICATION IN CAMBODIA

The Western Pacific Region has resolved to eradicate poliomyelitis by 1995. However, given the relatively late commencement of poliomyelitis eradication activities, and the magnitude of the poliomyelitis problem in Cambodia, it is anticipated that eradication in Cambodia may be delayed until 1998.

6 ESTIMATE OF THE QUANTITY OF VACCINE REQUIRED 1993-1996

Table 6 =
VACCINE REQUIREMEMTS FOR CAMBODIA EPI : 1993 - 1996

DOSES & COST OF VACCINE FOR ROUTINE IMMUNIZATION	1993	1994	1995	1996
BCG (MILLIONS) COST/DOSE($) COST BCG($)	0.00 0.065 58500	0.93 0.07 64890	0.95 0.08 76385	0.98 0.09 88511
OVP (MILLIONS) COST/DOSE($) COST OPV($)	2.00 0.07 140000	2.06 0.08 158620	2.12 0.08 179716	2.19 0.09 203619
DPT (MILLIONS) COST/DOSE($) COST DPT($)	1.84 0.06 110400	1.90 0.07 125083	1.95 0.07 141719	2.01 0.08 160568
MEAS.(MILLIONS) COST/DOSE($) Cost MEAS	0.61 0.16 97600	0.63 0.18 113400	0.65 0.19 123500	0.67 0.21 140700
T.T. (MILLIONS) COST/DOSE($) COST T.T.($)	1.84 0.03 55200	1.90 0.03 62542	1.95 0.04 70860	2.01 0.04 80284
TOTAL COST ($)	461700	521716	593968	674933
FREIGHT (30%)	138510	156515	178190	202480
GRAND TOTAL	600210	678230	772159	877413

Assumption :
1. Population increase 3% per year
2. Vaccine prices increase by 10% p.a
3. 3 doses of OPV included
4. 3 doses of tet.tox for pregnant women includes
5. Wastage multiplier 2.5 for BCG,1.7 for other antigens

Table 7

ORAL POLIO VACCINE REQUIREMENTS FOR SUPPLEMENTARY IMMUNIZATION

OPV	1993	1994	1995	TOTAL
REQUIREMENT :				
Supplementary OPV:				
Optimal NID (1)	3.6	3.7	3.8	11.1
Minimum NID (2)	2.9	2.9	3.0	8.8
ORI Requirement (3)	0.2	0.2	0.2	0.6
Total Optimal	3.8	3.9	4.0	11.7
Total Minimum	3.1	3.2	3.2	9.5
AVAILABLE OPV SUPPLIES (4):				
UNICEF	0.0	0.0	0.0	0.0
Rotary	0.0	0.0	0.0	0.0
AIDAB	0.0	0.0	0.0	0.0
Est.local production (5)	0.0	0.0	0.0	0.0
TOTAL AVAILABLE	0.0	0.0	0.0	0.0
OPV SHORTFALL				
Shortfall(Optimal)	3.8	3.9	4.0	11.7
Shortfall(Minimum)	3.1	3.2	3.2	9.5
Est.Cost (US$) of shortfall (Including PFI):				
COST (OPTIMAL)	$0.3	$0.4	$0.4	$1.1
COST (MINIMUM)	$0.3	$0.3	$0.3	$0.9

7.PROBLEMS WITH POLIOMYELITIS ERADICATION IN CAMBODIA

PLAN TO OVERCOME MAJOR PROBLEMS AND CONSTRAINTS IN DISEASE REDUCTION INITIATIVES , CAMBODIA 1993 - 1995

	Major problems & constraints	Principal cause	Activities planned to overcome problems and constraints	Time Schedule for planned activities	Pers. resp.
Polio	-Low coverage -Poor reporting system -Poor communication -No supplementary immunization acrtivities	-Unreliable immunization activities -Lack of training in surveillance	-Plan to increase coverage:priority areas -Surveillance training courses -Case investigation stating in 1993 in Phnom Penh -SNID 1993	-Jul 1993 -Jul 1993 -Jan 1993 Feb / March -~~Nov/Dec~~ 1993	EPI
NNT elim.	-NNT cases not reported -No NNT elim. plan -TT2+coverage low for pregnant women	-Case do not attend health facilities. -Little awareness of problem of NNT -Tetanus Toxoid: not address available at NNT	-Integrate NNT & AFP surveillance -Plan for NNT activities for 1994 -Include TT2+in SNID	-Jan 1994 -Jan 1994 ~~Jan~~ Feb / March -~~Nov/Dec~~ 1993	
Meas. contr.	-Low coverage	-High drop-out	-Use every opportunity to give measles vaccine -Include measles in SNID	Feb / MARCH -~~Nov/Dec~~ 1993	

THE EPI AND POLIO ERADICATION PROGRAMME IN CAMBODIA 1994 - 1996

BY: MS. Ly NARETH

NATIONAL CENTER FOR HYGIENE AND EPIDEMIOLOGY
MINISTRY OF HEALTH/CAMBODIA

Many other countries in the Western Pacific Region has well established immunization programmes that have resulted in the dramatic reduction of vaccine preventable diseases.Poliomyelitis is targeted for eradication by 1995 in the region, but in Cambodia, many children die or remain crippled from diseases that are being successfully controlled in neighboring countries through reliable and sustainable immunization programmes.

The interruption of transmission of wild poliovirus can be achieved in Cambodia by raising routine immunization coverage for infants and conducting supplementary immunization activities for all children under 5 years of age throughout the country.

OBJECTIVES

* To raise immunization coverage for EPI antigens for infants to 80% in 5 provinces by 1994, in the 12 provinces by 1995 and in the whole Cambodia by 1996.
* To decrease the incidence of EPI vaccine preventable diseases in order to achieve the folloing goal:
- To reduce the incidence ofpoliomyelitis by 50% in 12 provinces by 1996 in order to ERADICATE POLIOMYELITIS BY 1998,
- To reduce the indence of measles to 90% by 1996,
- To reduce the incidence of NNT by 50% by 1996.

The achievement of the first objective is essential in order to expect the reduction of the incidence of EPI preventable diseases especially polio eradication.These two objectives are complementary and closely linked.

THE KEY STRATEGIES USED IN THE EPI AND POLIOMYELITIS ERADICATION PROGRAMME ARE:

- Achievement and maintenance of high routine immunization coverage for infants under 12 months of age.
- Conducting supplementary immunization with OPV in the whole country aimed at interrupting the transmission of wild poliovirus.
- Strengthened surveillance system able to detect,report and investigate all cases of suspected poliomyelitis without delay.
-Outbreak response immunization with OPV in the immediate area of suspected poliomyelitis case.

ACTIVITIES

1-Planning and Management : strengthening the national plan for action for the EPI which will incorporate activities in support of increasing coverage in all areas, and introducing poliomyelitis eradication , neonatal tetanus elimination and measles control. Provincial planning will be conducted through workshops where the need of each province is assessed by provincial managers in collabration with central level.

2-Development of the acceleration model: priority provinces(provinces with low coverage and high population) will be selected for accelerated activities .Routine activities will be accelerated first , but the existing basic support to all provinces will be maintained .A key element for the success of the acceleration of the EPI programme is the decentralised management of the programme.

3-Training : province should identify their training needs , and will be asked to submit detailed work plans to the MOH .Basic training to ensure high quality immunization services and an effective cold chain and logistic system will be included.
Training on surveillance and disease reduction initiatives will be included in training agendas at the province level.

4-Supervision: at the central level ,supervisors have been allocated specific provinces within designated regions to supervise, they also function as a core of trainers for national training course.Checklists will be used by supervisors at various levels in order to help them to support the programme.

5-Monitoring and Evaluation: standard indicators will be used to measure programme emplementation in the following phases ;
_ provision of basic requirement,
_access to services,
_provision of high quality services,
_specific disease reduction initiatives.
Reporting at each level will be improved to ensure adequate data to measure these indicators obtained.
Coverage survey at each level will be done each year in the province of acceleration to monitor the progress of the programme.

6-Cold Chain and Logistics: the distribution of the cold chain equipment,vaccine and other supplies will be reviewed to allow for the increase demand for routine and supplementary immunization .
Standard vaccine, equipment and material will be distributed to provinces of acceleration .An inventory will be established.

7_Surveillance: strengthening th system of rapid reporting and zero reporting .Personnel will be recruted on standard case definition,use of case investigation forms, collecting and transporting stool specimens for poliomyelitis investigation ,monitoring surveillance reports and feed back to all levels.

8-Outbreak Response immunization :report of outbreak of suspected polimyelitis will be followed by action in the form of outbreak response immunization (ORI).Children under 5 years of age in the area (at minimum the village of suspected case) will all be given oral polio virus vaccine regardless of immunization status in two doses separated by four weeks.

9-Supplementary Immunization Activities:supplementary immunization with OPV which is essential to break the transmission of poliomyelitis will be conducted through national immunization days.All children under the age of 5 years regardless of immunization status,in two rounds separated by 4 to 6 weeks should be carried out . In addition to OPV ,other antigens will be offered including tetanus toxoid to women of child bearing age ,and measles vaccine to children over age of 9 months .National immunization days are a potent means of increasing social mobolisation to sustain the EPI.

10-Health Education and Social Mobilisation : the appropriate health education material will be developed and pre-tested, together with means of disseminating information ,including details on national immunization days . The quarterly news letter that has been recently produced will be distributed to all health facilities .

11-Meeting and Exchange of Information :The Western Pacific Region Technical Advisory Group on EPI and Poliomyelitis eradication which has held four meetings since April 1991, will continue to guide the EPI in Cambodia. The members of the group are international experts , and the meting is attended by EPI managers from poliomyelitis endimic countries,representatives of donnor agencies and countries and technical agencies. National reports are presented and there are technical discussions with recommandations for further activities .At national level there will be meetings of EPI managers on 3 monthly basis to monitor the progress ,exchange information and train participants on the latest recommandations of the TAG meeting.

12-Use of the Regional Laboratory Network and Development of National Laboratory Capacity: In a first instance ,stool specimens from suspected poliomyelitis cases will be transported under reverse cold chain conditions to designated laboratories outside Cambodia, for virological examination . The national laboratory in Phnom Penh will be strengthened through training of personnel and provision of supplies and equipment so that it will later become self-sufficient in poliomyelitis investigation.

EGYPT COUNTRY REPORTY.

BY

Dr. YAHIA MOSTAFA HASSAN MOSTAFA.
Assistant Director of Communicable Disease Control Dept.
Ministry of Health.

Title of the seminar: Polio-Eradication its theory and practice.

General information:--

Egypt : *occupies the eastern north part of continent of Africa, and one third of its land lies on cotinent of Asia.

*Population is around 60,000,000.

*It is composed of 26 governorates and 206 districts.

*Nearly 95% of the population inhabite the land around the river Nile about 10 Km, from thew sides of the Nile , and the rest of the land nearly desert.

*The population increases by 1800000 birthes every year.

Organizational stucture dealing with polio-eradication program:--

*The ministry of Health is composed of 2 main divisions
1- Curative Division.
2- Preventive Division.
*The Preventive Division is composed of many Depts.:--
1- Communicable Disease Control Dept.
2-Endemic Disease Control Dept.
3-Maternal and Child Health Dept.
4-School Health Dept.
5-Urban And Rural Health Dept.
6-Other Depts. e.g. Blood Banks, Central Labs, Quaranteen,.....etc
*The Communicable Disease Control Dept. is composed of 3 sections:
1-Epidemic Control Section.
2-Food Control Section.
3-Leprosy Control Section.
*Epidemic Control Section: (EPS) deals with many programs concerning all infectious diseases , one of which is polio-eradication program.
*Polio-Eradication Program, is carried out with other vaccine preventable disease programs through 2 parallel ways:-
1-General planning and supervision by EPS.
2-Implementation planning ,monitoring and evaluation by EPI component of Child Survival Project.

Expanded Program of Immunisation

Back ground:

Although immunisation has long been carried out in Egypt it has been only since the establishmant of the EPI in 1980 , and especially when the accelerated program was implemented in 1984, that immunisation services have increasingly reached the great majority of infants through out the country. EPI was incorporated by Ministry of Health and USAID in 1985 as a major component in the child survival project with substantial inputs by UNICEF, WHO, and International Rotary.
The program has included immunisationagainst polio and other diseases e.g. Diphtheria, T.B., Pertuses, Tetanus, Measles and Hepatitis B, with a goal to to reduce morbidity and mortality resulting from these seven childhood diseases and many objectives of which is the most importent is eradication of poliomyelitis by year 1994 through the following stratigies:-
1-Improve management capabilities and practices of the EPI team, particularly at the governorate and the district levels.
2-Continuous increasing the vaccination coverage.

3-Maintain vaccine efficacy through strengthening of cold chain equipments and maintenence and repair system.

4-Improve capabilities and skills of health workers providing immunisation services at all levels.

5-Sterngthen routine health information system for EPI program.

*Several activities conducted by Epi covering the following aspects:

1-Immunisation coverage.

2-Supervision and monitoring.

3-Training.

4-Health promotion and education.

5-EPI surveillance and applied researches.

6-Cold chain management.

7-Cold chain miantainence and repair.

POLIO-ERADICATION PROGRAM

Back ground:-

Poliomyelities is one of the major health problems in Egypt for a long time. It is of interest to know that polio was known in Egypt 4000 years ago , a picture of a man sufferring from poliomyelitis was drown on the wall of one of the pharaonic temples.

Surveillance:--

Till 1988 there was no actuel surveillance system to collect data about the situation of polio in Egypt and there was only the national institute of polio the only site from which we could collect some ihformation about the disease , but even these data were not relaible enough to know accurately the incidence of the disease in Egypt at that time. Anyhow , it is believed that the incidence was very high through the analysis Data collected from NIP which showed that there were more than 2500 new cases per year by1974 decreasing till less than 500 cases per year by 1988, the year the surveillance system of polio started to be built up.

The surveillance system started at 1988 but actually came in effect in mid 1990 by which the data collected can be cosidered to shoe nearly the true picture of the disease in Egypt.

By 1989 there were about 450 cases repoted by NIP and other 5 sites , after that the number of cases started to increase due to increase of notification sites and strengthening of the surveillnce system.

In 1980 NIP represented 100% of notification of cases.In 1992 it represented less than 13% of case notification.

Activities:--

*A polio eradication control room was established and equipped with 26 tiker devisesn one fax and a direct phone line connecting the room with all the 26 governorates. The staff composed of 5 doctors and 6 sanitarians.
*A case difinition was disributed to all notification sites (more than 5000 site.)
*3 forms concerning notification, investigation and follow up of the cases were distributed to all units to be filled and sent back to the control room for analysis beside the immediate notification when a case is discovered.
*By the end of 1991 two specimens of stools started to be collected and sent to the vacserra for lab diagnosis.
*Active surveillance was conducted by both central and governmental levels to strengthen the routine surveillance system.
*Training courses were done for mediçal staff to help in increasing their capabilities to clinical diagnosis of the disease according the case difinition.
*Strengthening the adopted birth registeration system to cover more than 95% of births.
*Immunisation activities:--

1-Routine vaccination : It is mandatory in Egypt and it is given at 2, 4, 6 and 18 months of age. A forth dose was added to be taken at 9th month of age. Also one injection of salk vaccine was added to be given at the second month of age. The vaccination coverage reached more than 85% by 1992.

2-Containment measures:When a case is discovered a campaign is conducted to vaccinate about 5000 children under the age of 5 years around the case from house to house.

3-The national vaccination day in April to vaccinate all the children under the age of 5 years of age all over the country.

4-The Mop Up operation the adopted strategy now to vaccinate all the children under 5 years of age in high risk areas in the low season and from house to house for 2 rounds with 4 weeks apart. All the measures mentioned sabin oral vaccine is used.
*Continuous supervision and monitoring by central level and through EPI program to control cold chain and vaccine effecacy
*The estimated quantity required through the period 1992-1995 to fullfil all the above activities around 150 million dose of oral sabin vaccine.

The main problems encountered are:--

1-Birth registeration problomes.
2-Transportation problems.

3-Reluctancy of notification.
4-Lack of insentives for the staff.
5-Unplanned new constucted areas (in rural areas and slum areas in urban).

At last with a look at the present situation we find that it is encouraging (last year only 196 AFP cases were reported with 120 cofirmed cases by lab and other epidimiological criteria.) But there may be a slight delay because we still feel that not all AFP cases are reported and we started to feel that there may be some shortage of vaccine supply in the next few years to come.

Future program of polio-eradication

Egypt 1994

==========

Although year 1994 is the targeted year in which Egypt becomes free of polio casas due to wild virus infection but I think this will be difficult regarding the number of confirmed cases in 1993 (120 cases) and its percentage of all AFP cases reported (198 cases) which indicate that the surveillance system of AFP cases is still in need of strengthening to include all the AFP cases. Duirng the seminar and through the discussions held, also, through the different experiences of countries shared in this seminar I came to the following conclusions:

1. The surveillance system has to be strengthened through

    a) Increase the reporting sites especially the private sectors and urge the doctors to report the cases not only polio cases and this may be conducted through appointing a well known doctor

respected by all doctors in private sectors in the program to supervise the program (Thailand experience).

b) Increase activites of active detection of cases from the central and governmental level to help in strengthening of routine surveillance system.

c) Continuous monitoring and evaluation of the surveillance system.

2. NIDs :

It is of utmost importance and we can get benefits from the Philippines experience especially as regards social mobilization and raising volunteers to help in the NIDs and other vaccination activities that will be held in the future.

3. Through the lectures done in the seminar I came to a conclusion that the criteria of confirmation of polio cases has to be revised especially after I knew that about 50% of GBS cases suffer from residual paralysis after 60 days and we have to incline more to laboratory diagnosis

of polio cases.

4. Through the discussions I came to the conclusion that it is the time now to start differentiation between wild and vaccine related polio cases in Egypt.
5. It is the time to take samples from the environment to detect the wild virus especially in areas reporting zero cases.
6. At last with all the above activities, the routine vaccination process should be strengthened and vaccination coverage must reach 95% this year by conducting special outreach campaigns in low coverage areas especially in slum areas including all children under the age of five years.

Dr. Yahia Mostafa Hassan
Assistant Director CDC dept.
Ministry of Health
Egypt.

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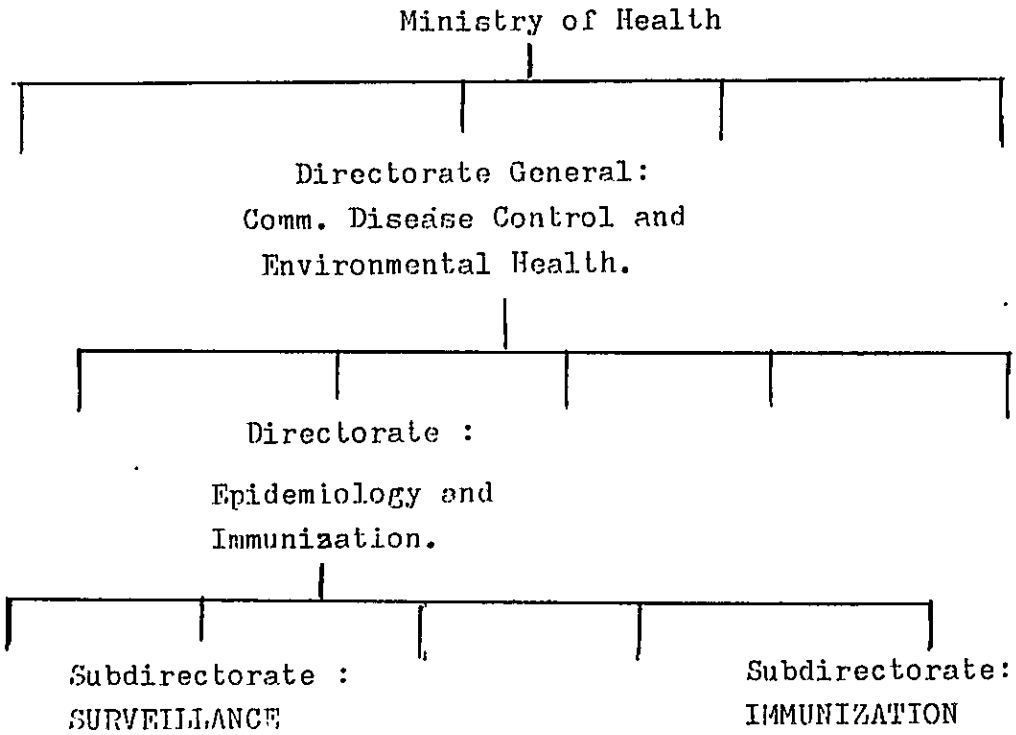
Dr. Yahia Mostafa. Hassan.
Assistant Director CDC dept.
Ministry of Health
Egypt.

