NATIONAL IMMUNIZATION DAYS (NIDs) 1996

1. Dates : 10 February and 10 March 1996
2. Antigen : Oral Polio Vaccine (OPV)
3. Target pop : 5.5 million children less than 5 years
4. Target Area : 320 townships of Myanmar
5. Manpower : Immunization Teams = 33,000
   Immunization Posts = 50,000
   Immunization Team Members =150,000

   Community volunteers and leaders, including :
   - Local State Law and Order Restoration Council authories
   - Myanmar Maternal and Child Welfare Association
   - Union Solidarity and Development Association
   - Health Assistants Association
   - Volunteer Fire Brigades
   - Red Cross
   - Religious Groups
6. Political Support - Received political support from the h ghest level.
7. Multi-sectoral Support - Ministries of Education, Energy Transport, Information and other ministries play an active role in NIDs and Members of the Central Steering Committee

8. Role of International Organization and partner Agencies:

(i) Rotary International . . .

US$ 1.21 million for OPV

(ii) Rotary Thailand . . .

US$ 20,000 for posters

(iii) UNICEF . . . US$ 498,000 for OPV

US$ 57,000 for training/supervision

US$ 45,000 social mobilization

(iv) Government of Japan . . . (through JICA)

US$ 401,000 for vaccine carriers

(v) W H O . . .

STC for 4 months

US$ 50,000 for OPV

US$ 72,000 for training of VHWs

US$ 50,000 for IEC materials

(vi) Centres for Disease Control (CDC), USA . . .

US$ 100,000 for OPV

(vii) Other AusAID (Australia) . . .

routine immunization funds are assisting NIDs activities in 2 s ates.

UNHCR . . .

also assisting NIDs activities in Rakhine.

UNDP . . .

donated US$ 250,000 for solar refrigerators

Results of National Immunization Days
1st round (10 February 1996)
Union of Myanmar

Sr. No.	State/ Division	Townships	Total Population	Children under 5	Number Immunized	Coverage percent.
1	Kachin	18	1,159,959	145,472	127,938	88%
2	Kayah	7	236,579	33,367	31,016	93%
3	Kayin	7	1,347,742	143,474	121,626	85%
4	Chin	9	442,970	65,501	62,183	95%
5	Mon	10	2,234,051	275,852	263,140	95%
6	Rakhine	17	2,522,300	396,248	377,503	95%
7	Shan (South)	21	1,737,182	246,914	220,578	89%
8	Shan (North)	22	2,030,091	206,065	171,276	83%
9	Shan (East)	9	697,030	74,601	53,385	72%
10	Yangon	43	5,150,013	543,032	617,279	95%
11	Bago	28	4,679,551	562,532	535,700	95%
12	Mandalay	30	5,950,084	771,135	758,240	98%
13	Magway	25	4,156,870	524,226	510,561	97%
14	Sagaing	38	5,003,693	642,861	624,992	97%
15	Ayeyarwady	26	6,192,599	753,418	729,354	97%
16	Tanintharyi	10	1,195,971	144,645	132,191	91%
	Total	320	44,736,685	5,529,343	5,236,962	95%

ASSISTANCE NEEDED FOR NIDs ... 1977

(a) OPV shortfall costs for the 1997 NIDs are based on the following calculations:

target population	=	6.36 million children aged less than 5 years,
No. of NID rounds	=	2 (December 1996 and January 1997)
vaccine wastage rate	=	1.4
OPV doses per vial	=	20
unit price per 20 dose vial	=	US$1.96 (UNICEF 1996 price)
Total	=	US$1.747 million
Rotary Commitment	=	US$0.600 million
CDC Commitment	=	US$0.447 million
Shortfall	=	US$0.700 million

(b) Suryeillance costs are based on prices quoted in the WHO/UNICEF 1995 Supplement to the EPI Product Information Sheets (WHO Geneva/HQ Document No.WHO/EPI LHIS/95.2), where available. For computer equipment not listed in he PIS, prices are based on 3 estimates rom local suppliers:

Specimen collection kits (500 @ US$3.00)	=	US $1,500.00
Specimen transport containers (50 @ US$40.00)	=	US $2,000.00
Motor scooters (7 @ US$1,317.00)	=	US $9,219.00
Computers 486/50MHz 8Mb RAM (2 @ US$1,200)	=	US $5,000.00
Printers - HP Laserjet (2 @ US$1,000.00)	=	US $2,400.00
Total	=	US$20,119.00

(c) Cold Chain costs are based on prices quoted in the WHO/UNICEF 1995 Supplement to the EPI Product Information Sheets (WHO Geneva/HQ Document No. WHO/EPI/LHIS/95.2).

Ice-lined refrigerator (60 units @ US$1,739.80)	=	US$69,592.00
(Electrolux Model TCW 1151 / PIS# E3/24)		
Ice-pack Freezer (36 units @ US$1,690.54)	=	US$ 27,048.64
(Electrolux Model TFW 791 / PIS# E3/26)		
Solar Refrigerator (13 units @US$5,500.00)	=	US$ 73,007.00
Total Cold Chain	=	US$169,647.64
Cold Rooms for Magwe, Mor ywa, Taunggyi		
Cold Room 0 to +80'C - Size 1.00 m^3/M	=	3 Nos.
Cold Room -15 to -20'C - Size 0.78 m^3/M	=	3 Nos.
REFRIGERATED VEHICLE	=	2 Nos.
		US $ 150 000

DISEASE SURVEILLANCE SYSTEM IN MYANMAR

1. There are (4) principal epidemic diseases.

   a) Cholera
   b) Plague
   c) Dengue Haemorrhagic Fever
   d) HIV - infectiion / AIDS

A single case shall be notifiable. Prompt control measures are undertaken at source level and information to the nearby - townships, respective State / Division and Central.

Law for communicable disease was amended and promulgated by SLORC in 1995.

a) Cholera

It may occur throughout the year with varying frequencies in States/ Divisions. More cases of acute diarrhoeal diseases are attributable to better reporting, diagnosis were usually made on clinical features and entry of O 139 in 1992.

b) Plague

It is still confined to central dry region namely, Sagaing, Magway and Mandalay Divisions. Ratfall occurs in the said endemic areas but there has been a few cases of clinical bubonic cases occasionally. Death due to plague was very seldom.

Case incidence rate is in decreasing trend but there is a potential for a serious outbreak in other areas rather than in presently endemic areas.

c) Dengue Haemorrhagic Fever (DHF)

Since 1970, DHF is more or less prevalent in Myanmar. There has a 4-5 year cyclical outbreak. It used to occur in the Monsoon. About 1/2 to 3/4 of all cases were reported every year in big cities.

Since 1981, 13 % increase every year in some of the cities was observed.

d) HIV - infection / AIDS

(Explained in other section)

2. Routine Disease Surveillance System

a) Principal epidemic diseases ;

Immediate actions at source level. Intervention by respective States/ Divisions or Central only when indicated.

Laboratory support was usually limited. But outbreak diagnosis was usually made at the local or reference laboratory.

b) Other Communicable Diseases Under National Surveillance
(Monthly report from township to higher levels)

1.	Diarrhoea	9.	Neonatal tetanus
2.	Dysentery	10.	Other tetanus
3.	Food poisoning	11.	Meningitis / Encephalitis
4.	Typhoid and Paratyphoid	12.	A R I
5.	Measles	13.	Viral hepatitis
6.	Poliomyelitis	14.	Rabies
7.	Diphtheria	15.	Malaria
8.	Whooping cough	16.	Snake bites
		17.	Tuberculosis

Due to transport and communication problems reporting efficiency is approximately 73.3 %.

3. Sentinel Surveillance System

22 townships were selected as sentinel posts representing their respective State / Division for better monitoring, supervision and evaluation.