1. Title of Seminar : Seminar on Polio Eradication, it's theory and practice.
2. Name of participant : HANNY ROESPANDI
3. Participant's position : Staff of Surveillance Sub-directorate, CDC Office, Ministry of Health, Republic of Indonesia.
4. Organizational Structure in Indonesia, dealing with National Poliomyelitis Eradication Programme :



CENTRAL GOVERNMENT :

- Poliomyelitis Eradication Programme is part of the National EPI Programme. The National EPI is under the management of the Subdirectorate of Immunization. There is also a Working Group on Polio Eradication Programme, which consits of all the programme unit concerned such as Immunization, Surveillance, Laboratory, Health Education - etc.

PROVINCIAL GOVERNMENT :

There are 27 Provincial EPI Managers.
The policy of Provincial EPI follows the Central Government Policy.

5. CURRENT STATUS OF NATIONAL POLIO ERADICATION PROGRAMME

5.1. INCIDENCE AND EPIDEMIOLOGIAL SURVEILLANCE

Not much was known about Poliomyelitis in Indonesia before 1971. The incidence of Polio is very difficult to obtain, eventhough efforts had been done, such as Post Polio Paralytic Survey and collecting reports from Health Institutions.

In 1971 Surveillance of Poliomyelitis in Indonesia was started by monitoring the hospitalized Polio cases. It covered only Sentinel Hospitals.

In 1978 a network for Polio Surveillance was developed. This consists of :

- routine reporting from hospitals, health centers, rehabilitation centers.
- surveys : . Post Polio Paralytic surveys
  . Serological and virological surveys
- outbreak investigation.

The routine reporting was unsatisfactory since the completeness of reportswas very low.

In 1988, the Polio survey was not done anymore and we started the Integrated Surveillance System which includes all Hospitals as well as Health Centers.

Some difficulties still persist :

- completeness and timeliness of reports
- under reported cases
- the validity of reports

The National Polio Eradication Programme was initiated in 1990 and since then every single case of Acute Flaccid Paralysis (AFP) should be notified within 24 hours.
This condition is considered an outbreak and should be investigated.

The number of Suspect Polio cases In Indonesia from 1988 - 1992 is shown in table 1 below :

Table 1 : Suspect Polio cases in Indonesia 1988 - 1992

year	No. of Polio cases according to the source of reports			
	hospital inpatient	hospital outpatient	Health center	TOTAL
1988	39	33	701	773
1989	43	87	483	615
1990	38	176	251	465
1991	40	48	133	221
1992	18	40	50	108

5.2. CLINICAL AND LABORATORY DIAGNOSIS OF POLIO

Clinical diagnosis of AFP cases in Hospitals are done by physicians/pediatricians.
In the field, during outbreak investigation, the diagnosis is done by Health Center's physician using WHO criteria.
Sometimes a team from Provincial/National Program will help with the clinical confirmation.

The fecal specimens of acute case (paralytic onset less than 3 months) should be collected as well as the contact persons.

The Laboratory examinations are done in 3 Laboratories :

Jakarta : Center of Health R & D
Surabaya : Government Health Laboratory
Bandung : Bio Farma

5.3. VACCINE SUPPLY AND IT'S QUALITY CONTROL

The Polio Vaccines were donated by the Rotary International, using vaccines produced by Belgium, France and Yugoslavia.
Starting this year (1994) we will use our locally product (Bio Farma) Polio vaccines.

The quality of vaccines are controlled by monitoring the temperature of the cold chain system and by testing the randomly taken vaccines from the field.

5.4. ROUTINE IMMUNIZATION PROGRAM AND IMMUNIZATION DAYS

Although EPI was officially started in Indonesia in 1977, Polio immunization was just included in the programme since 1980.
Polio immunization is given simultaneously with other vaccines to the babies.
Regarding OPV, an infant should be given 3 doses of OPV within one year after birth.
But since 1993, we started to give 4 doses of OPV before the babies' first birthdays

The immunization services can be obtained in every health institutions, either governmental or non governmental. They are also provided in Posyandu (the integrated health post) in the villages.

Since 1988 the EPI activities have been intensified, involving strong political commitment.
The condition of UCI (Universal Child Immunization) that means at least 80% of all babies will be fully immunized by their first birthdays (BCG 1x; DPT 3x; OPV 3x ; Measles 1x) was achieved in 1990.

Table 2 : IMMUNIZATION SCHEDULE IN INDONESIA (I)

Babies born in Health Institutions			
AGE	VACCINES		
at birth	HB1	BCG	OPV1
2 months	HB2	DPT1	OPV2
3 months		DPT2	OPV3
4 months		DPT3	OPV4
9 months	HB3	MEASLES	

Table 3 : IMMUNIZATION SCHEDULE IN INDONESIA (II)

Babies come to Health Center/Posyandu			
AGE	VACCINES		
2 months	BCG	DPT1	OPV1
3 months	HB1	DPT2	OPV2
4 months	HB2	DPT3	OPV3
9 months	HB3	Measles	OPV4

:Posyandu : Integrated Primary Health Care Services Post.

Table 4 : POLIO IMMUNIZATION COVERAGE (%) IN INDONESIA

1988 - 1992

year	C O V E R A G E (%)		
	OPV1	OPV2	OPV3
1988	82.9	75.2	73.4
1989	86.0	78.3	77.1
1990	95.4	87.3	88.9
1991	97.3	90.1	91.5
1992	98.4	91.0	94.5

The National Immunization Day is not yet been done in Indonesia.

5.5 TARGET YEAR OF POLIO ERADICATION IN INDONESIA.

There are two spesific targets for Polio Eradication in Indonesia, i.e. short term target and long term target.

The short term target :

the 3 main islands : Java, Sumatra and Bali should be Polio free zones by the end of 1995.

The long term target :

the other provinces will gradually be members of Polio free zones and eradicate Poliomyelitis throughout Indonesia by the year 2000.

6. ESTIMATE OF THE QUANTITY OF THE VACCINES REQUIRED DURING 1992 - 1995

The estimation of the quantity of the Polio vaccines required during 1992 - 1995 is calculated by using vaccine usage index and the target population.

The quantity required is about ~~360,000 vials/year~~ 26 million doses /year.

7. PROBLEMS BEING ENCOUNTERED WHEN ACTIVITIES ARE BEING CARRIED OUT

a). While the cold chain are in place and properly kept, the programme still lacks long term plans in how to ensure that the existing cold chain is maintained.

b). The Rotary International aid in donating Polio vaccines was ended in 1992.
In the years ahead the Polio vaccines will be obtained from our locally product. It needs more than several years to achieve the full production of Polio vaccines domestically.

c). Polio Surveillance is our weakest point in this programmes. This includes also the Laboratory services. Remaining issues in this field are :
- the low completeness and timeliness of reports
- the validity of reports
- Community Based Surveillance is not yet functioning
- Problems in collecting and sending stool specimens from the field.
- Some technical problems in 2 laboratories i.e. : Jakarta and Surabaya.

8. ANY SPECIAL REMARK :

- Being a very high populated country which are spread in thousands islands, Indonesia is going to determine whether the National Immunization Day strategy will be the right choice to eradicate Polio in Indonesia.

- If Polio is going to be eradicated by the year 2000 the most important things are :
  . Ensure the continuity of Polio vaccines supply
  . Strengthening the Surveillance system as well as the Laboratory network.
  . Sustainability of Polio immunization coverage i.e. the condition of UCI up to the village level.
  . Strengthening of the training of Health personnel and be supported by strong political commitment.

Name of participant: Hanny Roespandi

Participant's position: Staff of Surveillance subdirectorate,
CDC and EH Office, Department of Health
Republic of Indonesia

FUTURE PLAN

Our future plan is basically emphasized on 3 main activities:

1. Achieve the sustainability of high OPV coverage
2. Strengthen the surveillance system as well as the laboratory network
3. Get the political commitment

1. ACHIEVE THE SUSTAINABILITY OF HIGH OPV COVERAGE

It is known that achieving high immunization coverage is a CONDITIO SINE QUANON for the success of polio eradication activity Our target is to achieve at least 80% of OPV4 coverage:

- in every region/district in 1994 and
- in every subdistrict in 1996

This target will be monitored by using the LAM (Local Area Monitoring) supported by the already existing strong political commitment
LAM is a tool of management to monitor health activities including immunization coverage . It is a graph to show the rank of the monthly coverage rate of each village (subdistrict/district). By using LAM, the program manager will be able to identify the level of achievements, determine priority areas, and select the appropriate interventions that have to be taken.

However, it is increasingly clear that polio eradication cannot be achieved with high levels of routine immunization alone. The continued accumulation of susceptible children will permit large epidemics of polio to occur sporadically, even with high immunization coverage.

For the purpose of eradication of wild poliovirus, will require the implementation of supplemental immunization activity. At least Sub National Immunization Days (SNIDs) will be proposed at this early stage of polio eradication activities in Indonesia. The SNIDs should be conducted in three main islands i.e. Java, Sumatra, and Bali which comprise more than 80% of the population and which contribute 80% of the reported polio cases.

Before embarking on the recommended SNIDs, a very thorough preparation has to be done involving all the interdepartmental officials concerned, NGOs and donor agencies with strong political commitment.

Identifying the means to procure the large additional quantity of vaccines required is the major issue as well as the social mobilization.

2. STRENGTHEN THE SURVEILLANCE SYSTEM AND LABORATORY NETWORK

Surveillance is the keystone of an effective disease control program and the need to strengthen it, is well recognized, but the resources are not yet available.

Due to the high immunization coverage, we saw less polio cases during these past few years despite of the increasing percentage of reports' completeness.

As a consequence of the above situation, most people think that poliomyelitis is not really a public health problem, much less life threatening than neonatal tetanus, diarrhea and ARI which have claimed more lives. That is why the limited resources should not be given to polio unless there is an external resources.

Nevertheless, Surveillance Sub directorate will review all the polio data we had, analyze it and produce a comprehensive report which hopefully prove useful in generating support for surveillance activities, both within the health sector and outside of it. The surveillance data should be used as the basis of planning the next strategy.

Distribution of AFP definition including the follow-up action is absolutely an immediate step to be taken. This activity will need a huge amount of money for printing the materials (guidelines) and conducting a training/orientation program to the health personnels concerned. The answer for this is still a big question mark.

Regarding the laboratory network, I don't have any idea on how to overcome the problems. An intensive discussion among the members of the polio eradication working group might solve those problems. The existing working group should be expanded, by involving the experts such as pediatricians, neurologist, physiotherapists , etc. and should have a regular meeting.

3. GET POLITICAL COMMITMENT:

In recent years, political, religious and community leaders have successfully and enthusiastically participated in social

mobilization for acceleration of immunization. Their continued support will be necessary to sustain the high immunization coverage, to develop community surveillance and to mobilize resources in support of operational activities.

One of the most outstanding features in health promoting activities in Indonesia is the active participation of hundred thousands of voluntary community people, which are coordinated by the PKK (Family Welfare Movement). These are really an asset to conduct the Community-Based Surveillance because they are the ones who likely see the cases. But it still needs some support from the highest political level.

To get the political commitment we need to explain to them how much money we can save if polio would have been eradicated and no need to do the immunization anymore.

LAO COUNTRY REPORT

INTRODUCTION

Commenced in 1982, the Expanded Programme for Immunization in the Lao PDR continues to expand and develop. Some 102 districts of a total of 128 have the capacity to conduct immunization programmes. However the majority of the population still do not have access to regular immunization services. Only low vaccination coverage levels for the country have been achieved. The programme continues to extend each year to new districts, and over the last two years priority has been given to strengthening the infrastructure for delivery of immunization services by the adoption of new strategies and policies, the installation of new cold chain equipment, training of personnel and improving the logistics.

ROUTINE EPI ACTIVITIES

1 Immunization coverage

Strategies for the delivery of immunization services have been developed in 1991, which for routine services, are based on phased geographic expansion by zones. This immunization district strategy has been widely adopted following training provided to EPI managers. The zoning system of the EPI used for micro-planning at district level has been adopted by other health programmes.

The National Commission for the Mother and Child headed by the Deputy Prime Minister has become an important force in the development of the EPI. In addition the Prime Minister issued a decree on 21 April 1993 concerning the implementation of the immunization programme. This decree directs that ministries, mass organizations, Governors of provinces and heads of districts must make much greater efforts to rapidly increase the immunization coverage in order to achieve 80% coverage of the population by 1996. It also directs that provincial and district commissions for the mother and child headed by the governor of province and chief of district must be established to provide leadership, monitor progress and achieve intersectoral coordination. The President, Nouhak Phoumsawan has also promoted immunization by visiting health facilities in a number of provinces and immunizing children with oral polio vaccine.

The Ministry of Public Health continues to be the focal point for the immunization programme and is changing the decentralized system of health financing and planning and resource allocation to a more centralized system under the

control of the Ministry of Public Health. This change should result in greater equity of health services, more uniform implementation of the policies of the ministry and better planning and resource allocation. This transition phase commenced in late 1992 and has resulted in some delay in allocation of funds to provinces and hence implementation of activities.

A further 11 districts in 1992 received equipment, supplies and support for EPI so that by the end of 1992 some 108 districts out of a total of 128 had the capacity to implement immunization programmes. The remaining districts are remote and very difficult to access but it is expected that they will have the capacity to implement activities by 1994.

The immunization coverage for children achieved in 1992 was similar to the previous year.. There was an increase in the coverage of tetanus toxoid 2+ for pregnant women and women of child bearing age. The coverages for provinces showed substantial variation. Some provinces have been able to expand their programmes and increase immunization coverage, for example Xayaboury and Attapeu while other provinces have had a fall in coverage, for example Vientiane Province.

In 1992 continued improvements in the infrastructure for immunization delivery occurred. A major constraint to an increase in immunization activities at district level was the lack of adequate resources to support outreach and mobile activities.

2.2 Reported cases of EPI diseases

The surveillance system for the reporting of EPI diseases is weak. EPI managers collect information from health facilities but many of the patients with the target diseases do not have access to health services or do not attend. The number of reported cases for measles, pertussis and tuberculosis showed a marked decrease. However due to the inadequacy of the reporting system it is not possible to determine any conclusions from this.

The sentinel surveillance system provided more detailed information on hospitalized cases of the EPI diseases from nine provinces.

2.3 Quality of services

During 1992 some 148 provincial and district EPI managers were trained in management and as trainers. In addition the WHO series of modules "Immunization in Practice" were modified and field tested. In 1993 training of maternal and child health workers and outreach and mobile vaccinators commenced

using these modules. By the end of April 1993 some 669 vaccinators had been trained in 1993 as well as a further 35 in 1992. It is planned that approximately 1,000 vaccinators will have received training in 1993. This should result in a substantial improvement in the quality of the immunization services delivered.

Further strengthening of the cold chain occurred in 1992 and 1993 with the installation of new cold chain equipment. Provinces and districts with electricity supply received icelined refrigerators and new freezers. Gas operated absorption equipment was introduced in some 15 districts in 4 provinces and kerosene refrigerators were supplied to new districts as well as to other districts for replacement of old equipment.

The health information system was expanded with the development of a database in the National Institute for Hygiene and Epidemiology for which information was collected from provinces and districts. This information has been used to strengthen planning and management at the national level including the logistics system. Vaccine management at central level and in most provinces improved as a result of the training for managers implemented in 1992.

3. DISEASE REDUCTION INITIATIVES

3.1 Poliomyelitis eradication: supplementary immunization

Sub-National Immunization Days were implemented in 24 districts of the country in December 1991 and January 1992. Following the success of these days and with the experience gained in all 17 provinces expansion of the SNIDs occurred to 48 districts in 17 provinces in November and December 1992. Some 46% of the population of the country, living in 4,189 villages was targeted and at least 3,920 villages were reached. The overall coverage achieved with two doses of OPV for children under 5 years of age was 77%. For OPV1 and OPV3 the vaccination coverages achieved through the regular immunization programmes were 35 and 21% which were raised to 52 and 27% respectively by the SNIDs.

DPT and measles vaccines were also administered to eligible children with some 25,187 and 53,814 doses of measles and DPT respectively being administered. The coverage of measles for the target population over the two rounds was 28% which raised the national vaccination coverage for measles in 1992 from 32 to 46%. For DPT the coverage achieved over the two rounds in children under year was 19% which raised the national vaccination coverage of DPT1 from 34 to 41% and for DPT3 from 20 to 23%.

The immunization days received good support from the national, provincial and district leadership. Many organizations contributed to the achievement of the immunization days, including the Lao Women's Union, Ministries of Education, Information and Culture as well as non-governmental organizations and private and non-private societies. Governors and other leaders participated in opening day ceremonies in most provinces and the provincial administrations usually contributed some funds with other support coming from non-governmental organizations and the business community. The oral polio vaccine and the majority of the operational costs were provided by the World Health Organization.

In 1994 National Immunization Days are planned with approximately one hundred districts conducting immunization days. Oral polio vaccine and support for operational costs will be required. In 1993 an additional one million doses of OPV is required for the 1994 NIDs and in 1994 1.8 million doses.

3.2 Poliomyelitis eradication: surveillance and monitoring

The reporting of cases of acute flaccid paralysis occurs through the sentinel surveillance system in which 9 provinces report regularly although some 12 provinces have received training.

Some 10 cases of acute flaccid paralysis were reported in 1992 with some 4 stool specimens collected and sent to the reference laboratory in Thailand. One specimen was positive with polio virus type 3 being isolated. Nine cases met the criteria for the diagnosis of poliomyelitis: virus isolation one case, residual paralysis three cases and lack of follow-up five cases.

Three staff from the department of epidemiology, NIHE received training in 1992 on basic epidemiology as well as poliomyelitis surveillance from the WHO medical officer. In February 1993 staff from the hygiene stations of all 17 provinces received training in poliomyelitis surveillance. However the reorganization of responsibilities for poliomyelitis surveillance at the national level has delayed establishing a national system of surveillance for acute flaccid paralysis. Following the reorganization the plan for poliomyelitis surveillance will be reviewed and supplementary budgets prepared in order that support may be provided to provinces for case investigation and outbreak control activities.

3.3 Neonatal tetanus elimination

No specific plan of action has been prepared for neonatal tetanus elimination. The immunization schedule conforms to the recommended WHO five dose schedule for women of child bearing age. Since the majority of the population only has access to outreach and mobile delivery of immunization services, the vaccinators immunize women of child bearing age as well as pregnant women. In maternal and child health clinics the priority has been given to immunization of pregnant women. The immunization coverage for TT 2+ for both pregnant women and women of child bearing age has shown an increase in recent years.

Surveillance for neonatal tetanus is included in the sentinel surveillance system. As the surveillance for AFP is expanded in the country it is planned that surveillance for neonatal tetanus will be integrated into the network.

3.4 Measles control

Measles continues to result in substantial morbidity and mortality with the official cases reported representing only a small proportion of actual cases. Emphasis has been given to increasing vaccination coverage. Measles vaccine has been included in the two most recent sub-national immunization days and has resulted in an increase in vaccination coverage for children 9 to 23 months of age to 46%.

Measles is one of the diseases included in the sentinel surveillance system. The number of cases reported in 1992 through this system was only 30 which is a decrease from 1991. This may indicate decreased incidence in urban areas. However in rural areas anecdotal reports of measles epidemics are common.

PROBLEMS AND CONSTRAINTS IN DISEASE REDUCTION INITIATIVES

4.1 Problems and constraints in 1993

Poliomyelitis eradication, neonatal tetanus elimination, measles control:

- weak surveillance system
- low immunization coverage
- weak health infrastructure
- lack of resources for operational costs.

4.2 Plans to overcome problems and constraints

The same problems are common to all the disease reduction

initiatives.