From sentinel posts, reports were collected on monthly basis.

Reporting efficiency is not much more better than routine surveillance. Excepting principal epidemic diseases, simple analysis was not usually done at local level. Because of this weakness,control measure were sometimes delayed for other communicable diseases.

4. Disease Surveillance for EPI -diseases.

a). Diphtheria (85) cases in 1994 trend = - 25.6 / year
b) Neonatal tetanus (71) cases in 1994 trend = - 20.0 / year
c) Poliomyelitis (28) cases in 1994 trend = - 11.2 / year
d) Measles (3530) cases in 1994 trend = - 1401 / year
e) Whooping cough (1745) cases in 1994 trend = - 1376 / year

Disease Surveillance System for EPI diseases

A single case is defined as an outbreak. Verification of case, rapid survey on immunization coverage by L Q A S and immediate mop-up action for immunization are being done for every outbreak.

Monthly incidence is being monitored by both Central Epidemiology Unit and Central EPI.

Laboratory intervention is always done by local laboratories and by national health laboratory whenever available.

Annual evaluation for EPI in which impact for target diseases is included.

5. Special Disease Surveillance System

For Diarrhoea, ARI, Meningococcal meningitis, Plague, NNT, Poliomyelitis etc, special surveys from time to time were done depending on availibility of budget.

6. Data collection of communicable diseases from Specialist / General Hospital Paediatric units and Infectious Hospital and analysis at Central Level.

Emerging, Re-emerging Communicable Diseases

- HIV - infection / AIDS
- Dengue Haemorrhagic Fever
- Malaria
- Plague
- Cholera (especially 0139)
- Meningococcal meningitis
- Viral hepatitis (carrier rate was 12 % about 12 years ago)
- Tuberculosis

Plan of Action for Emerging, Re-emerging Communicable Diseases

1. Revise existing infrastructure of Health and Strengthening
2. Promote rapid action for control measures
3. Strengthening of existing Laboratory supports
4. Promoting research areas relavant to present epidemiological situation

Guidelines for Infectious Disease Control

- Reduction of Principal Epidemic Disease until no more a major health problem.
- Reduction of Programme Communicable Diseases in conformity with WHO guidelines / targets.
- Promotion of Laboratory Service especially in rapid diagnosis and control measures at all levels.
- Establishment of National Reference Laboratory for Communicable Disease.
- Establishment of Laboratory network inside and outside Myanmar.
- Disease Surveillance System through integrated Primary Health care.

Budgetary needs for Disease Surveillance System

- Promotion of Layman reporting system for communicable diseases.
- provision of Quick tests for Principle Epidemic diseases and some Communicable Diseases Under National Surveillance.
- Capacity building of Health Staff responsible for disease control.
- Production of Information, Education, Communication materials and its nationwide utilization
- Provision of facilities for monitoring, supervision, evaluation and feedback.
- Financial assistance for Special Surveys, Research, etc.

Demographic statistics

Total Population = 46.5 millions
(projection of 1995 population)

Proportion of Under 5	=	13.2 (1993 Nationwide CDD House Hold Case Management Survey)
Proportion of Under 1	=	2.5 - 3.1 % (Central EPI)
Crude Birth Rate	=	25.74 / 1,000 (1993 Central Stastistical Organization)
Crude Death Rate	=	8.7 / 1,000 (1993 Central Stastistical Organization)
Annual Growth Rate	=	1.8 %
Infant Mortality Rate	=	47.5 / 1000 livebirths (urban only) 49.6 / 1000 livebirths (rural only) 48.5 / 1000 livebirths (national) Source - Central Stastistical Organization
Under 5 Mortality Rate	=	100.73 / 1,000 livebirths (1995 Nationwide ARI Survey)

Organogram for Disease Surveillance

Director (Disease Control)

↓

*Dy. Director (Epidemiology)

↓

Epidemiologist (Upper -)	Epidemiologist (HQ)	Epidemiologist (Lower -)
↓	↓	↓
SDCUs (4 States & 3 Divisions) P S U	HQ Office RCDU	SDCUs (3 States & 4 Divisions)

SDCUs	=	Special Disease Control Units 15 in number in S / D
RCDU	=	Rodent Control Demonstration Unit in Yangon
PSU	=	Plague Special Unit

HEALTH OF CHILDREN IN MYANMAR

According to the social and financial report from ministry of Finance, basing on the data from Central Statistical Organization the projected population for the year 1995 was 46.5 million . Out of this, six million were children under 5 year of age.

Myanmar has high infant mortality and under 5 mortality rates , when compared to the figure of some developed countries.

VITAL STATISTICS, MYANMAR

TOTAL POPULATION	46.5 (Projected Population for 1995)	MILLION
CHILDREN UNDER FIVE YEARS	6	MILLION
I.M.R	48.5/1000	LIVE BIRTH*

* 1994 - 1995 SOCIAL AND FINANCIAL REPORT

The main causes of death in children are infectious diseases like respiratory infection, diarrhoeal diseases, malaria, tuberculosis and dengue haemorrhagic fever etc.

LEADING CAUSES OF UNDER 5 DEATH

Diseases	Proportion of all Deaths
1. ARI	28.2 %
2. Hyperpyrexia with convulsion	22.6 %
3. Diarrhoea	16.1 %
4. Prem/SGA/Birth Injury/Asphyxia	11 %
5. Others	22.1 %

Source - cause specific under 5 mortality survey Myanmar (1994 - 95)

Myanmar as a signatory of the World Summit Declaration, has taken a number of initiatives under the National Health Plan to reduce morbidity and mortality of children. Although Myanmar is a developing country, we take a place in the community of nation in placing the needs of our children high on our national agenda.

To achieve the goals set at the World Summit for children, a number of new programmes have been launched and on-going programmes have been strengthened in different areas of health and nutrition of pregnant mothers and young children.

The main objectives of all the programmes are to reduce morbidity and mortality rates of children and to improve health and nutritional status of the young children.

THE PROGRAMMES DIRECTLY OR INDIRECTLY RELATED TO IMPROVEMENT OF HEALTH OF CHILDREN

Sr.No.	Name of Programme	Started in	100% Coverage
1.	A.R.I	1989 7 townships in Yangon Division	1995
2.	B.F.H.I	1993	1996
3.	CDD	1978 Started as ORT Project	1987
4.	E.P.I	1978 Started in 108 townships *BCG, DPT & DT 1986 In 250 townships *BCG, DPT, Measles & Polio	 1995 In 319 townships
5.	Nutrition - PEM - Micronutrient deficiency	1978 Growth monitoring 244 townships	1986
6.	T.B Control Programme	1954	1966
7.	V.B.D.C	1953 Started as Malaria Control Programme	V.B.D.C. in 1976 - Malaria - D.H.F - Filaria - J.B.E

With the effective implementation of National Immunization Programme, both morbidity and mortality rates of EPI targeted diseases reduce dramatically resulting in significant reduction in overall mortality rates of children.

These EPI targeted diseases are seldom seen in children wards and now we are facing difficulties in teaching our medical students because we cannot show them the actual cases.

Malnutrition and infection is a lethal combination for young children. So Department of Health is trying its best to improve the nutritional status of young children. During the past decade we were able to reduce malnutrition among the children under three years of age from 42% to 32%.

Implementation and achievement of these programmes simply prove that Myanmar tries to the level of best satisfaction in the interest of the children.

However mortality and morbidity rates of young children due to preventable and treatable conditions like infectious diseases are still high. This simply reflect that there is a need to improve the health and nutrition status of children.

The programmes designed to reduce morbidity and mortality rate of children have been implemented and coverage in terms of quantity is satisfactory, there is still room for improvement.