The low immunization coverage is a result of the low percentage of the population having access to immunization services. Political commitment to raising vaccination coverage has increased greatly and efforts are being made to achieve intersectoral support for achieving the objectives under the leadership of the National Commission for Mother and Child at national level and the governors at provincial level. The expansion of the immunization programme will continue and more resources will be allocated to outreach and mobile activities. Supplementary immunization activities such as National Immunization Days will also be conducted to raise immunization coverage.

The surveillance system will be strengthened and a network of reporting sites in all provinces will be established. Following reorganization of responsibilities at central level progress is expected in 1993 provided adequate resources can be allocated to support case investigation, follow-up, reporting and sending of specimens. Surveillance for acute flaccid paralysis will be the priority but surveillance for measles and neonatal tetanus will be progressively strengthened and integrated in the surveillance network. The sentinel surveillance system is under review and is expected to be modified so that it will be simpler and more relevant to the needs of programme managers.

The health infrastructure is weak in all provinces and can only considered to be adequate in Vientiane Municipality. With the recentralization of health financing and planning at central level more equitable allocation of resources will occur. Priority is being given to strengthening the planning and management capabilities of the ministry. Support for strengthening of health services and renovation of health facilities is being provided by the Ministry of Health as well as by international organizations, bilateral agencies and non-governmental organizations.

The lack of resources for operational costs has been a major constraint to increasing the immunization coverage. With the recentralization of health financing and immunization made a priority activity of the national government as well as in the health sector, increased allocation of funds for operational costs should occur. However support from international organizations will continue to be required.

COUNTRY REPORT

I - Title of seminar : Bolio eradication

II - Name of participant : Chanthavong SAVATCHIRANG

III - Participant's position: Responsible in Health education unit and logistic officer and assistant EPI manager

IV - Background :

1- Geo political setting :

The Lao people's Democratic Republic is a land-locked country which borders by P.R. of China, Myanma ,Kingdom of Thailand ,Campuchea and Republic socialism of Vietnam .

It is located almost entirely in the sloped basin of the Mekong river which constitutes the common border with Thailand ,the country cover: 236,800 square kilometers .

The National highway system is still inadequate and there is no access to many rural areas particularly in the Northern and north-Easthern which mainly are covered by the mountains and dense forests. During the rainy season , many rural roads and highways are not operational due to heavy rai and flood. The national transportation system which links major cities to the capital is not adequate .

2- Demography and density:

Laos has an estimated population of 4415488 million in 1993 according tc 1985 census, there was 3,584,000 inhabitants, with an average density of 15,1(16) inhabitants per square kilometer. About 85 percent of the population lives in rural areas, in some 11,500 villages. 60 percent of the population is concentrated in the plains of Vientiane, Khammouane, Savannakhet and Champasack. 7o percent of the active population works in the agricultural sector including forestry. Young people under 16 years of age makes up half of the population which has been in creasing at an average cumulative rate of 2.9 percent per anum .

The population is currently estimated to grow at 2.9 percent annually

rate of 17 per 1000 .

Infant mortality rate is estimated at 104 per 1000 live birth, nearly 10 children out of every 100 children born do not survive the first year of life . The mortality rate of children under 5 years is about 175 per live births . life expectancy is estimated to be 50 years for men and 55 for women .

The demographic data show that children below 15 years of age constit nearly half of the population. Women from 51 percent of thepopulation and more than 45 percnet are in the reproductive age groups of 15 to 45 yea

3- Ethnicity and cultures :

Laos is one of the least developed country in the region- Unlike others countries in South-East Asia , where the has been rapid growth in the urban population. Laos is still a predominantly rural country: ethnic diversity,variation in customs, cultures and religions beliefs combined with scattered low density / sqkilometer hampers socio-economi development and expansion of health care.

4/ - Organization structure, dealing with poliomyelitis in Lao P.D.R

The ministry of public health in Lao P.B.R provides the over all guidance for the peripheral health services, although provinces are administratively decentralized and each province decides on its own health priorities,manpower and budget based on the availability of local resources.

The National commission for the mother and child headed by the Deputy Priminister has be come an important force in the development of the EPI . In addition the Prime Minister issued a decree on 21 April 1993 concerning the implementation of the immunization programme. This decree directs that ministries , mass organizations, Governors of provinces and heads of districts must make much greater efforts to rapidl increase the immunization coverage in order to achieve 80% coverage of the population by 1996. It also directs that provincial and distict commission for the mother and child headed by the governor of province and chief of district must be established to provide leadership, monitor progress and achieve intersectoral coordination.

The president of Lao P.D.R has also promoted immunization by visiti

health facilities in a number of provinces and immunizing children with oral polio vaccine .

The low immunization coverage in a result of the low percentage of the population living access to immunization services. Political commitment to raising vaccination coverage has increased greatly and efforts are being made to achieve intersectoral support for achieving the objectives under the leadership of the National commission for the Mother and Child at national level and the governors at the provincial level.

The Expansion of the Immunization Progamme will continue and more resources will be allocated to outreach and mobile ... activities. Suplementary immunization activities such as National Immunization Days will also be conducted to raise immunization coverage .

The Immunization Days received good support from the national, provincial and district leadership. Many organizations contributed to the achievement of the immunization days, including the Lao Women's Union Ministries of Education, information and culture as well as non-govern(N(and private and non-Private societies. Governors and other leaders. participated in opening day ceremonies in most provinces and the provinci administrations usually contributed some funds with other support coming from non -governmental organizations and the business community. The oral polio vaccine and the majority of the operational costs were provided by the World Health Organization .

In 1994 National Immunization Days are planned with approximately 102 districts conducting immunization days . Oral polio vaccines and support for operational costs will be required in 1993 and additional one million doses of OPV is required for the 1994 NIDS and in 1994 1.8 million doses.The proposed dates are 15 January and 19 February 1994.

//- Current status of National Polio eradication Programme

The sub-national immunization Days were implemented in 24 districts of the country in December 1991 and January 1992 .Following the success of these days and with the experience gained in all 17 provinces expansion of the SNIDS occurred to 48 districts in 17 provinces in December1992 and January 1993 . Some 46% of the population of the country, living in 4,189 villages was targeted and at least 3,920 villages were reached.The overall coverage achieved with two doses of OPV1 and OPV3 the vaccination coverage achieved through the regular immunization programme were 35 and 21% which were raised to 52 and 27% respectively by the SNIDS and coverage achieved

with two doses of OPV for children under 5 years of age was 77% .

1- Incidence and epidemiological surveillance :

Surveillance and monitoring: The reporting of cases of acute flaccid paralysis occurs though the sentinel surveillance system in which 9 provinces report regulary although some 12 provinces have received training .

Some 10 cases of acute flaccid paralysis were reported in 1992 with some 4 stool specimens collected and sent to the reference laborato in Thailand. One specimen was positives with polio virus type 3 being isolated . Nine cases met the criteria for the diagnosis of poliomyeliti virus isolation one case,residual paralysis three caess and lack of follow-up five cases .

The surveillance system for the reporting of EPI diseases is weak. EPI managers collect information from health facilities but many of the patients with the target diseases do not have access to health services or do not attend .

2- Clinical diagnosis of the disease

Case definition for clinical diagosis of poliomyelitis is based on the WHO recommendation.

3- Laboratory diagnosis of the disease

The stool specimen is planned to sent to the reference laboratory in Thailand .

The serology is not performed locally due to incopability of laboratory performance.

4- Vaccine supply and its quality control

Mainly vaccine willbe supplied by UNICEF and vaccine has been sent to Thailand for its quality control .

5- Vaccination programme routine and vaccination days

Commenced in 1982, the Expanded Programme for immunization in the Lao P.D.R continues to expand and develop some 1o2 districts of a total of 128 have the capacity to conduct immunization programmes. However the majority of the population still do not have access to regular immunization services. Only low vaccination coverage level for the count have been achieved. The programme continues to extend each year to new districts, and over the last two years priority has been given to strengthening the infrastructure for delivery of immunizationservices by the adoption of new strategies and policies, the installation of new

cold chain equipment, training of personnel and improving the logistics.

Strategies for the delivery of immunization services have been developed in 1991 , which for routine services, are based on phased geographic expansion by zones. This immunization district strategy has been wid ely adopted following training provided to EPI managers. The zoning system of EPI used for micr-planning at district level has been adopted by other health programme .

The district is considered the functional unit for EPI activities. IN eac district the capability should exist to plan and manage an immunization programme which would deliver immunization services through health facilities and outreach and mobile activities to villages.
The immunization programme will in clude those activities which the part of the regular immunization progamme or supplementary activities such as the National vaccination days .

The National vaccination days are an essential component inthe strategy to achieve polio eradication but are also very important in raising vaccination coverage of measles and increasing awareness of immunization

6- Target year of eradication

The Lao P.D.R is one of the six countries in the western pacific region which is endemic for poliomyelitis. Lao PDR is a member the regional committee for the WHO western pacificregion.Therefore, the target year of polio eradication is committed by the same year of the other countries in this region as by 1995 .

/// Estimate of the quanti ty of the vaccine required during 1992 - 1995.

Please Found it here attached

OPV REQUIREMENT FOR NIDS

1. SNID IN 1992

The amount of OPV distributed for SNIDs in 1992 was 1 million doses. However there was a very large amount of wastage and much OPV left in provincial stores after the SNIDs. The wastage rate was probably in excess of 100%.

2. CALCULATED REQUIREMENT FOR 1994 NIDS

Refer attached table for calculation of amount of OPV required. For NIDs using wastage rate of 20% the amount required is 1.4 million doses.

3. CURRENT VACCINE STOCK

The current vaccine stock at the end of July 1993 was 659,880 doses with an additional 180,000 doses ordered. At the current rate of consumption an amount of approximately 650,000 doses can be expected in stores.

4. THE AMOUNT REQUIRED FOR NIDS

The amount to be ordered should be 1.4 million doses, but should have a 2 year expiry date at -20 C. The vaccine should come in 2 shipments; the first early November and the second early December 1993.

R Nesbit

16 August 1993

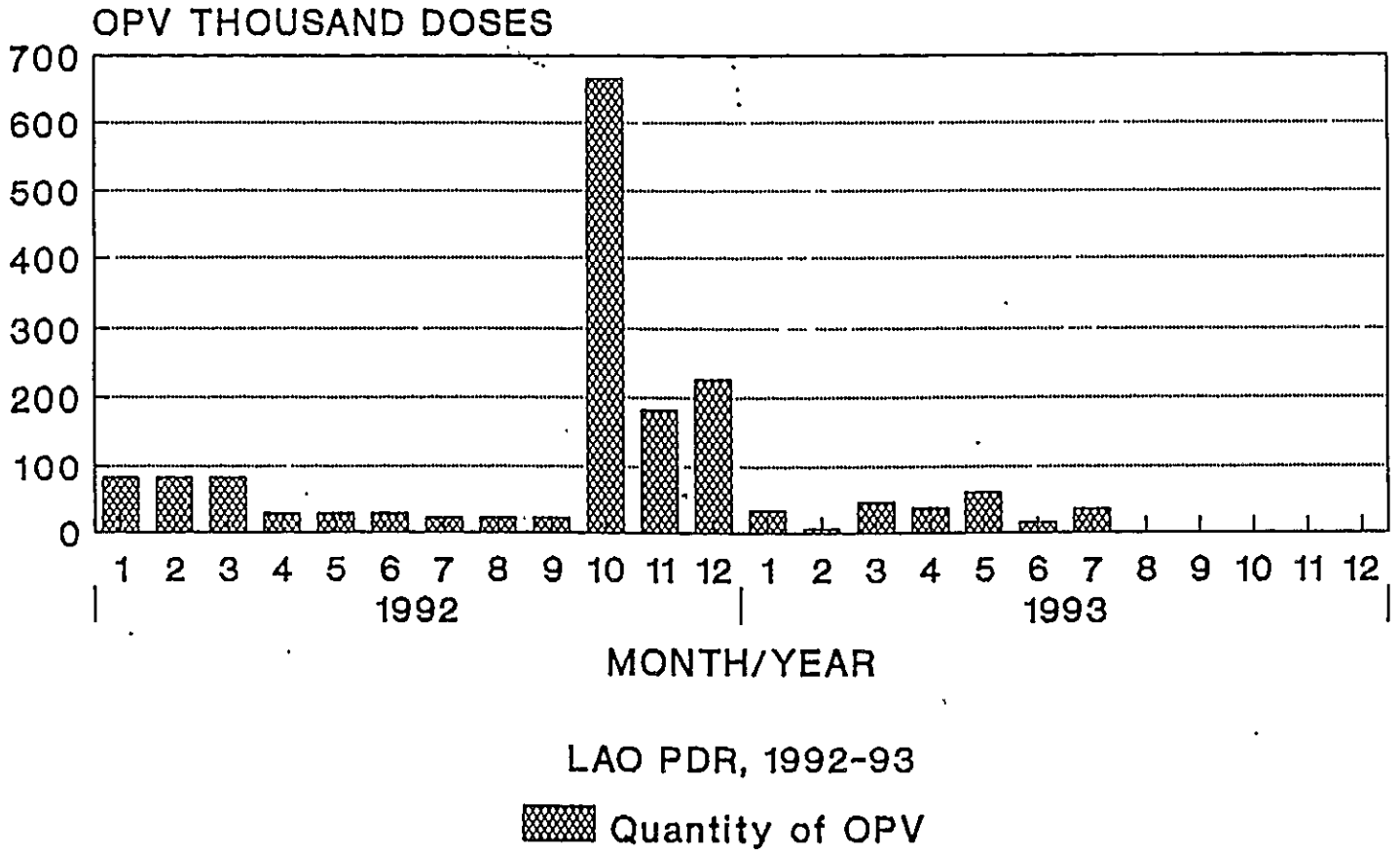
REQUIREMENTS FOR ORAL POLIO VACCINE, 1993 - 1995
(In thousands of doses)

	1993	1994	1995
Total population (thousands)	4277	4389	4503
Routine EPI (1)	658	784	922
Children <5years	727	746	766
x doses	2	2	2
x wastage	1.2	1.2	1.2
x target	80	100	100
Total OPV for NIDs	1396	1791	1837
OPV for outbreak response (2)	90	90	90
Total OPV	2054	2665	2849

(1) Routine EPI for infants: 3-4 doses. 1993 OPV3 coverage 45% 1994 OPV3 55%, 1995 OPV3 75%, 1996 OPV3 80%.

(2) Outbreak reponse immunization: 4,500 doses for an estimated 20 outbreak response operations.

ORAL POLIO VACCINE DISTRIBUTION
BY MONTH, 1992 AND 1993



PVDIST/HG

(//// - Problems and contraints.

Problem of implementation to increase the vaccine coverage had several major constraints as the follows :

1- Inadequate manpower and managerial capacity

The lack of the manpower and administrative capacity within the Natioanl and provincial level limit the degree to which the central and provincial authorities can not ensure implementation Of EPI as planned at the local levels.

2- Low population density

The average density is only 16 persons per square kilometer. This is one of the least populated country in the region. This makes health service delivery including EPI both costly and difficult.

3- Geographical and Transportation

Lao PDR has a road densury of 0.055km per square kilometer.It is one of the lowest in Asia and the pacific. During the rainy season, only 40% of the National road network is passible to traffic.
Extension of immunization activities is seriously hamered by poor transportation .

4- Electrification

Electrification is progressing, but the majority (80%) of the distric do not have the electricity needed for cold chain, which requires a minimum of eight hours electricity daily.

5 - Disease surveillance system

The current diseases system does not provide means to mensure the impact of health especially vaccine preventable diseases .

6 - Laboratory system

No laboratory confirmation was done for most of EPI diseases due to the inadequacy of the laboratory service in the country .

Conclusion

It is realized, that it is not possible to carry out this programe throughout the country at once, due to the present funding adequate staffing and cold chain problems

Cold Chain : To fully equipment, including the installation of the equipment and training of staff in every day care and maintenance of the equipment, the following provincial and district hygiene stations and facilities with cold chain equipment according to standard specifications.
To stock adequate quantities of spare parts for the cold chain equipment at the appropriate level .

Surveillance: All health facilities providing vaccination services will report monthly on number of cases of the 6 EPI target diseases.EPI managers will compile reports from the district hospital and dispensaries and report to provincial EPI manager who will compile reports from all districts and the provincial hospital .

Sentinel surveillance:
The number of sentinel sites will be expanded during the year to 12 provinces. provincial hospitals in the system will provide regular reports on the 16 diseases included in the sentinel surveillance.

PLAN OF ACTION FOR 1994

EXPANDED ON IMMUNIZATION AND POLIO-ERADICATION

BY: Dr.TAYPHASAVANH FENGTHONG AND,
Mr. CHANTAVONG SAVATCHIRANG
(LAO PDR)

I- OBJECTIVES:
1- To reduce morbidity and mortality from measles, pertussis, tetanus, diphteria, tuberculosis and poliomyelitis by providing immunization services against these diseases for every child and every female entering or in their reproductive years.
2- To eradicate ingenious poliomyelitis caused by wild poliovirus.

II- Strategies:
Vaccination strategies:- routine immunization,
- National Immunization Days (NIDs),
- outbreak response immunization (ORI).

III- IMPLEMENTATION OF THE PROGRAMME
* Regular Immunization Programme
Provincial and district hospitals should provide immunization services though maternal and child health clinics. Delivery of immunization services to villages in zone 0 should be through health facilities. Staff of health facilities will need to be active in their communitier promoting their services and providing health education. That is why they must creat demand for immunization services.
* National Immunization Days
National Immunization Days will be repeated in January and February 1995.

IV- PLANNING AND MANAGEMENT
* Leadership and Outersectoral coordination:
- National commission for mother and child to provide leadership for immunization throughout the country.
- Provincial and district commissions for mother and child to meet monthly and monitor progress towards achieving the target and to ensure intersectorial coordination.
- Using the decree of the Prime Minister as the basis expand advocacy for EPI by all means, such as high level advocacy tours and including EPI on agenda of National meetings for different sectors and mass organizations.

* Intersectorial coordination
- hold regular quarterly meetings in the Ministry of Health for all concerned departments and at least monthly at provincial and district level to review the progress towards achieving the objectives and to ensure coordination of activities.

* Planning and management
- Increase planning and management capacity at provincial, district and National levels.
- Strengthen financial management at National, Provincial and District level.

V- SERVICES DELIVERY

* EPI ROUTINE SERVICES
- strengthen capacity to provide immunization services including provincial of operational support to 125 districts
- to enable more than 10,000 villages to have access to immunization services at least 4 times /year.
- All Provincial and district hospitals to provide regular immunization services according to the national policy.
- All dispensaries should participate in EPI activities which may by holding regular immunization sessions, participating in National Immunization Days, supporting outreach vaccination sessions in their area and promoting EPI.

*NATIONAL IMMUNIZATION DAYS

- Prepare for National Immunization Days to be conducted in 125 districts in January and February 1995.

VI - INFORMATION, EDUCATION AND COMMUNICATION
- strengthen Provincial and district capacity for social mobilization and communication especially for EPI through training provision of equipment and materials.
-promote knowledge of EPI in the community through media, entertainment activities, posters.
- Develop capacity and capability of Lao Women's Union at National, Provincial and district level to mobilize their member to promote EPI.
- Develop and implement communication and mobilization strategy for zone 0.
- Develop and implement communication strategy for the promotion of EPI through sport activities.

VII - SURVEILLANCE

* ROUTINE DISEASE REPORTING

- Strengthen capacity of provincial and district EPI managers to conduct surveillance.
- strengthen reporting in surveillance system.
- train health staff to conduct surveillance at the time of immunization sessions.
- strengthen outbreak response and case investigation, reporting and response.
- strengthen feedback mechanisms.

*SURVEILLANCE FOR POLIOMYELITIS, MEASLES AND NEONATAL TETANUS

- Detect promptly and investigate thoroughly all cases of Acute Flaccid Paralysis (AFP) in children less than 15 years of age.
- Develop Weekly reporting system for AFP, Measles and Neonatal Tetanus throughout the country with district and provincial health services participating.
- Conduct aggressive outbreak control measures for all suspect polio cases detected.
- Investigate measles and neonatal tetanus cases in selected areas.

VIII- TRAINING

- Train all provincial and MCH and district EPI managers in planning and management.
- Train 400 health workers in immunization practice.
- Strengthen capacity of provincial personnel to conduct training.
- Train provincial personnel in cold chain maintenance and supply management.
- revise and produce training manual for 1995 NIDs.
- Train health staff and community volunteers for 1995 NIDs

IX- COLD CHAIN AND LOGISTICS

*COLD CHAIN

- Strengthen cold chain system through: establishment of regional and subprovincial stores, installation of equipment in new districts, and replacement of old existing equipment.

-update and maintain database at NIHE on EPI equipment present in provinces and districts.

-strengthen the maintenance of cold chain equipments through establishing policies on maintenance of equipments,

reporting system for equipment not working, and provision of spare parts.

* TRANSPORT AND LOGISTICS

-strengthen cold chain maintenance and supply management through training of provincial staff.

-strengthen EPI logistics through assessment of existing transport means and support mechanisms, development of policy on transport for EPI, development of maintenance and monitoring mechanism.

X- MONITORING AND EVALUATION

*MONITORING AND SUPERVISION

- strengthen district, Provincial and National capacity to monitor and supervise EPI through training, provision of monitoring chart, strengthening reporting system from all participating units, and providing feedback.

*EVALUATION

-Evaluate the progress of EPI towards achieving Poliomyelitis eradication by conducting coverage surveys, reviewing EPI program at National, Provincial and district level.

COUNTRY REPORT

1. **Title of Seminar**: Seminar on Polio Eradication: It's theory and Practice

2. **Name of Participant**: Agnes B. Benegas

3. **Participant's Position**: Medical Specialist II

4. Organizational Structure of Polio Eradication program in the Philippines

The Polio Eradication Project was initiated and is headed by the Secretary of Health of the Philippines. A National Polio Eradication Task Force headed by Secretary with the different DOH Service Directors as members was created to mandate and supervise eradication activities.

The National Immunization Committee (NIC) composed of DOH Central EPI program managers and funding agencies (UNICEF, USAID, CIDA, Rotary International, WHO) supports the Secretary of Health. It serves as the National Steering Committee on EPI and Polio Eradication. It is responsible for the overall planning and evaluation of all aspects of the program. This is an advisory board of the Department of Health on policy matters regarding immunization. Within the NIC is the Polio Eradication Subcommittee headed by the Director of the Maternal and Child Health Service (MCHS). Its members include the Directors of Biologicals Production Service (BPS), Procurement and Logistic Service (PLS), Health Intelligence Service (HIS), Public Information and Health Education Service (PIHES), Research Institute for Tropical Medicine (RITM) and representatives from Rotary International (RI) and funding agencies. The subcommittee shall:

1. Coordinate all DOH activities on Polio Eradication especially logistical needs, surveillance, laboratory support, social mobilization and monitoring;

2. Collate and review budgetary requirement for the projects;

3. Report to the NIC the plans and developments regarding the PEP;

4. Recommend to the NIC PEP policy and strategy options for representation to the DOH Management Committee (Mancom) and the National Polio Eradication Task Force.

A Polio Eradication (PEU) dedicated to the PEP was created within the MCHS, EPI Division, to act as the Secretariat of the Subcommittee on the PEP. The PEU plans the general strategies and manage project activities, execute guidelines and decisions made by DOH or the National Polio Eradication Task Force (NPE-TF), monitors implementation of the project, provide technical and managerial support to the field staff and other units needed, and assist FETP in surveillance training activities.

The Field Epidemiology Training Program Sentinel Surveillance Unit shall is in-charge of overseeing the supplemental Surveillance System for Polio Eradication. It collaborates with MCHS and RITM with surveillance projects. It shall be responsible for conducting case

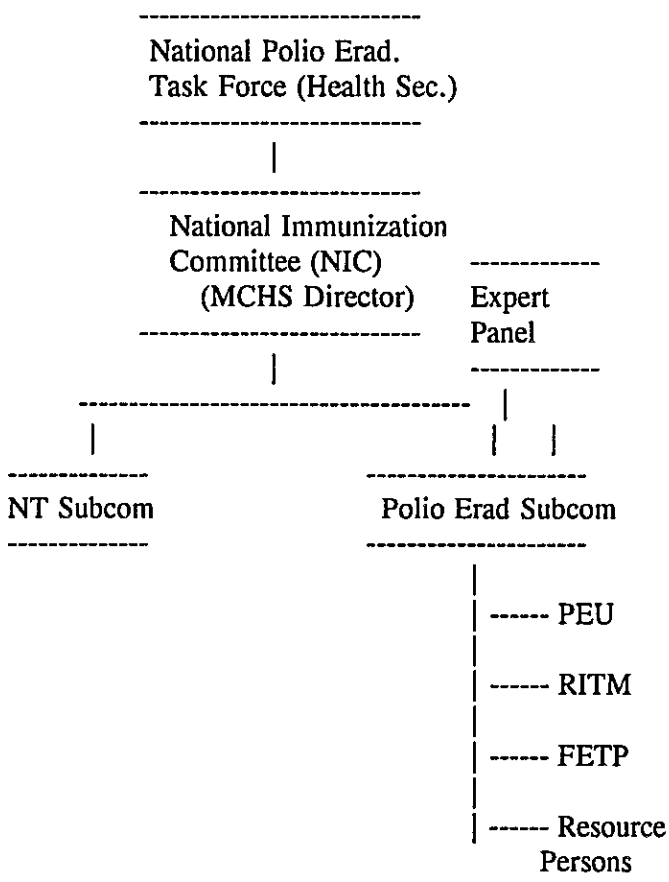
investigations and in training provincial and district polio eradication officers for them to conduct epidemiologic investigations on AFP cases and oversee all epidemiologic investigations. At the same time it was tasked to design and disseminate the flow of reports, collection and collation of weekly reports from reporting units, analyze reports for completeness and accuracy, follow-up defaulters, identify barriers in reporting and recommend actions to remove these barriers, publish reports of probable and confirmed polio cases and distribute these to the reporting units and National PET Force, the PEP and other key officials and person.

The Research Institute for Tropical Medicine (RITM) receive and analyze all specimen from suspected polio cases over the country. It submits weekly report to FETP and monitors equipment and supplies needs for poliovirus analysis.

An expert panel was also created with a pediatrician, a neurologist and an epidemiologist who review all case investigation reports and other records of Acute Flaccid Paralysis and make the final classification of these cases whether these are to be discarded or confirmed poliomyelitis.

Figure 1 outlines the organizational structure of the polio eradication project in the Philippines.

Fig 1. Polio Eradication Organizational Chart



5. CURRENT STATUS OF NATIONAL POLIO ERADICATION PROGRAMME.

5.1. Incidence of Epidemiologic Surveillance.

Incidence. The nationwide introduction of OPV in 1980 has dramatically decreased the number of cases and deaths due to polio. Before 1980, there was an average of 905 polio cases per year. This decreased by more than half to an average of 417 cases for the period of 1980-1985, despite the still low coverage in the initial years of OPV administration. The incidence further decreased to an average of 243 cases per year in the period of 1986-1990 during which the time OPV3 gained wider coverage. The 1990s set a record high coverage of least 90% for OPV3. (Table 1). Polio cases consequently dropped to only 29 cases in 1990, 11 cases in 1991 and 8 cases in 1992.(Table 2). For 1992, of the 8 confirmed polio cases, half did not have any OPV with the other half not completing the primary doses of 3 OPV. The ages ranged from 5 months to 13 years old.

SURVEILLANCE :

Case Definition: The current polio eradication programme adopts WHO definition of suspected poliomyelitis case, which is: "Any patient with Acute Flaccid Paralysis (AFP), including and child less than 15 years of age diagnosed to have Guillain Barre Syndrome for which no other cause can be identified.

The Reporting System:

The routine surveillance system of the field units is integrated into the Field Health Service Information System (FHSIS) that collects data in a weekly, monthly and quarterly basis and then compiles these data into an annual report. The surveillance of the seven EPI target diseases, in particular, are contained in the weekly report of Notifiable Disease (FHSIS Form W - 1a and W-1b). This is a consolidation or report coming from the barangay health stations, rural health units, hospitals, Non-government organizations (NGOs), Government organizations (GOs) and concerned citizens (FIG. 2). However, this system was not very reliable because of factors: (1) delayed reporting (generally a lag of 3 years), (2) absence of a standard case definition of poliomyelitis,(3) inability to investigate suspected poliomyelitis cases; and the (4) technical difficulty in differentiating between the acute and late effects of poliomyelitis.

Supplemental Surveillance System:

The supplemental surveillance system for polio eradication was established in 1992 with the assistance of the Field Epidemiology Training Program (FETP). The FETP maintains the sentinel sites at 13 of 15 regional /provincial hospitals which is manned by a sentinel nurse and a clerk. It exists in all regions except Region IV and ARMM. In some regions there are FETP graduates who act as regional epidemiologist such as in Regions I, III, VII and VIII

FETP monitors 13 infectious diseases in addition to AFP FETP sentinel staff receive zero reports from the catchment area as well as immediate reports about AFP cases and relay them to Manila by telephone. Together with the regional/provincial EPI staff (Regional/Provincial Immunization Officer), Regional/Provincial EPI nurse coordinators and FETP graduate if available, they coordinate case investigation, stool transport, outbreak response immunization and follow-up examination of cases.

They also report the AFP case to the Central Office and send or fax a copy of the filled-out case investigation form. Stool transport from the Region is facilitated by DHL, a commercial courier which is present in all key cities and fly specimen to Manila without any cost.

A four-day course on Integrated EPI Disease Surveillance Training were conducted last year except Regions III and VII. Each course were composed of 30 participants from the provincial/district/city level.

In 1993, there were 59 AFP cases initially reported. Out of the 59, only 54 turned out to be true AFP. Four cases were presented to the Expert Panel. 7 (13%) were from NCR, 18 (33%) from Luzon, 20 (37%) from Visayas and 9 (17%) from Mindanao.
4 (7%) have wild polio virus Type I isolated from the stool. 2 were from Cebu City (Region VII), one from NCR, and the other one from Misamis Occidental (Region X).

Out of the 54 cases, 22 (41%) were in the 0-4 years old. 12 (22%) 5-9 years old, 18 (33%) 10 -14 years old, and 2 (4%) were 15 and above.

This system consists of an immediate and a weekly zero reporting. Immediate reports of AFP cases entail case investigation, stool ccollection and culture, and a 60 day follow-up examination, Weekly zero reporting means a written report of no case seen for the week. suspected cases are reviewed by an Expert panel who confirms whether of not a case is truly poliomyelitis based on the results of laboratory isolation and results of follow-up examination 60 days after onset of symptoms.

Of the 76 initial AFP reports in 1992, FETP was able to follow-up and document only 47 AFP cases. Of these, 30 (67%) were from Luzon(most of whom were from NCR, 28%). 11 cases (23%) from the Visayas, and 4 (9%) from Mindanao. Sixty percent of these cases sere under five years old.

TAG 4 Form 3A shows that weekly reporting is received from 89% of the expected units; 86% of the AFP reporting units are on time. The completeness of the units reporting weekly varied from 74% to 100% and most often,, 80% to 90% of the units are reporting. The reason behind the failure of most of the FETP reporting units was attributed to the lack of adequate communication facilities, both from the AFP reporting units to FETP, and vice-versa; only one phone is available at the FETP and this is not even dedicated to the purpose.

TAG Form 3B and Chart 1B - flow Chart for AFP investigation summarizes the surveillance data. There were a total of 76 cases of Acute Flaccid Paralysis (AFP) reported in 1992 which is way below the expected 240 considering the Pan-American Health Organization estimate of 1 AFP case per 100,000 population below 15 years old. 97% of these cases were investigated within 7 day of reporting; 42 within 48 hours which is the prescribed time. Three per cent (2 cases) that were reported were not investigated because they were beyond 15 years old and paralysis was due to trauma. On investigation, 26 out of the reported 76 cases, turned out to be non-AFp cases wtih 47% cases as AFP cases.

There was an average of 7 days delay (range: o to 124 days) from the onset of paralysis to the time of reporting. This is wide variability is due to possible reasons: first, the prevailing thinking that weakness of the extremities is not an emergency and not a serious complaint such that parents did not seek medical advise. Second, there were problelms of recall by the patients' guardians as regards the onset of the complaint.
Only 60% of the AFP cases were followed-up after 60 days. This is due to the fact that most of these patients have left the area and did not give any forwarding address.

5.2 Clinical Diagnosis of the Disease

Clinically diagnosed cases are those that conform with the definition of an Acute Flaccid Paralysis mentioned previously. The case investigator with the help of the attending physician conducts the physical examination of admitted cases. Cases not hospitalized are examined by the surveillance physician or nurse. General information, signs and symptoms and physical examination in particular the motor function are assessed. See attached investigation form. If the criteria are met the case is labeled as an AFP case and stool specimens are collected.

5.3 Laboratory diagnosis of the disease

Despite the minimal resources available, 60% of the 45 AFP cases had at least 2 stool specimens sent to the national reference laboratory (Research Institute for Tropical Medicine (RITM). There were some 33% who had no stool specimens at all. This was because of lack of personnel to collect stool samples and absence of the reverse cold chain set-up.

There were 30 cases (representing 66% of all AFP cases) with at least one stool sample collected within 7 days from the date of reporting. The other cases had no stool specimens because these were discovered very late from the time of onset thus nullifying the value of a stool diagnosis. Of the 30 stool samples collected, only 10 were collected within 2 weeks from the onset of paralysis.

From January to June 1993, all stool samples of the 39 reported AFP were submitted through the cooperation of the DHL company to RITM for virologic confirmation. Of all the cases, 12 (30%) were negative for poliovirus and the rest were for confirmation. Five (12%) have 60 day follow-up investigation.
As of December 31, 1993, 4 patients revealed wildpolivirus typeI.
Two were from Cebu city, one from NCR and the other is from Misamis Occidental

5.4 Vaccine Supply and Quality Control

Oral Polio Vaccine passing WHO standard is the only vaccine recommended for polio eradication in the Philippines. Since 1983, Rotary International has donated the Oral Polio Vaccine to the Philippines through UNICEF for routine immunization as well as for special immunization activities.

5.5 Vaccination program-routine and vaccination day

There are no changes in the routine immunization schedules.
Tables 2a and 2b illustrate the present EPI schedule.

Table 2a: Immunization Schedule for Infants and Children

AGE	ANTIGEN	MINIMUM INTERVAL
As soon after birth	BCG	none
6 weeks	DPT, OPV, Hep B	none
10 weeks	DPT, OPV, Hep B	4 weeks
14 weeks	DPT, OPV, Hep B	4 weeks
9 months	Measles	none
6-7 years	BCG	none

Table 2b. Immunization Schedule for Mothers

ANTIGEN	TIME ASSOCIATION WITH INFANT'S AGE	MINIMUM INTERVAL
Tetanus Toxoid 1	anytime during pregnancy	-
Tetanus Toxoid 2	1 month after TT1	one month
Tetanus Toxoid 3	6 months after TT2	six months
Tetanus Toxoid 4	next pregnancy	one year
Tetanus Toxoid 5	next pregnancy	one year

Supplemental Immunization Activities

Two National Immunization Days were conducted last April 21 and May 19, 1993 and will continue until 1995. On these days, all children below 5 years old are given Oral Polio Vaccine regardless of immunization status, and regardless of the date of the last polio dose. Aside from this, in selected health facilities measles and tetanus toxoid and vitamin A supplementation (only during May 19 NID) are given for specific target age groups to maximize the benefits of these special days.

On these days 9 million children below 5 years old were given OPV simultaneously nationwide at all the vaccination posts. At the same time about 2 million women aged 15-44 years old were given tetanus toxoid. to achieve this herculean task, there were at least 64,000 vaccination posts manned by 400,000 health workers and volunteers.

Outbreak Response Immunizations (ORIs)

ORIs were conducted in response to the AFP cases reported in 1992. These were conducted twice, at an interval of one month in the areas where the AFP case came from. There were variations in timing, geographical coverage, and target population.

The earliest ORI was done 7 days after the case developed paralysis while the latest was 2 and 1/2 months later. The average delay was one month from the onset of paralysis. The main reason for the death was that parents do not consult immediately during the acute phase of the disease.

Geographical coverage ranged from 4 zones in a barangay to 80 barangays. the variation stemmed from the absence of definite guidelines on how to delineate the areas for ORIs.

Coverage of targeted children varied from 86 to 173,000 children. this is closely related to the geographical boundaries selected. The coverage ranged from 30% to 95% in the first round (average:60%) and from 25% to 99% (average:74%) in the second round.

Target year of eradication

According to the National Plan of Action, the target year of polio eradication is 1995.

6. Estimate of Vaccine Requirement during 1992-1995

(see Annex A)

Problems:

1. Not enough AFP cases are being reported and the quality of surveillance is not yet sufficient to document final eradication of poliomyelitis.

2. In many cases, the interval between onset and stool collection is unacceptably wrong in many cases such that the presence or absence of residual paralysis two months after onset, to be determined at a routine follow-up examination is a main criterion for confirmation as polio.

3. Final classification was blocked by long delays in laboratory work-up of specimens. During the fourth quarter of 1992 and during 1993, there was an increasing backlog in working up of AFP stool specimens.

4. Other private hospitals which are likely to see Acute Flaccid Paralysis are not aware of immediate and zero reporting.

5. Some clinicians do not readily accept that it is necessary to report any child with Acute Flaccid Paralysis - i.e. the need to use the AFP standard case definition for reporting. Even in government and private health sector, they are hard to motivate on the need of AFP surveillance.

6. There are still gaps in training and information. Many health workers still don't know about the surveillance effort or are not familiar enough with its procedures.

7. Devolution has influenced polio eradication such that there are difficulties in training of health workers from the provincial up the municipal level. They still have to get permission from their local officials in order for them to attend such training. Therefore, advocacy meeting is very important to local executives.

8. Large network of zero-reporing units in the Philippines are not performing as expected.

9. There are still long delays in reporting and investigating cases.
One of the reasons why there is delay in reporting is that mother consult the health center rather late. A number of AFP cases are picked up late because they were not recognized as AFP at the lower levels.

10. Only few cases are being properly followed-up, although follow-up examination is so essential for final classification..

11. Outbreak response immunization results are not submitted to the Central Office (MCHS) such that MCHS are not aware that ORI has been done in response to an Acute Flaccid Paralysis case.

12. Orientation to the community is not yet being done so that mothers or even lay persons should understand the importance of reporting any paralysis and seeking hospital care the soonest possible time.