To achieve qualitative improvement the following areas are planned to be strengthened:

(a) Training (both preservice and inservice)
(b) Development of more effective IEC materials
(c) Supervision and monitoring
(d) Referral system
(e) Mobilization of manpower resources (volunteer and NGOs)

WE are also trying our best to find ways and means for long term sustainability of these programmes by promoting :

- community cost sharing
- local production of good quality low cost ORS and some essential drugs.

With all these concerted efforts and hard work, I am quite sure that we will be able to meet the end decade goal set at the World Summit for children.

United Nations Development Programme (UNDP)

Human Development Initiative Programme phase (1) 1994-1995 and extended up to June 1996 has been implemented in selected townships in Myanmar with a total budget of 25.95 million US $ and for the health sector the funding was 7,185,838 US $.

The main projects under HDI (1) are

1-Improving quality and outreach of Primary Health Care Services Project under which:

- -Immunization services
- -Community Health Nursing
- -Reduction of morbidity and mortality due to tuberculosis
- -Quality birth spacing services through a community based approach
- -Improved outreach and quality of basic health services

2-Reducing malaria morbidity and mortality through upgrading health services and increased community participation

3-Community Based Rehabilitation of Leprosy Patients

4-Support to national AIDS Programme

Out of these projects, those concerned with disease control are the following:

	US $
-Immunization services	427,531
-Reduction of morbidity and mortality due to tuberculosis	244,120
-Reducing malaria morbidity and mortality through upgrading health services and increased community participation	1,623,100
-Community Based Rehabilitation of Leprosy Patients	755,100
-Support to National AIDS Programme	1,754,900

UNICEF Inputs
Supplementary Funds

SrNo	Project	1996	1997	1998	1999	2000	Total
1	UCI project	900	900	900	890	890	4,480
2	CDD/ARI	350	350	350	350	350	1,750
3	HIV/AID Project	250	250	180	180	180	1,060
	Total	1500	1500	1430	1420	1420	7290

United Nations Childrens Fund (UNICEF)

According to the Master Plan of Operations 1996-2000, Country Programme of Cooperation between the Government of the Union of Myanmar and UNICEF for the Survival, Protection and Development of Children and Women in Myanmar the following programme have been formulated.

1-Health/Nutrition

2-Water/ Sanitation

3-Education/ECD

4-Advocacy, information and communication

5- Child rights and protection

6-Policy, planning & monitoring for children

The UNICEF Executive Board has approved a total commitment not exceeding US $ 32.5 million from its general resources to support the programme activities described in the Master plan of Operations for the period beginning January 1996 and ending December 2000.

The Executive board has also authorized the Executive Director to seek special purpose contributions of up to US $ 23.5 million in support of this Master plan of Operations. Concerning the Diseases Control programme under the Health/Nutrition programme. The following are the budgetary breakdown:

UNICEF Inputs
General Resources (US $ '000)

SrNo	Project	1996	1997	1998	1999	2000	Total
1	UCI project	1390	1390	1390	1390	1390	6,950
2	CDD/ARI	310	310	310	350	350	1,670
3	HIV/ AIDS project	190	190	140	140	140	800
	Total	1890	1890	1840	1880	1880	9420