ANNEX A

6. Estimate of Vaccine Requirement during 1992 - 1995, in doses

Total Diphtheria, Pertussis, Tetanus, Measles, BCG and Tetanus Toxoid, Hepatitis B Vaccines, 1992 - 1995

VACCINE	1992	1993	1994	1995	TOTAL
DPT	11 924 751	12 347 145	12 692 835	13 047 919	50 012 650
MV	4 760 380	14 543 836	14 951 028	15 369 285	49 624 529
BCG	9 116 128	10 276 965	10 564 695	10 860 244	40 818 032
OPV	11 924 751	38 394 610	39 469 565	40 573 732	130 362 658
TT	9 274 807	29 707 083	30 538 809	31 393 136	100 913 835
HBV	3 348 000	4 436 100	5 472 360	6 563 025	19 819 485

TAG 4 FORM 3B

MONITORING AFP SURVEILLANCE
SUMMARY COUNTRY REPORT OF AFP SURVEILLANCE 1992

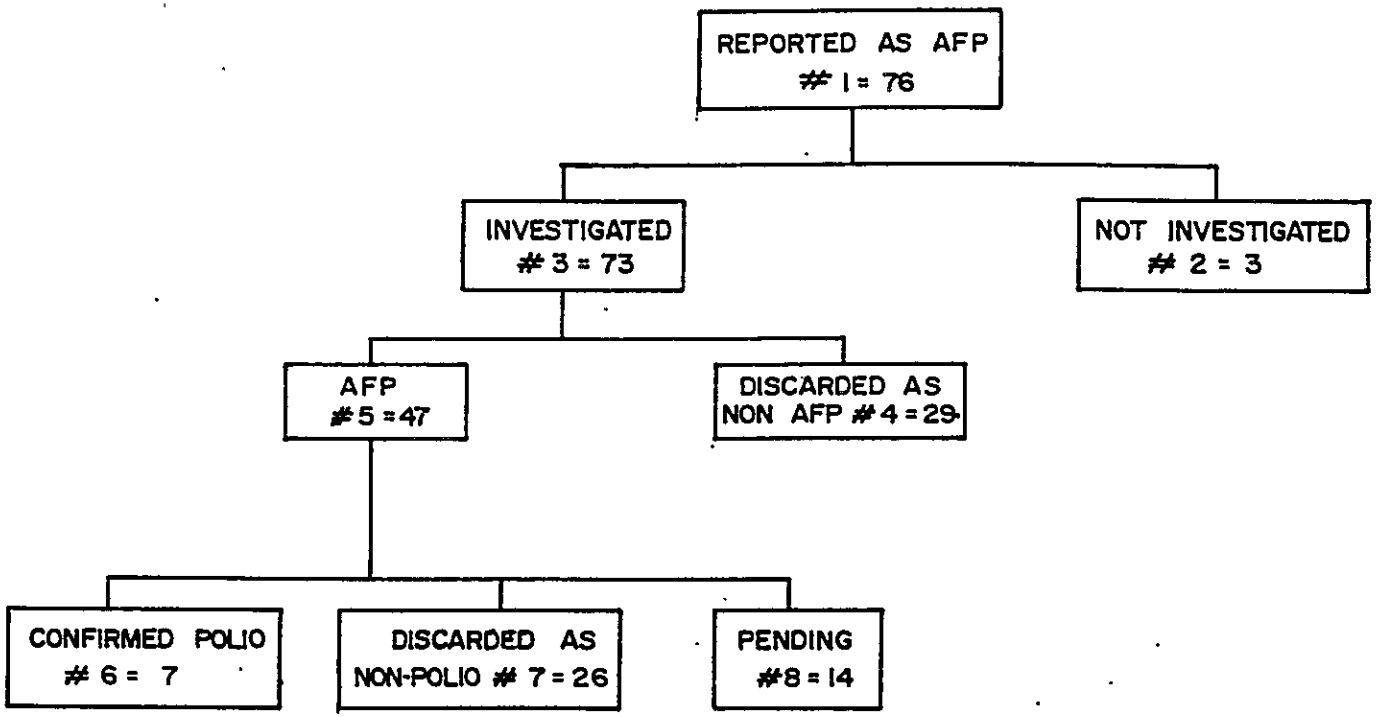
1. NUMBER OF REPORTED AS AFP CASES IN 1992 (#1 = #2 + #3)	76	(#1)	
REPORTED WITHIN 14 DAYS OF ONSET	25		33% (%of #1)
REPORTED WITHIN 7 DAYS OF ONSET	21		28% (of #1)
REPORTED AS AFP CASES, NOT INVESTIGATED	3	(#2)	4% (of #1)
REPORTED AS AFP CASES, INVESTIGATED (#3 = #4 + #5)	73	(#3)	96% (of #1)
REPORTED AS AFP CASES INVESTIGATED WITHIN 48 HOURS OF REPORT	32		42% (of #1)
REPORTED AS AFP CASES INVESTIGATED WITHIN 7 DAYS OF REPORT	73		96% (of #1)
2. NUMBER DISCARDED AS NON-AFP	29	(#4)	38% (of #1)
3. NUMBER OF AFP CASES IN 1992 (#5 = #6 + #7 + #8)	47	(#5)	62% (of #1)
4. NUMBER OF AFP CASES WITH			
- 0 stool specimen taken	4		9% (of #5)
- 1 stool specimen taken	9		19% (of #5)
- > or = 2 stool specimen taken	34		72% (of #5)
- > or = 1 stool specimen taken within 2 weeks of onset	24		51% (of #5)
5. NUMBER OF AFP CASES WITH FOLLOW-UP VISIT AFTER 60 DAYS	25		53% (of #5)
6. NUMBER OF CONFIRMED POLIO CASES IN 1992	7	(#6)	15% (of #5)
Confirmed by: Wild Virus Isolated	2		29% (of #6)
Residual Paralysis	4		57% (of #6)
Lost to follow-up	1		14% (of #6)
7. NUMBER OF AFP CASES DISCARDED AS NON-POLIO AFP IN 1992	26	(#7)	55% (of #5)
8. NUMBEROF AFP CASES WITH FINAL CLASSIFICATION PENDING AS OF May 31, 1993	14	(#8)	30% (of #5)
9. TOTAL NUMBER OF REGIONS	15	(#9)	
-Regions with confrimed polio cases in 1992	5		33% (of #9)
10. TOTAL NUMBER OF PROVINCES/CITIES	147	(#10)	
-Provinces/Cities with confirmed polio cases in 1992	7		5% (of #10)

TAG4 FORM3A PHILIPPINES

3A MONITORING INDICATORS: REPORTING COMPLETENESS & TIMELINESS
REPORTING SITES FOR POLIOMYELITIS SURVEILLANCE IN 1992

MONTH	NO. OF SITES EXPECTED TO REPORT	REPORTS RECEIVED		REPORTS ON TIME	
		NO.	% COMPLETENESS	NO.	% TIMELINESS
JANUARY	13	13	100%	9	70%
FEBRUARY	21	18	86%	13	62%
MARCH	58	50	86%	40	69%
APRIL	69	61	88%	61	88%
MAY	74	71	96%	71	96%
JUNE	77	57	74%	57	74%
JULY	111	106	95%	106	95%
AUGUST	114	102	90%	102	90%
SEPTEMBER	145	118	81%	109	75%
OCTOBER	156	152	97%	152	97%
NOVEMBER	193	169	87%	169	87%
DECEMBER	229	206	90%	206	90%

FLOW CHART FOR AFP INVESTIGATION



Vaccination Coverage with OPV3
Philippines, 1980-1992

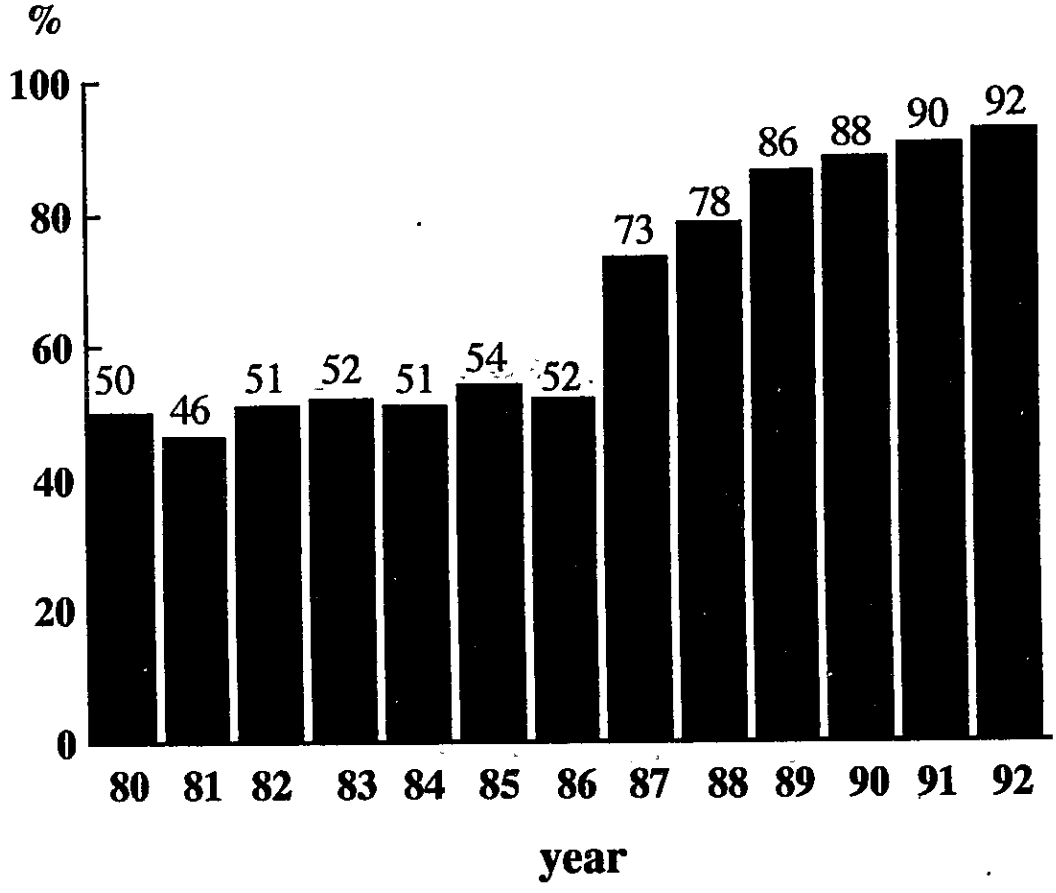


Table 1

Polio Cases, 1980-1992

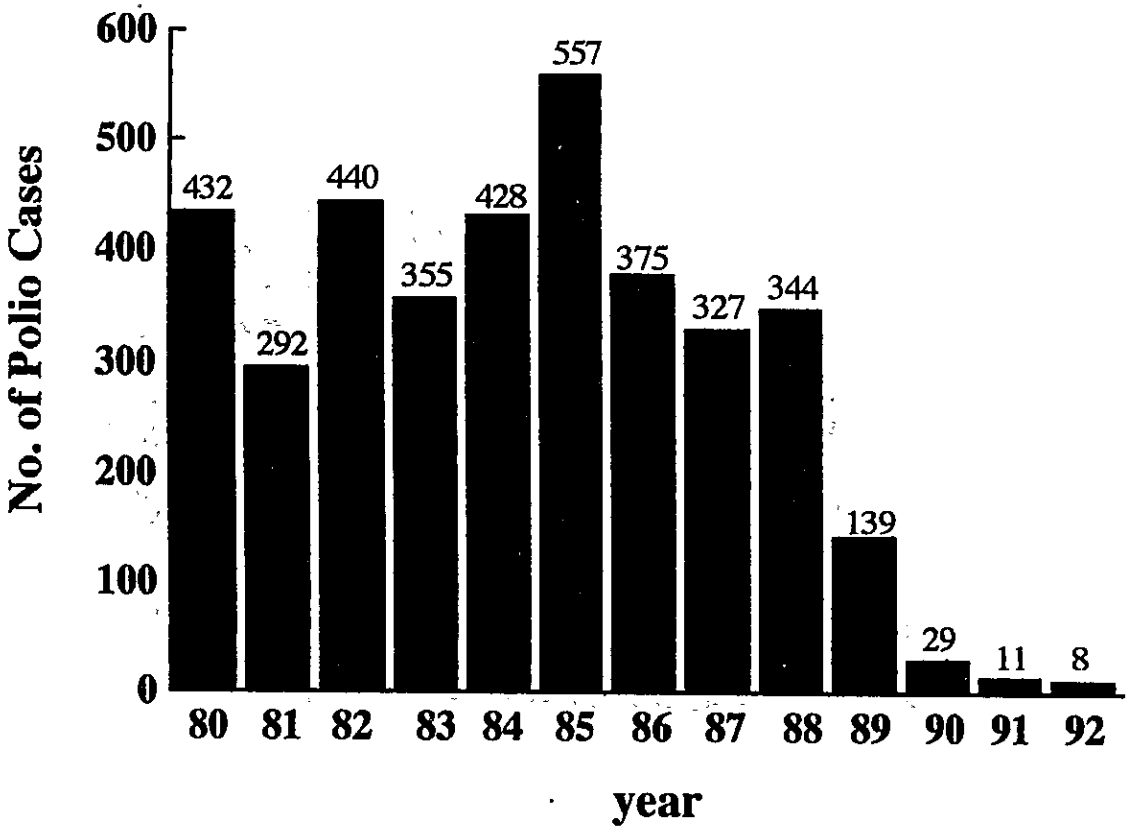


Table 2

ROUTINE REPORTING

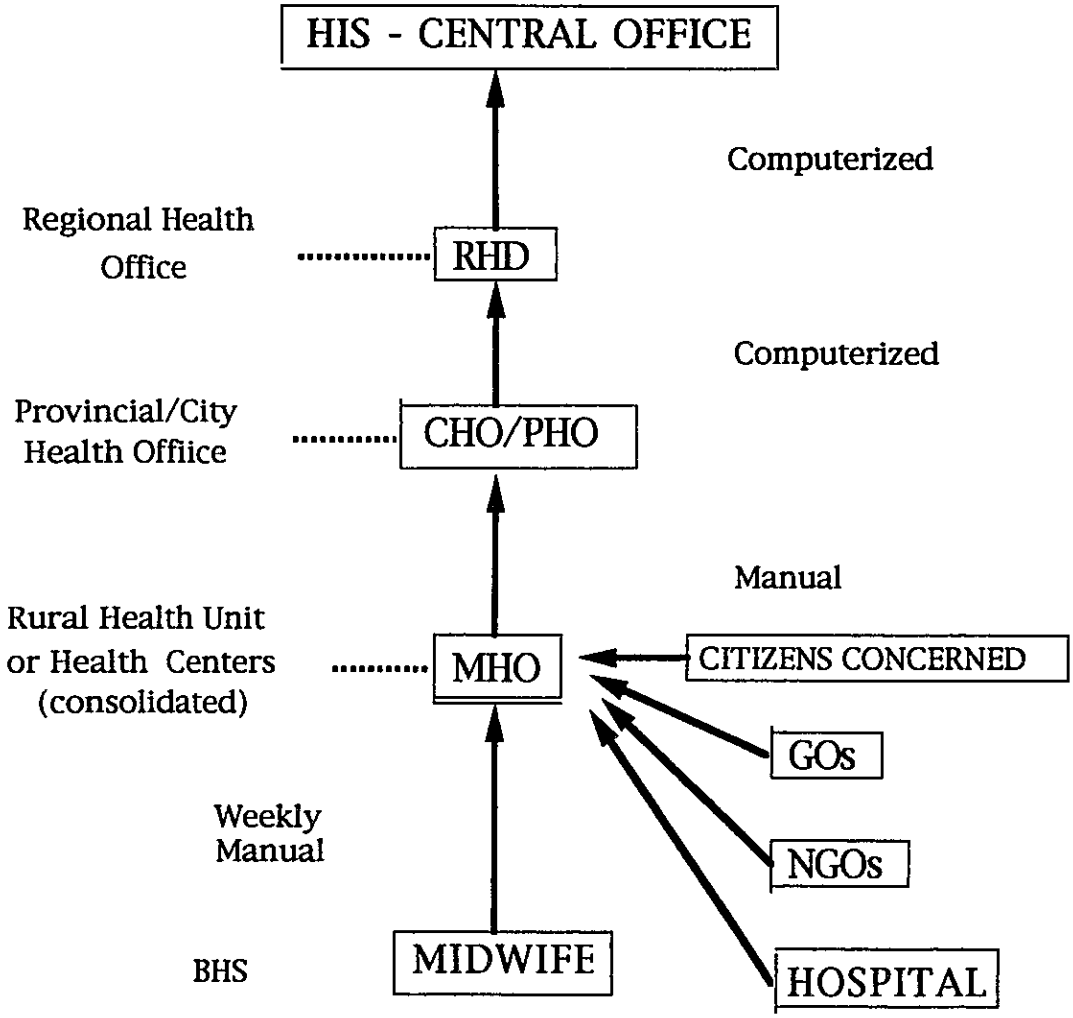
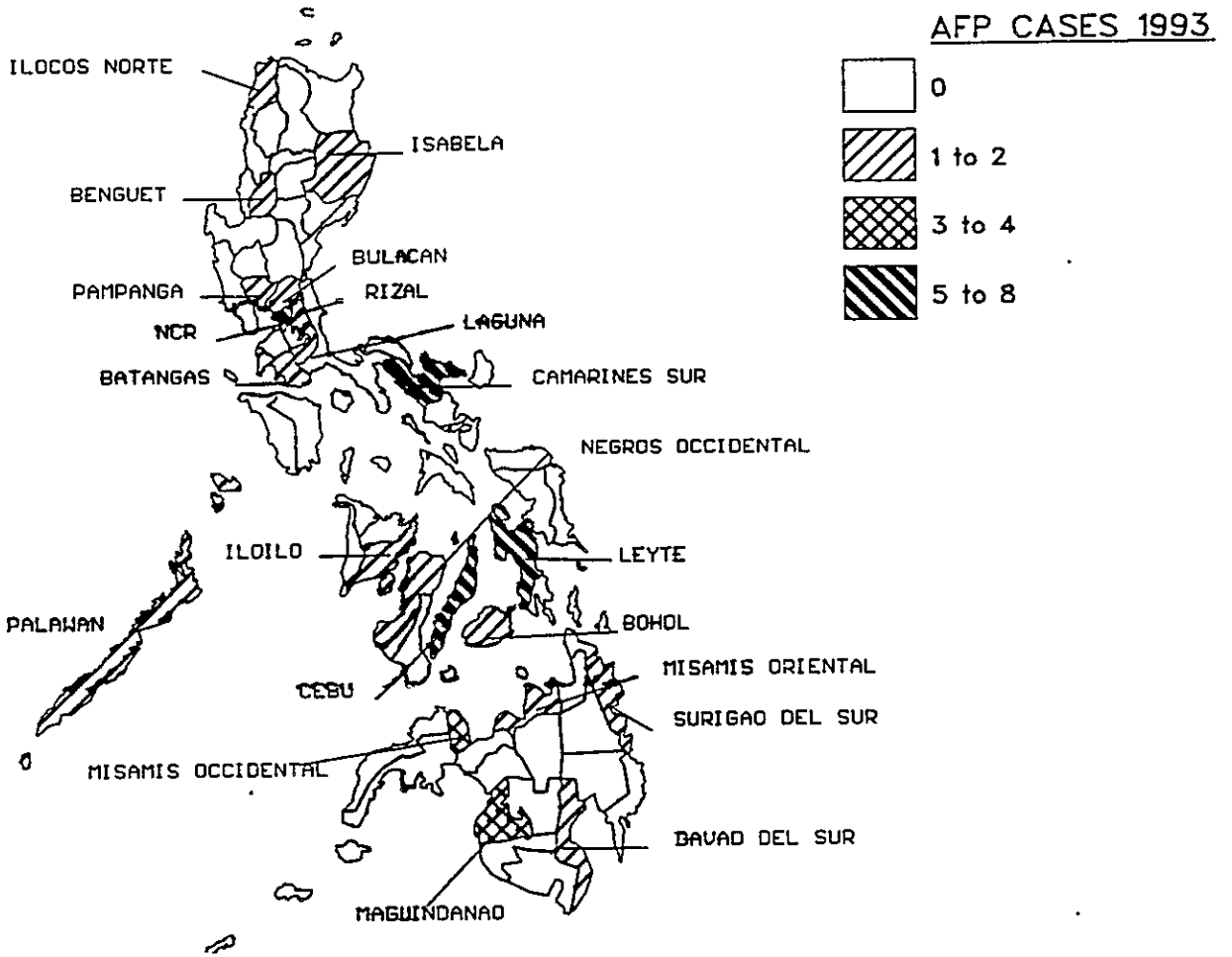


FIG. 2

REPORTED NON–POLIO AFP CASES BY PROVINCE

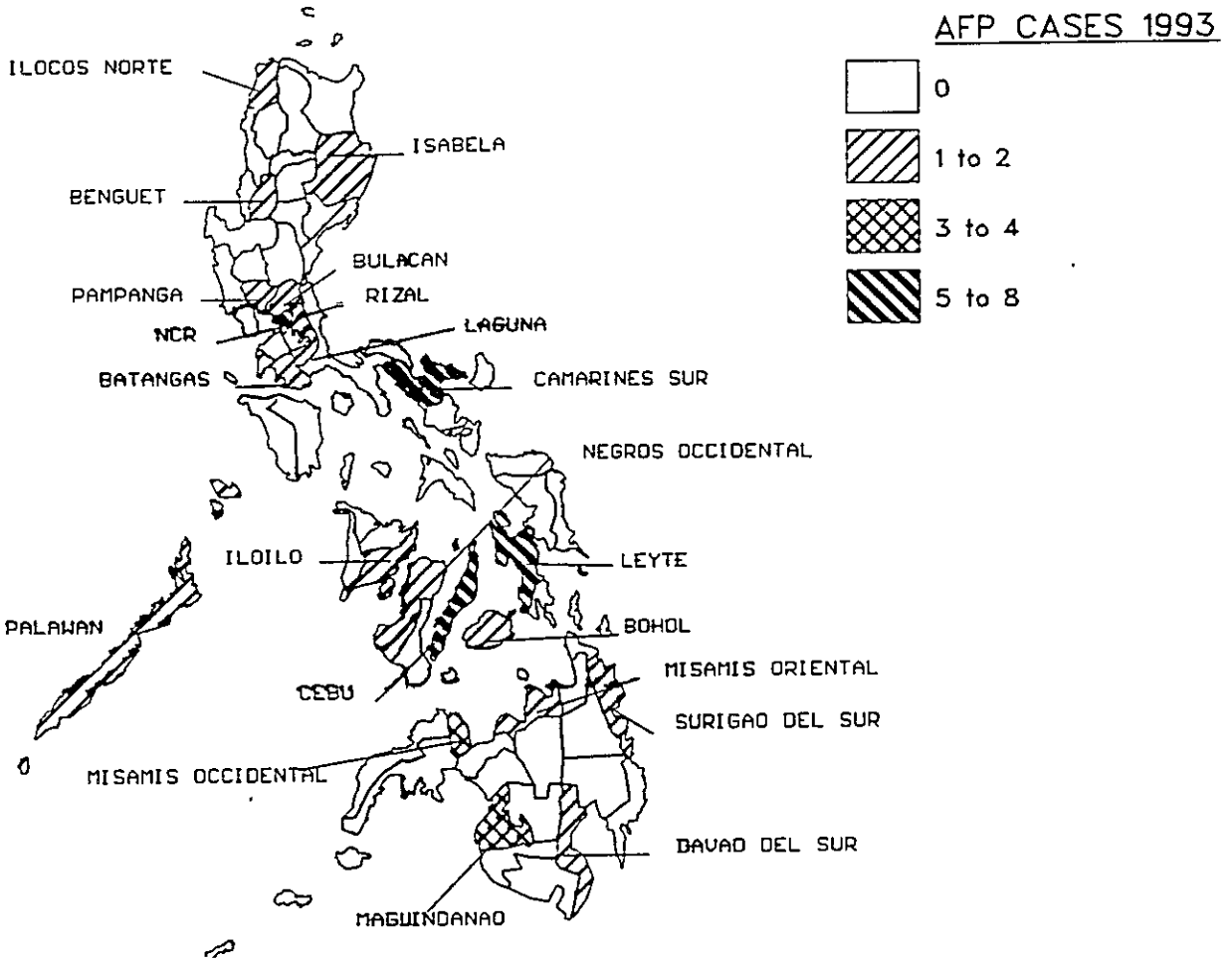
PHILIPPINES, 1993



IMMUNIZATION STATUS BY AGE OF AFP CASES Philippines, 1992-1993									
No. of OPV	1992				1993				
Doses	<1 year	1-4 yrs	5-9 yrs	10-15 yrs	<1 year	1-4 yrs	5-9 yrs	10-15 yrs	Total
Zero	0	3	5	13	1	7	6	12	47
One	1	2	1	1	1	4	0	1	11
Two	0	2	1	1	2	3	2	0	11
3 or More	1	10	5	2	1	8	0	1	28
Unknown	0	2	1	3	1	3	0	2	12
Total	2	19	13	20	6	25	8	16	109

REPORTED NON–POLIO AFP CASES BY PROVINCE

PHILIPPINES, 1993



IMMUNIZATION STATUS BY AGE OF AFP CASES Philippines, 1992-1993									
No. of OPV	1992				1993				
Doses	<1 year	1-4 yrs	5-9 yrs	10-15 yrs	<1 year	1-4 yrs	5-9 yrs	10-15 yrs	Total
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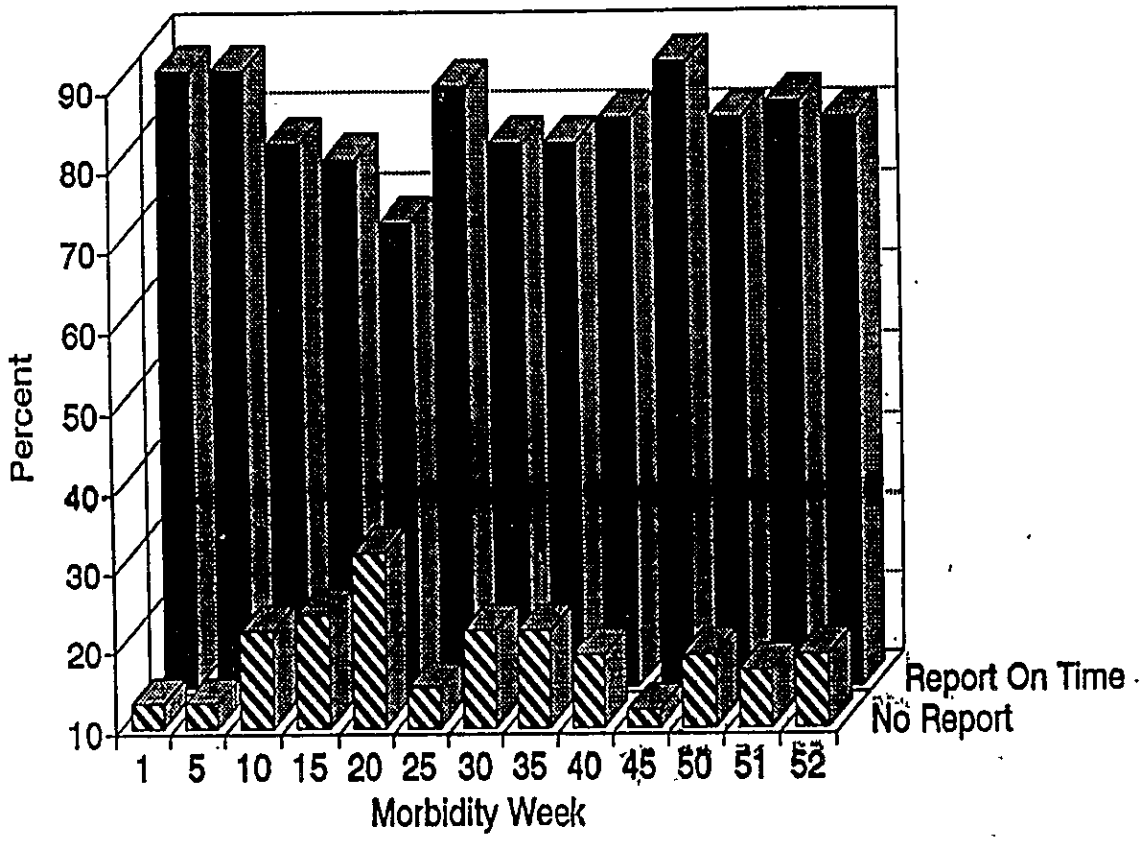
One	1	2	1	1	1	4	0	1	11
Two	0	2	1	1	2	3	2	0	11
3 or More	1	10	5	2	1	8	0	1	28
Unknown	0	2	1	3	1	3	0	2	12
Total	2	19	13	20	6	25	8	16	109

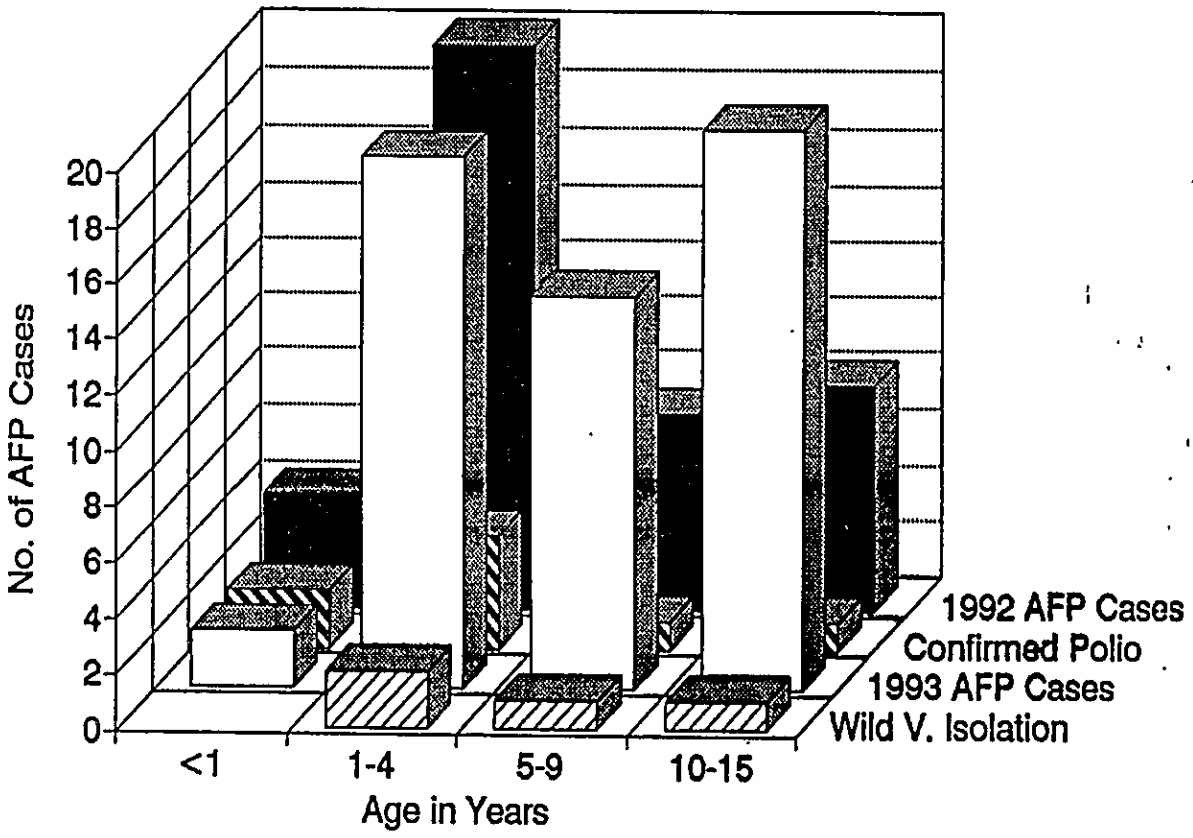
Completeness and Timeliness of AFP

Surveillance Report, Philippines, 1993

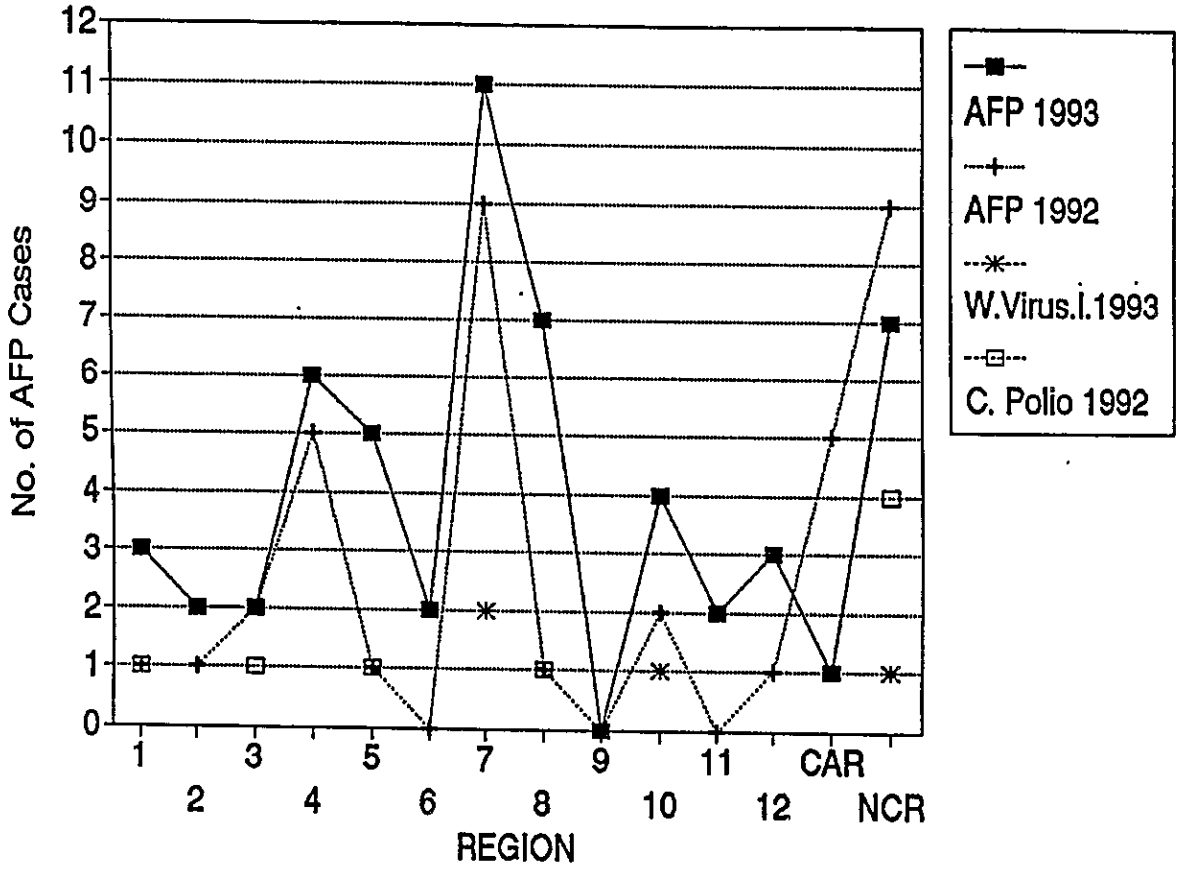


Age Distribution of AFP Cases

Philippines, 1992 and 1993

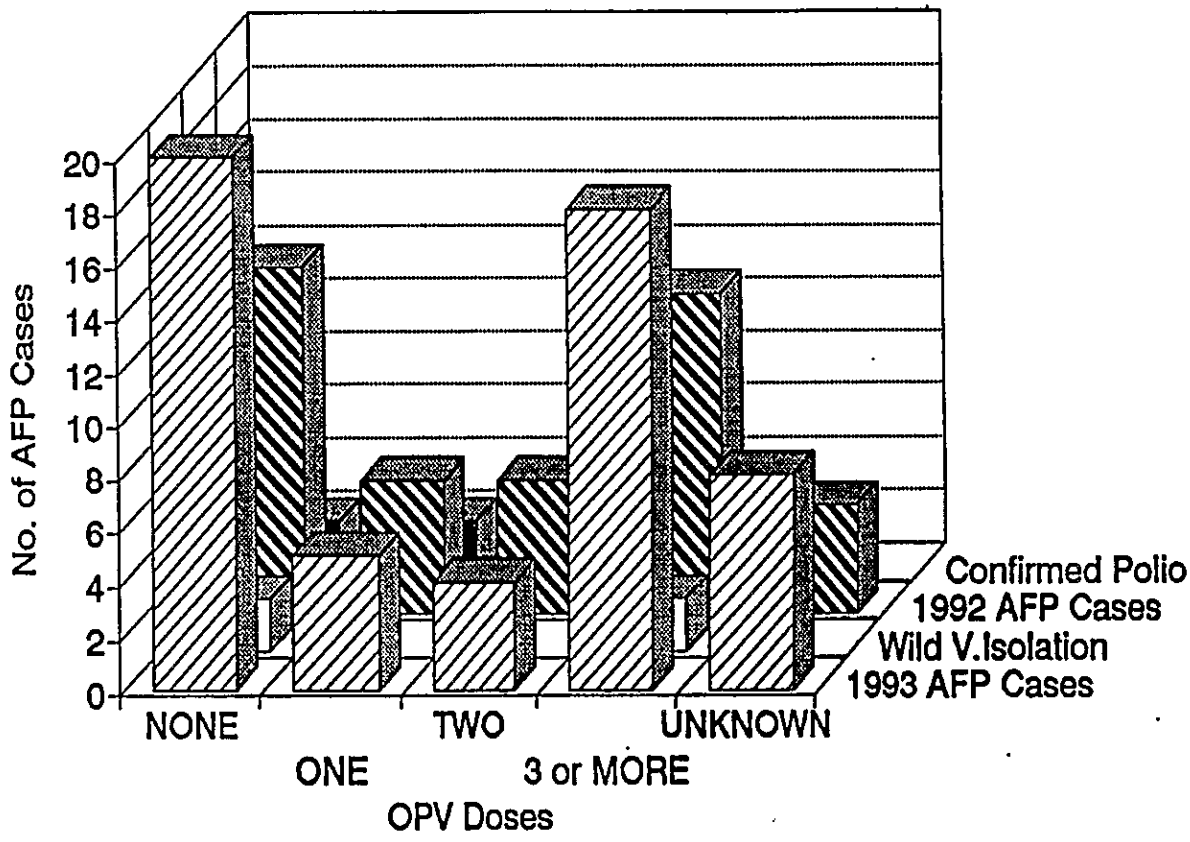


Reported Non-Polio/ AFP Cases
Philippines, 1992 - 1993

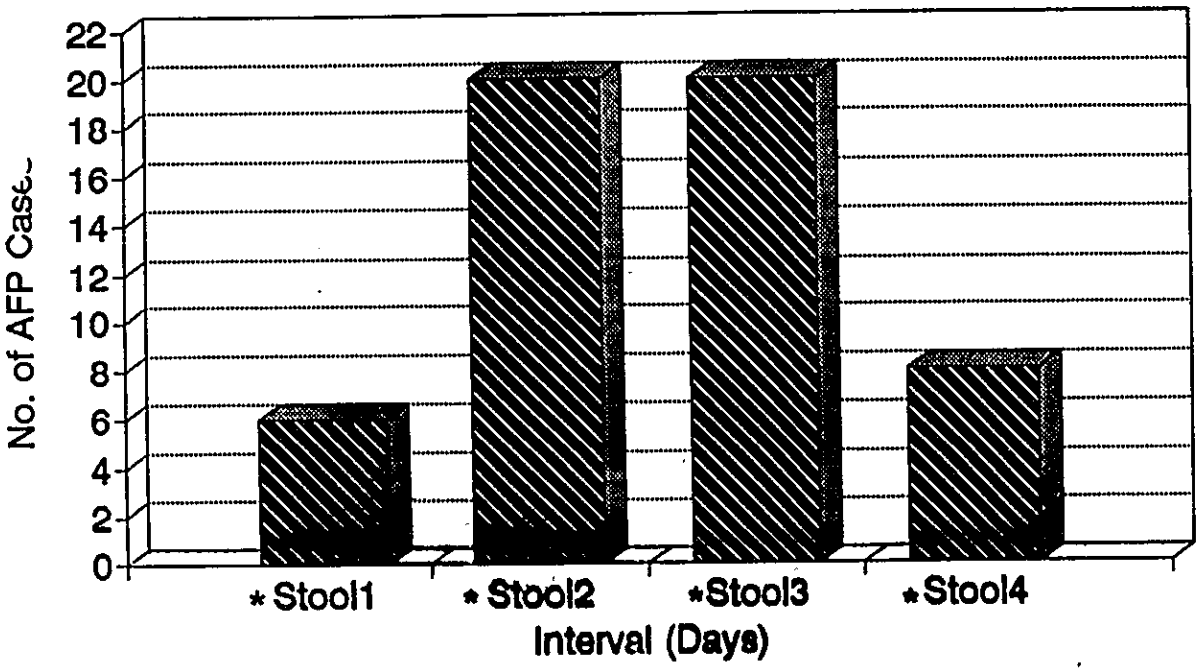


Immunization Status of AFP/Confirmed

Polio Cases, Philippines, 1992/ 1993



Completeness and Timeliness of Stool Specimen Collection, AFP, Phil. 1993



*Stool1 - No Specimen
2 - 1+ Specimen within 2 wks.
3 - 1+ Specimen after 2 wks.
4 Unknown

Case Investigation Form for Acute Flaccid Paralysis (AFP)

DEPARTMENT OF HEALTH

Republic of the Philippines

Pilot Case Investigation Form for Acute Flaccid Paralysis (AFP), Revised September 1992

Please write out or circle (i.e., numbers or yes/no questions)!