Present Support from WHO and UNICEF

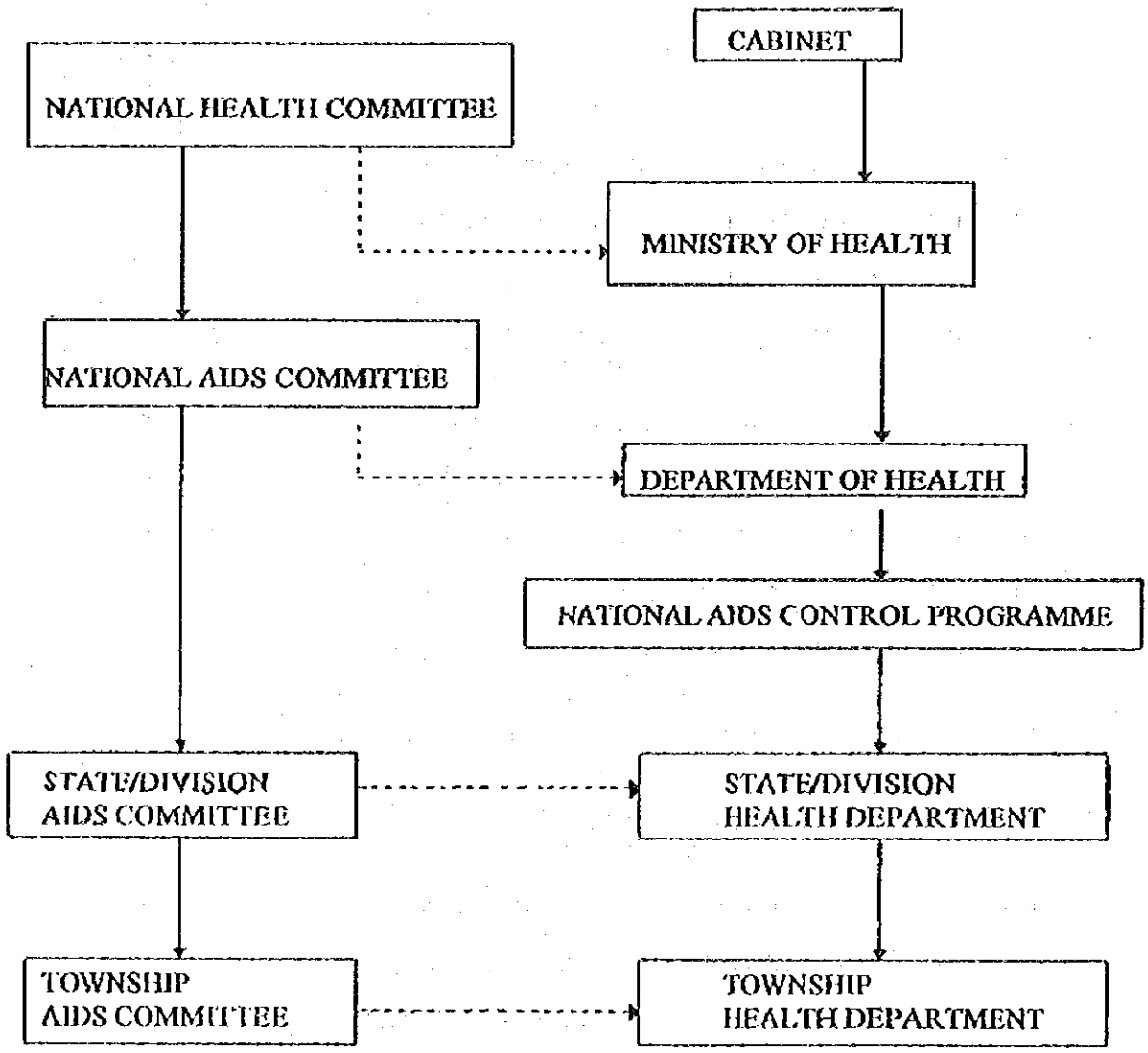
Support from WHO

Under the WHO regular budget (Myanmar) 1996-97 the title of plan of action concerning disease control project, its specific programme numbers and budget allotment for 1996-97 biennium is as follows:

Title-Integrated Control of Diseases

		Approved budget 1996-97 US $	Plan of Action for 1996 US $
1-	Leprosy elimination	100,000	76,750
2-	Vaccine Preventable Diseases & Immunization	140,000	106,500
3-	Diarrhoeal and acute respiratory disease control	182,500	156,700
4-	Tuberculosis	175,000	99,250
5-	Control of communicable diseases, including surveillance of emerging diseases and antibiotic resistance	99,750	44,250
6-	HIV/STD	431,400	425,900
7-	Malaria	290,000	118,550
	TOTAL	1,418,650	1,027,900