1 CASE ID / PLACE

Last N.: | 1st N.: | Sex: | DOB: __|__|__ | Age: | EPI-Id-No.:

Mother's N. | Father's N. | Region: | Province:

Permanent address / directions:

2 REFERRAL / REPORTING

Child initially seen at: | Date first seen: __|__|__

Date of report to FETP/DOH: __|__|__ | Person reporting:

Report from where? (Institution) | Attending physician: | Tel. No.:

Remarks:

3 HISTORY + PHYSICAL EXAMINATION

Onset of paralysis (date): __|__|__ | No. of days to maximum paralysis ____

Main history source: 1. Parents 2. Chart 3. Doctor/Nurse

At onset (paral.): Fever: Y / N / Unk | Diarrhoea: Y / N / Unk | Cough/Cold: Y / N / Unk | Other ____

PAST HISTORY (last 30 days):		ON EXAMINATION (date: __|__|__):		SITE OF PARALYSIS:
Injections ?	Yes | No | Unkn.	FLACCID Paralysis?	Yes | No	(grade mot. strength: 0=abs. to 5=full)
Recent trauma or animal bite?	Yes | No | Unkn.	Meningeal signs (stiff neck):	Yes | No	left arm ___ right arm ___
Any existing neurologic disease?	Yes | No | Unkn.	Paralysis symmetric/asymm.?	Symm. | Asymm.	left leg ___ right leg ___
Any recent travel? (Specify below)	Yes | No | Unkn.	Deep tendon reflexes:	Norm. | Red. | Abs.	respir.: yes/no | face: yes/no
Similar case among contacts?	Yes | No | Unkn.	Any sensory loss?	Yes | No	others (specify):

Remarks:

4 PRELIMINARY DIAGNOSIS: AFP: Yes / No

IF YES: 1. Poliomyelitis | 2. Guillain-Barre | 3. Transv. Myelitis | 4. Traum. Neuritis | 5. Other: ____

IF NO: 1. Injury | 2. Spastic paralysis | 3. Joint or bone infection | 4. Other: ____

Name of investigator: | Date: ____|____|____ | Signature:

Address of investigator:

Remarks:

5 IMMUNIZATION HISTORY / OPV

Growth monitoring card available? Yes / No | Total No. of OPV doses received: ____

Main reason for not fully immunized: 1. not informed 2. illness 3. refusal 4. unknown 5. other: ____

Dates: OPV1 __|__|__ | OPV2 __|__|__ | OPV3 __|__|__ | OPV4 __|__|__ | OPV5 __|__|__ | OPV6 __|__|__ | OPV7 __|__|__ | Last OPV __|__|__

Recent OPV to contact? Y/N | Date __|__|__ | Date 1.outbreak response immuniz. __|__|__ | Number immunized: ____ | % of eligible: ___

Remarks:

6 LAB INFO

	Date collected:	Date sent:	Date rec. RITM:	Pos. CPE (RITM):	RITM: PV-Type	Date sent to Ref.:	Ref.-Lab. Result:
Stool 1: Yes / No	__|__|__	__|__|__	__|__|__	Yes / No	1 | 2 | 3	__|__|__	wild/vacc. | T: 1|2|3
Stool 2: Yes / No	__|__|__	__|__|__	__|__|__	Yes / No	1 | 2 | 3	__|__|__	wild/vacc. | T: 1|2|3

Remarks:

7 FOLLOW-UP Date: __|__|__

Case examined >= 60 days after onset paralysis? Yes / No | Date of examination: __|__|__

If not seen, why not? ____ | Paralysis/Weakness still present? Yes / No

Site of residual paralysis: Right leg: Y / N | Left leg: Y / N | Right arm: Y / N | Left arm: Y / N | Face: Y / N | Other:

Ability to walk: 1. Cannot walk 2. Walks with assistance 3. Limps 4. Walks normally | Exam. physician:

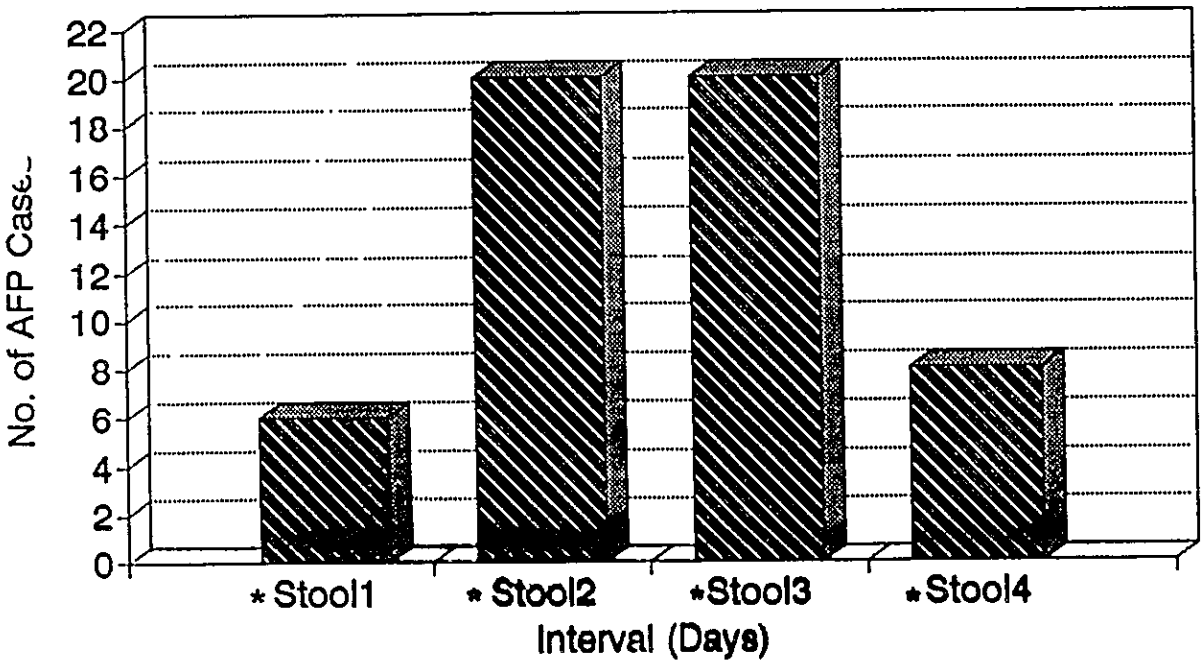
Remarks:

8 FINAL DIAGNOSIS: DATE: __|__|__ (CONFIRMED POLIO or discarded as polio; Expert Review Committee)

1. CONFIRMED	--> Virus isolation: Yes / No | Residual paralysis: Yes / No | Death: Yes / No | Lost to follow-up: Yes / No
2. DISCARDED	--> 1. Guillain-Barre | 2. Transverse Myelitis | 3. Traumatic Neuritis | 4. Unknown | 5. Other ____

Remarks:

Completeness and Timeliness of Stool Specimen Collection, AFP, Phil. 1993



*Stool1 - No Specimen
2 - 1+ Specimen within 2 wks.
3 - 1+ Specimen after 2 wks.
4 Unknown

Case Investigation Form for Acute Flaccid Paralysis (AFP)

DEPARTMENT OF HEALTH

Republic of the Philippines

Pilot Case Investigation Form for Acute Flaccid Paralysis (AFP), Revised September 1992

Please write out or circle (i.e., numbers or yes/no questions)!

1 CASE I.D. / PLACE I.D.

Last N.:	1st N:	Sex:	DOB: __|__|__	Age:	EPI-Id-No.:
Mother's N	Father's N.	Region:	Province:		
Permanent address / directions:					

2 REFERRAL / REPORTING

Child initially seen at:		Date first seen: ___|___|___
Date of report to FETP/DOH: ___|___|___		Person reporting:
Report from where? (Institution)	Attending physician:	Tel. No.:
Remarks:		

3 HISTORY / PHYSICAL EXAMINATION

Onset of paralysis (date): ___\|___\|___ — No. of days to maximum paralysis ____

Main history source: 1. Parents 2. Chart 3. Doctor/Nurse

At onset (paral.): Fever: Y / N / Unk | Diarrhoea: Y / N / Unk | Cough/Cold: Y / N / Unk | Other _____

PAST HISTORY (last 30 days):		ON EXAMINATION (date: __|__|__):		SITE OF PARALYSIS:
Injections ?	Yes | No | Unkn.	FLACCID Paralysis?	Yes | No	(grade mot. strength: 0 = abs. to 5 = full)
Recent trauma or animal bite?	Yes | No | Unkn.	Meningeal signs (stiff neck):	Yes | No	left arm ___ right arm ___
Any existing neurologic disease?	Yes | No | Unkn.	Paralysis symmetric/asymm.?	Symm. | Asymm.	left leg ___ right leg ___
Any recent travel? (Specify below)	Yes | No | Unkn.	Deep tendon reflexes:	Norm. | Red. | Abs.	respir.: yes/no | face: yes/no
Similar case among contacts?	Yes | No | Unkn.	Any sensory loss?	Yes | No	others (specify):

Remarks:

4 PRELIMINARY DIAGNOSIS: AFP: Yes / No

IF YES: 1. Poliomyelitis | 2. Guillain-Barre | 3. Transv. Myelitis | 4. Traum. Neuritis | 5. Other: _____

IF NO: 1. Injury | 2. Spastic paralysis | 3. Joint or bone infection | 4. Other: _____

Name of investigator: — Date: ___\|___\|___ — Signature:

Address of investigator:

Remarks:

5 IMMUNIZATION HISTORY / ORI

Growth monitoring card available? Yes / No — Total No. of OPV doses received: ____

Main reason for not fully immunized: 1. not informed 2. illness 3. refusal 4. unknown 5. other: _____

Dates: OPV1	OPV2	OPV3	OPV4	OPV5	OPV6	SPV?	Last OPV
__|__|__	__|__|__	__|__|__	__|__|__	__|__|__	__|__|__	__|__|__	__|__|__

Recent OPV to contact? Y/N | Date __\|__\|__ — Date 1.outbreak response immuniz. ___\|___\|___ — Number immunized: ____ — % of eligible: ___

Remarks:

6 LAB. INFO

	Date collected:	Date sent:	Date rec. RITM:	Pos. CPE (RITM):	RITM: PV-Type	Date sent to Ref.:	Ref.-Lab. Result:
Stool 1: Yes / No	___|___|___	___|___|___	___|___|___	Yes / No	1 | 2 | 3	___|___|___	wild/vacc. | T: 1|2|3
Stool 2: Yes / No	___|___|___	___|___|___	___|___|___	Yes / No	1 | 2 | 3	___|___|___	wild/vacc. | T: 1|2|3

Remarks:

7 FOLLOW-UP Date: ___\|___\|___

Case examined >= 60 days after onset paralysis? Yes / No — Date of examination: ___\|___\|___

If not seen, why not? _____ — Paralysis/Weakness still present? Yes / No

Site of residual paralysis: Right leg: Y / N | Left leg: Y / N | Right arm: Y / N | Left arm: Y / N | Face: Y / N | Other:

Ability to walk: 1. Cannot walk 2. Walks with assistance 3. Limps 4. Walks normally — Exam. physician:

Remarks:

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1. CONFIRMED —> Virus isolation: Yes / No | Residual paralysis: Yes / No | Death: Yes / No | Lost to follow-up: Yes / No

2. DISCARDED —> 1. Guillain-Barre | 2. Transverse Myelitis | 3. Traumatic Neuritis | 4. Unknown | 5. Other _____

Remarks:

FUTURE PROGRAM FOR POLIO ERADICATION (1994- 1995)

Name of participant: Agnes B. Benegas

Participant's position: Medical Specialist II
EPI - Polio Eradication Unit

SUMMARY

With imrpoved immunization coverage it has brought dramatic reduction in polio cases. In 1993, there were 8 confirmed polio cases all over the country. Without an immunization programme, five in every 1000 newborns every year will acquire polio. For 1992, 92 & or 1.8 million infants were immunized against polio. During the two National immunization Days (NIDs) coverage survey showed an accomplishment of 95% for either April and May NID.

Unless polio is wiped out, however, it can recur in epidemics. By immunizing 90% of all infants against polio, up to 8000 polio cases will be averted each year. Eradicating polio will not only spare Filipino children from lifetime disability. It will also increase productivity and bring savings from reduced treatment and long term disability. It is worth the effort and our legacy to the 21st century is a polio-free world.

OBJECTIVES and TARGETS:

OBJECTIVE: As part of the Western Pacific Region, the Philippines is committed to eradicate poliomyelitis by 1995.

TARGETS:

Beginning 1994:

Training on surveillance will continue and municipal health officers who were not trained in 1993 should be trained. Since most of the cases of AFP are not confined in the hospital, community-based surveillance should be implemented. Posters on surveillance will be given to the community so that they can report any Acute Flaccid Paralysis (AFP) . Active search for AFP cases in the hospitals will be done. Since some government hospitals have not participated in the AFP reporting units as well as big private hospitals, letters signed by the Sec. of Health should be sent to the directors and orientation on the Polio Eradication Project should be done. Incentives will be given by Rotary International to those who will report AFP and investigate them.

Beginning 1995:

Community-based surveillance will continue and all reporting units will also continue to report AFP.

PRINCIPAL STRATEGIES FOR THE ERADICATION INITIATIVE:

a. Maintaining at least 90% coverage during routine immunization. Routine immunization should not be forgotten eventhough National immunization Days are being conducted. NIDs are just supplementary immunizatiuon activities to the routine immunization. It is as equally as important as NIDs.

b. Carrying out NIDs twice a year from 1993-1995 to all children below 5 years old. Last April 21 and May 19, 1993, two successful National Immunization Days (NIDs) were conducted. This activity will continue up to 1995. For 1994, NIDs are scheduled on February 16 and March 16. For 1995, it will be conducted on Febraury 15 and March 15.

c. Expanding the immunization targets to include all children below 5 years old especially during NIDs to give additional doses to those who have received initial doses of OPV during routine immunization and to reach those who have been missed.

d. Adopting supplemental immunization activities such as Outbreak Response Immunizations (ORIs) in areas where AFP case has been missed. After 1995, the possibility of doing only mop-up operations especially in areas which has still low OPV coverage and cases for the past three years will be done instead of NIDs.

e. Improving AFP Surveillance System:

Surveillance is as equally important as NIDs. Strengthening of the present surveillance system should be done in order to document final eradication of poliomyelitis. The standard case definition of poliomyelitis should have been disseminated to all government and private hospitals. The interval between onset and stool collection should be emphasized during the training such that diagnosis of Polio should be made on viral isolation and not only on the presence or absence of residual paralysis after 60 days. Other health workers who are not aware of the surveillance effort should be re-oriented. Private pediatricians should be oreinted on the importance of reporting Acute Flaccid Paralysis and motivate them to report such cases.

f. Orientation on the Community;

The community should be oriented on how to identify AFP cases and report them immediately. Mothers or even lay persons should participate in

the surveillance and the importance of seeking hospital care the soonest possible time should be emphasized such that early diagnosis is made.

g. Social Mobilization:

Social mobilization is very important in order for the project to succeed. The Two National Immunization Days (NIDs) showed that social mobilization really played a very important role to make it a success. It was a multisectoral effort from government and other non-governmental organizations, civic and religious groups, etc. With devolution in place, advocay is very important especially for the local officials to make them understand the importance of the project.

STRENGTHENING EPIDEMIOLOGICAL SURVEILLANCE AND LABORATORY SERVICES:

Since there was a long delay in laboratory work-up of specimens due to increasing backlog because of lack of personnel, hiring of additional personnel in RITM will be funded by Rotary International.

Timely case investigation and submission of report should be done. Outbreak Response Immunization(ORI) should also be submitted to the Central Office so that the Central Office is aware that such activity has been done. Weekly submission of zero reports even in the absence of the case should also be done. Regular feedback to the field units especially with regards to the result of stool specimens should also be done to ecourage their participation and sustain enthusiasm on the project. Quarterly monitoring of the Sentinel sites ans reporting units can be done on a quarterly basis. Improvement of communication facilities can also be done by coordinating with government communication bureau.

IMPROVEMENT OF OUTBREAK CONTROL ACTIVITIES:

A. Active search of AFP cases can be improved by:

- checking on admission's logbook in hospitals
- integrating the activity during ORI
- training midwives on the standard case definition and how to recognize the disease
- simplified poster on AFP surveillance
- intensify health education and early consultation to health facilities once a case has been detected.

B. Immunization activities can be improved thru:

- Adoption of the Vaccine Independence Initiative (VII)
- sustaining close coordination between other government

and non-government organizations especially during mass campaigns
- involving the local government during immunization activities and emphasizing th long term benefits of immunization
- mobillizing all sectors in provate organizations

C. Improve ORI and follow-up and recording
- 6o days follow-up should be done on all AFP cases
- preparing the community of the activity and informing them of the benefits of additional OPV.
- Master listing of children
- Monitoring and feedback

OPERATIONAL RESEARCH:

Operational research should be integrated as a routine element to the EPI-Polio Eradication Project. There should be sufficient funds for the researchers to condcut the research related to the program. Serological surveys on the prevalence of antibodies to poliovirus in children below 5 years old can be done to determine their immunity levels. Coverage surveys should continue to validate the routine reporting and National immunization Days (NIDs).

1. Introduction

With improved immunization coverage it has brought dramatic reduction in polio cases. In 1993, there were 8 confirmed polio cases all over the country. Without an immunization programme, five in every 1000 newborns every year will acquire polio. For 1992, 92% or 1.8 million infants were immunized against polio. During the two National Immunization Days (NIDs) coverage survey showed an accomplishment of 95% OPV coverage for either April and May NID.

Unless polio is wiped out, however, it can recur in epidemics. By immunizing 90% of all infants against polio, up to 8000 polio cases will be averted each year. Eradicating polio will not only spare Filipino children from lifetime disability. It will also increase productivity and bring savings from reduced treatment and long-term disability. It is worth the effort and our legacy to the 21st century is a **polio-free** world.

2. Demography, geography and climate.

The Philippines has a total land area of 300,000 sq. kms. Its 7,107 islands comprise one of the largest island groups in the world. About 60.5 million Filipinos comprise the total population, 55% of which occupy the largest island of Luzon. Filipinos comprise 111 cultural and linguistic groups of Malayo- Polynesian origin, with varying degrees of Chinese, Spanish and American influences. The dominant religion is Catholicism, though a significant number are Protestants and Moslems.

The Philippines is the world's third largest English- speaking country, after the Unites States and the United Kingdom. Pilipino is the national language; English is used for commercial and legal transactions. Literacy rate is as high as 88%.

The Philippines is a tropical country, with average year- round temperature of 32 C (80 F). March to June are hot and dry (36 C); rains and typhoons abound from July to October; November to February are pleasantly cool (around 23 C) and dry. In mountainous regions, temperatures dip to about 15 C.

2.2 Transportation

The common means of transportation is by land. Most roads are accessible to transportation. In Metro Manila, taxis, buses, jeepneys and a Light Rail Transit (LRT) system provide public transport. Air flights are also available in all the major cities and provinces.

2.3 Vital Statistics:

Based on the latest statistics report (1990):

- annual growth rate = 2.35/1000
- crude death rate = 5.1/1000
- Infant mortality rate = 24.3/1000

- Maternal death rate = 0.8/1000
- Neonatal death rate = 11.7/1000
- life expectancy = 65 years

2.4. Administration

The Philippines has a presidential form of government. It consist of three branches namely: the executive, judiciary and the legislative. The executive branch is composed of different government department one of which is the Department of Health. Each department is headed by different secretaries appointed by the commission on Appointment.

3. Overview of the Health Services

3.1. Health Organization and Administration
Fig.1. Department of Health Organizational Structure (Annex A)

3.2. Health Facilities

The Department of Health directly manages 24 specialty and Regional hospitals. There are 75 provincial hospitals which are directly under the governors, 276 district hospitals under the leadership of the mayor and 2216 rural health units.

3.3. Health Manpower

In the light of devolution, all provincial, district and municipal hospitals are directly under the local government officials. Provincial hospitals are directly under the governor, while the district/municipal hospitals are under the mayor. Only regional hospitals and some specialty hospitals at the National level have not been devolved to the local government.

3.4. Health Budget

The total health budget from 1993 was 996 million. The budgetary increase of 1.1 billion in 1993, which theoretically carries into the 1994 budget has given the DOH enough leeway to push for greater collaborative efforts in preventive and promotive health activities keeping with primary health care principles. However, in 1994, the ceiling has been decreased to 6.7 billion.

3.5. Medical Care Reimbursement System (Medical Insurance)

The Medicare is a form of medical insurance wherein it collects monthly contribution to both government and private employees through salary deduction. Hospitalized employees and their immediate families avail of the benefits of Medicare. All major illnesses that require hospitalization have been included in the medical insurance plan. The health insurance pay small percentages of bed, medicine, doctor's fee and laboratory cost.

4. Situation Analysis

4.1. Historical Overview

The Expanded Program on Immunization was officially launched in the Philippines on July 12, 1976. Antigens were introduced gradually both in number and geographical coverage, hence the name expanded.

The targets for immunization are children aged 0-1 year and pregnant women.

Over the years, the EPI infrastructure was built which includes a system of distribution of vaccines through cold storage facilities; a system of recording and reporting a system of monitoring and supervision and evaluation of performance including surveys and investigation of outbreaks.

Table 1 lists the important milestones in EPI that are pertinent to the Polio Eradication Project.

Table 1. Important Milestones

July 12, 1976 -	official launching of EPI in the Philippines
1977 -	Massive polio outbreaks especially in Mindanao Cases = 1,454 Deaths = 357
1979 -	OPV3 started in selected areas reporting outbreaks
1979 -	Last major polio outbreaks reported (Cebu and Manila) Cases = 1,054 Deaths = 353
1980 -	OPV3 given nationwide
1984 -	Lameness survey done: Lameness was found in 4 of every 1,000 children younger than 15 years old
1986 -	Proclamation No. 6 committing Philippines to UCI
1987 -	EPI reporting changed to provincial/city level reporting with computerization of data and coverage survey confirmation
May 13, 1988 -	41st World Health Assembly adopts resolution to eradicate poliovirus by year 2000.
Sept.16, 1989 -	WHO WPR resolution adopting Polio Eradication Initiative (PEI); Philippines is a signatory
1989 -	Philippine achieved UCI goal
1990 -	Philippine EPI adopts Wednesday Immunization Day
1990 -	OPV3 coverage of infants is 84%; Polio incidence down to 85 cases (in 26 provinces and cities.)

March 18,1991 - DOH Execom approved Philippine Plan of Action on Polio Eradication

4.2. Current Management of Immunization status

At the NATIONAL level, the **National Immunization Committee** is responsible for the overall planning coordination and evaluation of all aspects of the program. This is an advisory board of the Department of health on policy matters regarding immunization.

The **National EPI Division** is headed by the National EPI Manager who is responsible for the Secretary of Health. The main functions of the division are:

a. Assist the National Immunization Committee in the formulation of policies, strategies and plans of immunization activities;

b. Coordinate/collaborate with the Biological Production Service in establishing vaccine requirements and facilitating distribution;

c. Provide technical guidance, consultations and training to peripheral health workers;

d. monitor, assess and evaluate EPI

e. coordinate/collaborate with other services at the central level in planning, implementing and evaluating EPI related activities.

At the **Regional Level**

The Regional Director is responsible for the management of the Expanded Program on Immunization. He ensures the participation of private hospitals, non-governmental organizations, and non-health governmental organizations. He participates in the revision of the regional EPI plan.

The Regional Immunization Officer (RIO) is responsible for planning, implementing and evaluating the EPI. Specifically, he is responsible for providing technical assistance related to the program; analyzes provincial/city EPI reports; gives regular feedback to the Regional Health Director.

The Regional Nurse Coordinator is responsible for the supervision of the cold room officer; providing technical assistance to nursing personnel; maintaining the inventory of vaccines, requisitioning vaccines and allocating EPI vaccines, syringes, needles and other supplies; analyzes, consolidates. collates and submits the monthly EPI accomplishment reports, the quarterly inventory report, and the semi-annual cold chain monitoring report to the Regional Immunization Officer.

The **Regional Cold Room Officer** is designated by the Regional Director and trained by the Regional Immunization Officer or Nurse Coordinator. The duties of the cold room officer are:

- collects, stores and distribute vaccines
- monitors and records the temperature of cold chain equipment
- checks and fills u the cold chain monitors;
- updates vaccine control record;
- prepares a monthly inventory of cold chain supplies and equipments

At the **Provincial Level**

The **Provincial Health Officer/City Health Officer** is responsible for the provincial/city management of EPI. He ensures the participation of provincial/city hospitals, private hospitals, etc.

For **District Hospitals**

The Chief of Hospital is responsible for the management of EPI. He should designate an Immunization Officer, Nurse coordinator, and cold chain officer to assist him in EPI activities.

At the **Municipal level/Health Center level of city health department**

The **Rural Health Physician/Health Center Physician** or in the absence of a physician, **the Public Health Nurse/Health Center Nurse:**

- prepares the EPI Municipal Plan
- seeks the approval of the plan from Local Health Board
- implements and evaluates the approved plan;
- coordinates immunization activities with other government and non-government agencies
- do outbreak response immunizations

In addition, the Public Health Nurse:

- assists the physician/nurse in the management of EPI
- prepares vaccine requirements and oversees allocation
- supervises the midwives in her catchment area
- analyzes, consolidates and submits reports on EPI accomplishments and vaccine inventory

The **Sanitary Inspector** acts as the disease control officer and

- prepares spot maps of the catchment areas of rural health units

- Assists the municipal health officer in disease surveillance activities
- participates in immunization activities in hard-to-reach areas

At the **Barangay level**

The Rural Health Midwife

- continuously updates the Target Group List for EPI
- updates other EPI records in addition to the Target Group List
- oversees the use of home-based records, including the Growth Monitoring chart and tetanus toxoid card
- coordinates with barangay officials and key leaders of the barangay on immunization sessions
- prepares vaccine requirements and collects vaccine from Main Health Centers
- prepares and submits reports of EPI accomplishment and inventory of vaccine to the Public Health Nurse.
- Provides regular (monthly, if possible) feedback of EPI accomplishment

4.3 Vaccine production and Procurement

Oral Polio Vaccine for EPI has been donated by Rotary International. Measles and DPT are donated by the Canadian International Development Agency (CIDA). BCG and Tetanus Toxoid are produced by the Biologicals Production Services (BPS) of the Department of Health. Government funding support for EPI has increased. In 1992, the government allocated funds for procurement of Hepatitis B vaccines for the initial target of 40% which has increased to 50% for 1993. For 1993, the 60% shortfall for routine OPV and the 20% OPV requirements for the NIDs were taken cared of by the government.

For 1993 the 60% shortfall for the routine OPV vaccine, and 20% opv need for NIDs were borne by the government of the Philippines. Also the Australian government through the Australian International Development Bureau (AIDAB) donated A$400,000 for OPV which was used during the NID. rotary International (RI) provided for the 60% OPV requirements of NID and 40% OPV requirements for routine immunization. The Canadian International Development Agency (CIDA) provided totally the DPT and Measles needs for routine immunization for the Philippines. The Philippine government provided funds for the additional measles requirements for NIDs.

4.4. Cold chain and Logistics

The Central vaccine store at the Bilogical Productions Service (BPS) has an existing walk-in cold room and is in the process of acquiring a walk-in freezer. Additional cold room will be given to the Cordillera Administrative Region and Region XI to replace the old one.

4.5. Transport of Vaccines

Vaccine supply to Regions I, III, IV, and NCR are being picked up from BPS by the cold chain manager. The rest of the region are being sent through the Philippine Airlines. Transport boxes should be used to transport vaccines from each level (Regional, Provincial, District and RHU. From the RHU to the barangay, vaccine carriers are used when there are only a few ampule/vials of vaccines. If vaccines are shipped by air, personnel receiving the vaccines are notified as to the date and time of arrival. After transferring the vaccines, confirmation on the number of vaccines, diluents, droppers and the status of the cold chain monitor card (if used) should be provided to the sending office.

4.6. Current Immunization Coverage 1992

FIC = 91.04%

Antigen	National Coverage
DPT3	91.92%
OPV3	92.14%
BCG Infants	94.06%
Measles	89.88%
BCG Entrants	58.46%
TT	70.00%

4.7. Routine Surveillance and Reporting

EPI cases and deaths should be reported weekly on FHSIS Form W -1a. The report should be submitted by all health facilities . (Annex B)

Feedback from the office receiving the report should be provided to the reporting centers on a regular basis or immediately when action related to disease containment must be undertaken.This is important so that the health personnel are updated on the progress of the disease reduction initiatives.

4.8. Epidemiologic Features of Poliomyelitis

For 1993, there were 59 AFP cases initially reported. Out of the 59 only 54 turned out to be true AFP. Four cases were presented to the Expert Panel. 7 (13%) were from NCR, 18 (33%) from Luzon, 20 (37%) from Visayas and 9 (17%) from Mindanao. 4 (7%) have wild poliovirus, Type I isolated from the stool. 2 were from Cebu City (Region VII), one from NCR and the other one from Misamis Occidental (Region X)

Age Distribution of the 54 cases as follows:

Age group (yrs)	No. of cases	Frequency (%)
0 - 4	22	41%
5 - 9	12	22%
10 - 14	18	33%
15 & above	2	4%
TOTAL	54	100%

4.9. Case Investigation and Outbreak Control

Every AFP case reported is investigated by a trained personnel either at the regional/provincial level or together with the FETP staff.

4.10. Training on Polio Surveillance:

13 Surveillance trainings were conducted last 1993. In the training, the three disease reduction initiative were discussed namely: polio eradication, neonatal tetanus elimination, and measles control. However, the emphasis of the training was more on polio eradication. Participants were provincial health officers, city health officers. provincial/city EPI coordinators, chief of Hospitals, pediatric residents and some municipal health officers. Beginning 1994, surveillance training will continue and community-based training will be implemented.

4.11. International participation

Most of the resources for EPI especially vaccines are donations coming from different international agencies such as CIDA, AIDAB, RI. They are procured to the country through UNICEF. A full-time consultant based in DOH was specifically hired by WHO to help specifically in surveillance.

4.12. Information, education and communication

The goal of Public Information and Health Education Service (PIHES) is to support the DOH and local government units in implementing its priority programs and provide leadership and technical assistance in Health Promotion and Disease Prevention and Social Mobilization with special emphasis on public education, communication and information programs and advocacy initiatives. PIHES works in coordination with MCHS especially during National Immunization Days (NIDs).

4.13. Evaluation

Comprehensive Program Reviews (CPR) on EPI are done to evaluate the program. Last CPR was done in 1991 and another one is scheduled for this year. Every year two National consultative workshops are held to consult Regional EPI coordinators on issues pertaining to the program and give them the recent updates. Area conferences are also held wherein Provincial Health Officer, City Health Officers and another concerned are also called to attend such conference. Coverage surveys are also done to determine how well EPI has met its coverage target for immunizing children, to provide additional information e.g. reasons for immunization failure and to estimate the reduction in morbidity and mortality from the vaccine preventable diseases.

5. Objectives and Targets

Objective: Eradicate poliomyelitis from the country by 1995.

Targets:

By the end of 1993:

- all government hospitals should be AFP reporting units.
- all regions have conducted the EPI disease surveillance training

Beginning 1994:

- Training on disease surveillance will continue
- Community - based surveillance will be implemented.
- Active search for AFP cases will be done in hospitals
- Writing of letters to big government hospitals in Manila and big private hospitals to report AFP.
- Incentives will be given by RI to those who will report and investigate AFP.

Beginning 1995:

- Continue with community-based surveillance
- All Reporting units will continue to report AFP

By the end of 1995: **"Polio-free" Philippines**

6. Principal Strategies for the Eradication Initiative

a. Maintaining at least 90% OPV coverage during routine immunization.

b. Carrying out (NIDs) twice from 1993-1995 to all children below 5 years old.

c. Expanding immunization targets to include all children below 5 years old (during NIDs) to give additional doses to those who have received initial doses of Oral Polio Vaccine and to reach those who may have missed during routine immunization.

d. Adopting supplemental immunization activities such as ORIs in areas where an AFP case has been reported and conduct NIDs twice a year.

e. Improving AFP surveillance system.

f. Orientation of the community on how to identify AFP cases and report immediately.

g. Social mobilization to sustain the support of all sectors in making polio immunization available to all children.

6.2. Initiation of Supplementary Immunization Activities in Selected areas

Outbreak Response Immunization must be done in areas where an AFP case has been reported.

6.3. Strengthening Epidemiological Surveillance Activities and Laboratory Services thru:

a. Training of other health personnel who were not trained in 1993 with emphasis on case investigation, collection of stool specimens, 60 days follow-up, etc.

b. Hiring of additional personnel in RITM courtesy of RI.

c. Timely submission of case investigation and ORI report.

d. Conduct of community-based surveillance.

e. Weekly submission of "zero" report even in the absence of a case.

f. Integration of Immunization Surveillance Activities.

During ORIs active search should be performed. IEC esp. on the importance of additional doses of OPV should be emphasized. Community should be oriented on how to report AFP cases.

g. Regular feedback to the field units especially with regards to the result of stool specimens to encourage participation and sustain enthusiasm on the project.

h. Quarterly monitoring of Sentinel sites and reporting units.

i. Development of Posters on Surveillance for the community on how to recognize AFP cases.

j. Improve communication facilities by coordinating with Government communication bureau.

6.4. Improvement of Outbreak Control Activities.

A. Active search of AFP cases can be improved by:

- checking on admissions' logbook in hospitals
- integrating the activity during ORI
- training Midwives on the standard case definition and how to recognize the disease.
- simplified poster on AFP surveillance
- intensify health education and early consultation to health facilities once a case has been detected.

B. Immunization Activities can be improved thru:

- adoption of the Vaccine Independence Initiative
- sustaining close coordination between other GOs and NGOs esp. during mass campaigns
- involving the local government during immunization activities and emphasizing the long term benefit of immunization
- mobilizing all sectors in private organizations

C. Improve ORI and follow-up and recording

- preparing the community of the activity informing them of the benefits of additional OPV
- Master listing of children
- monitoring and feedback

6.5 Operational Research

Operational research should be integrated as a routine element to the EPI-PEP. There should be sufficient funds for the researchers to conduct the research related to the program.

1. Serological surveys on the prevalence of antibodies to poliovirus in children below 5 years old to determine immunity levels.

2. Continue with coverage surveys to validate routine reporting and NIDs.

8. Resources and Budget

8.1. Financing of EPI in General

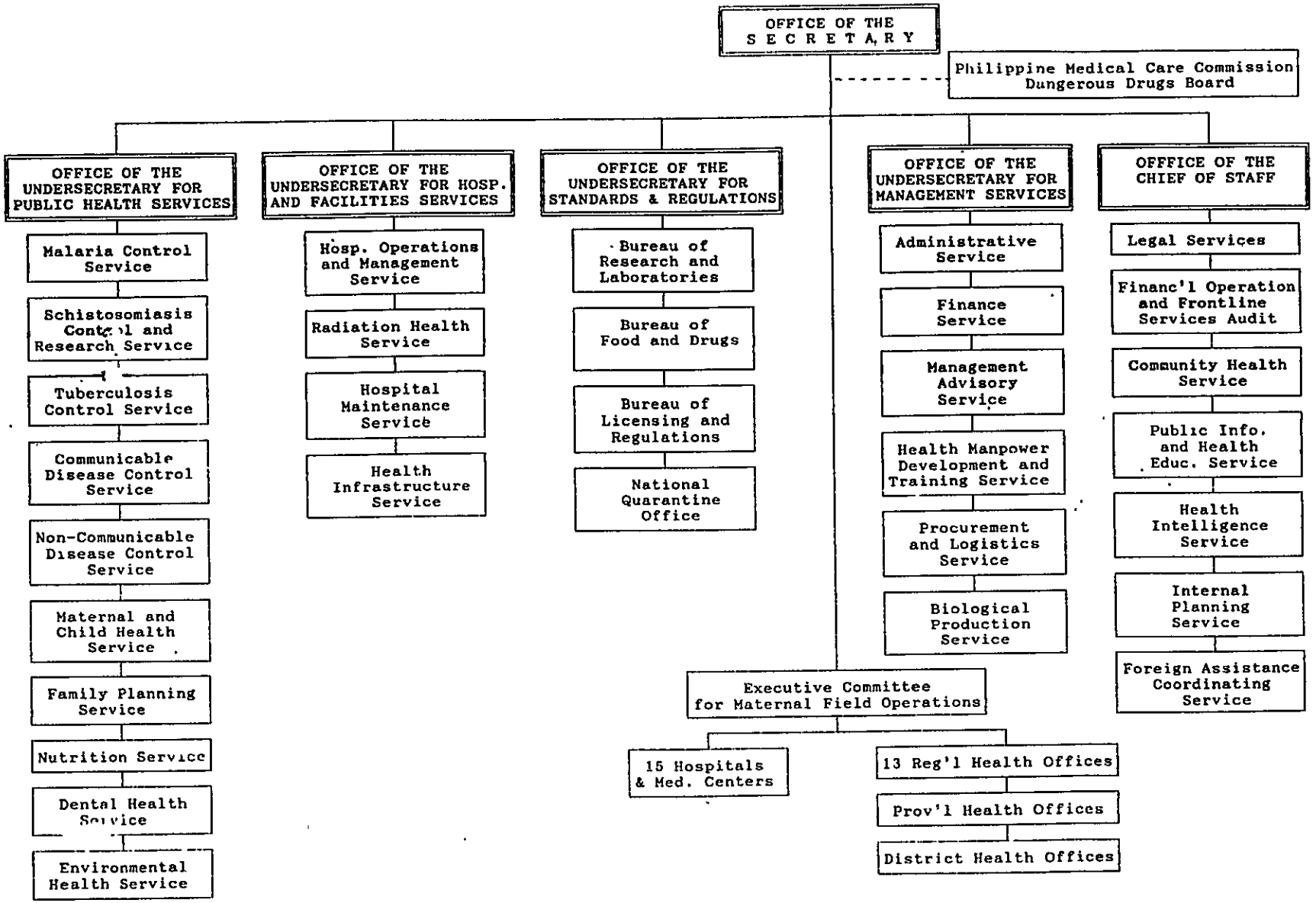
EPI Budgetary Requirements
1994
(Amount in Dollars)

Vaccines including hep B	11,425,000
Communications	3,636
Syringes/Needles	1,670,000
Equipment	455,000
Training	231,000
	13,784,636

8.2 External Resources Requirements

EPI Vaccine Requirements
1994-1995
(Amount in Million Dollars)

	1994	1995
Vaccine Needs	11.425	14.560
Committed (RI)	1.250	1.250
(GOP)	10.000	10.000
(AIDAB)	.425	
Shortfall	None	2.000


OFFICE OF THE SECRETARY
Philippine Medical Care Commission
Dangerous Drugs Board
OFFICE OF THE UNDERSECRETARY FOR PUBLIC HEALTH SERVICES
Malaria Control Service
Schistosomiasis Control and Research Service
Tuberculosis Control Service
Communicable Disease Control Service
Non-Communicable Disease Control Service
Maternal and Child Health Service
Family Planning Service
Nutrition Service
Dental Health Service
Environmental Health Service
OFFICE OF THE UNDERSECRETARY FOR HOSP. AND FACILITIES SERVICES
Hosp. Operations and Management Service
Radiation Health Service
Hospital Maintenance Service
Health Infrastructure Service
OFFICE OF THE UNDERSECRETARY FOR STANDARDS & REGULATIONS
Bureau of Research and Laboratories
Bureau of Food and Drugs
Bureau of Licensing and Regulations
National Quarantine Office
OFFICE OF THE UNDERSECRETARY FOR MANAGEMENT SERVICES
Administrative Service
Finance Service
Management Advisory Service
Health Manpower Development and Training Service
Procurement and Logistics Service
Biological Production Service
OFFICE OF THE CHIEF OF STAFF
Legal Services
Financ'l Operation and Frontline Services Audit
Community Health Service
Public Info. and Health Educ. Service
Health Intelligence Service
Internal Planning Service
Foreign Assistance Coordinating Service
Executive Committee for Maternal Field Operations
15 Hospitals & Med. Centers
13 Reg'l Health Offices
Prov'l Health Offices
District Health Offices