B1. ADMINSTRTION OF NATIONAL POLICY

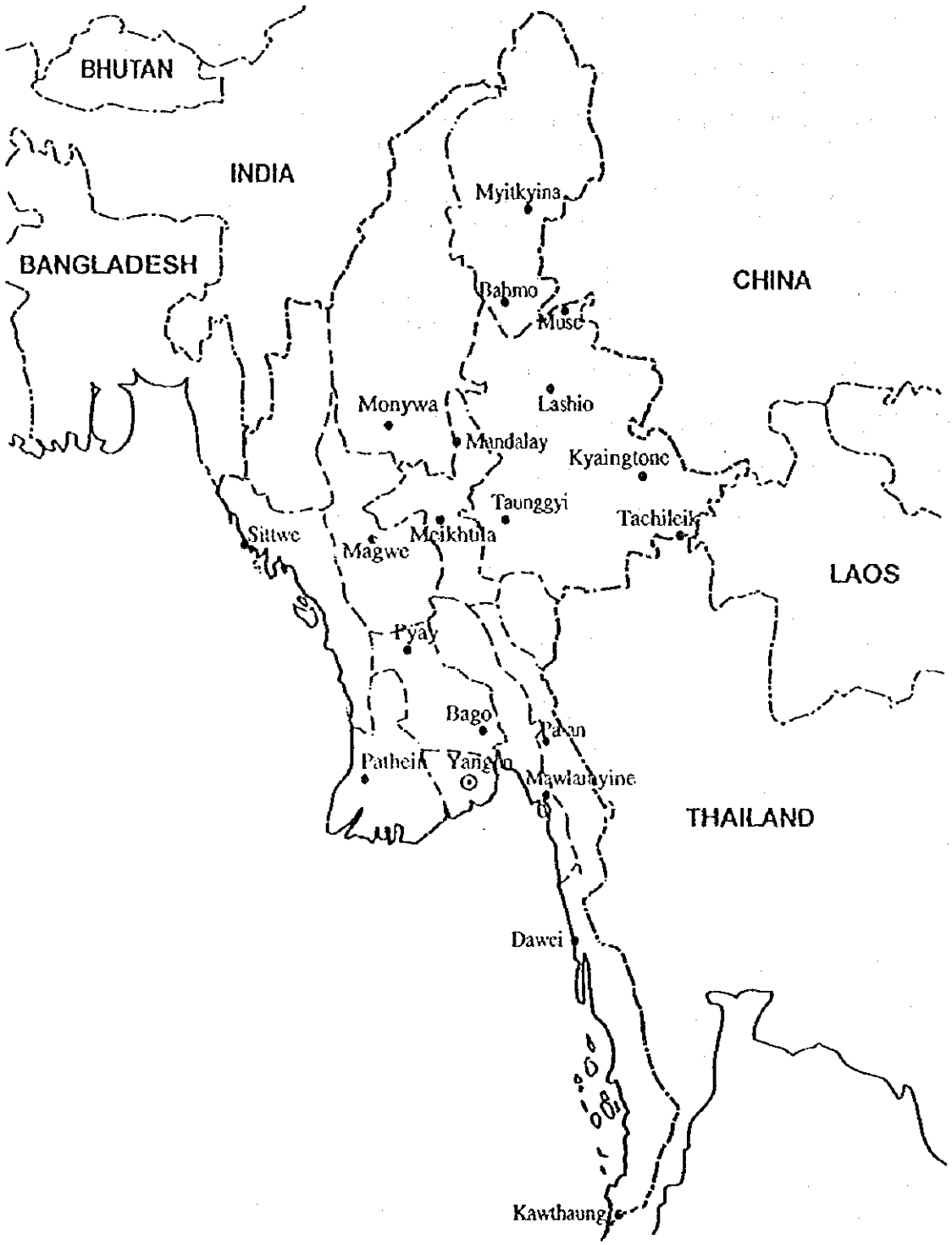


NATIONAL AIDS COMMITTEE MEMBERS

1.	MINISTER OF HEALTH	CHAIRMAN
2.	DEPUTY MINISTER OF HEALTH	VICE CHAIRMAN
3.	ATTORNEY GENERAL	MEMBER
4.	DIRECTOR OF DEFENCE MEDICAL SERVICES	"
5.	POLICE GENERAL (PEOPLE'S POLICE FORCE)	"
6.	DIRECTOR-GENERAL (SOCIAL WELFARE DEPARTMENT)	"
7.	DIRECTOR-GENERAL (IMMIGRATION & MANPOWER)	"
8.	DIRECTOR-GENERAL (MYANMAR RADIO & TELEVISION DEPARTMENT)	"
9.	MANAGING DIRECTOR (NEWS & PERIODICALS ENTERPRISE)	"
10.	MANAGING DIRECTOR (HOTEL & TOURISM ENTERPRISE)	"
11.	DIRECTOR-GENERAL (HEALTH MANPOWER DEPARTMENT)	"
12.	DIRECTOR-GENERAL (MEDICAL RESEARCH DEPARTMENT)	"
13.	DIRECTOR-GENERAL (PLANNING & STATISTICS DEPARTMENT)	"
14.	DIRECTOR-GENERAL (TRADITIONAL MEDICINE DEPARTMENT)	"
15.	DIRECTOR-GENERAL (SPORTS & PHYSICAL MEDICINE DEPARTMENT)	"
16.	DIRECTOR-GENERAL (BASIC EDUCATION DEPARTMENT)	"
17.	DIRECTOR-GENERAL (HIGHER EDUCATION DEPARTMENT)	"
18.	DIRECTOR-GENERAL (COTTAGE INDUSTRIES DEPARTMENT)	"
19.	DEPUTY DIRECTOR-GENERAL (DEPARTMENT OF HEALTH)	"
20.	DIRECTOR (NARCOTICS, MINISTRY OF HOME AFFAIRS)	"
21.	PRESIDENT (MYANMAR RED CROSS SOCIETY)	"
22.	PRESIDENT (MYANMAR MATERNAL & CHILD WELFARE ASSOCIATION)	"

23.	DIRECTOR (LABORATORY)	DEPARTMENT OF HEALTH	MEMBER
24.	DIRECTOR (MEDICAL CARE)	DEPARTMENT OF HEALTH	"
25.	DIRECTOR (PUBLIC HEALTH)	DEPARTMENT OF HEALTH	"
26.	DIRECTOR (ADMIN:)	DEPARTMENT OF HEALTH	"
27.	DIRECTOR (PLANNING)	DEPARTMENT OF HEALTH	"
28.	DIRECTOR (DISEASE CONTROL)	DEPARTMENT OF HEALTH	"
29.	PROFESSOR/HEAD (DEPT. OF MEDICINE)	INSTITUTE OF MEDICINE (1)	"
30.	ASSISTANT LECTURER/CONSULTANT PSYCHIATRIST, (DRUG DEPENDENCY TEAM & RESEARCH UNIT - YANGON PSYCHIATRIC HOSPITAL)		"
31.	DEPUTY DIRECTOR	INTERNATIONAL HEALTH DEPARTMENT MINISTRY OF HEALTH	"
32.	PRESIDENT	MYANMAR MEDICAL ASSOCIATION	"
33.	DIRECTOR (NURSING)	DEPARTMENT OF HEALTH	"
34.	PRESIDENT	MYANMAR DENTAL ASSOCIATION	"
35.	PRESIDENT	MYANMAR NURSES ASSOCIATION	"
36.	DIRECTOR-GENERAL	DEPARTMENT OF HEALTH	SECRETARY
37.	PROJECT MANAGER	NATIONAL AIDS PREVENTION & CONTROL PROGRAMME	JOINT SECRETARY

MYANMAR NATIONAL AIDS PROGRAM:
SENTINEL SURVEILLANCE SITES



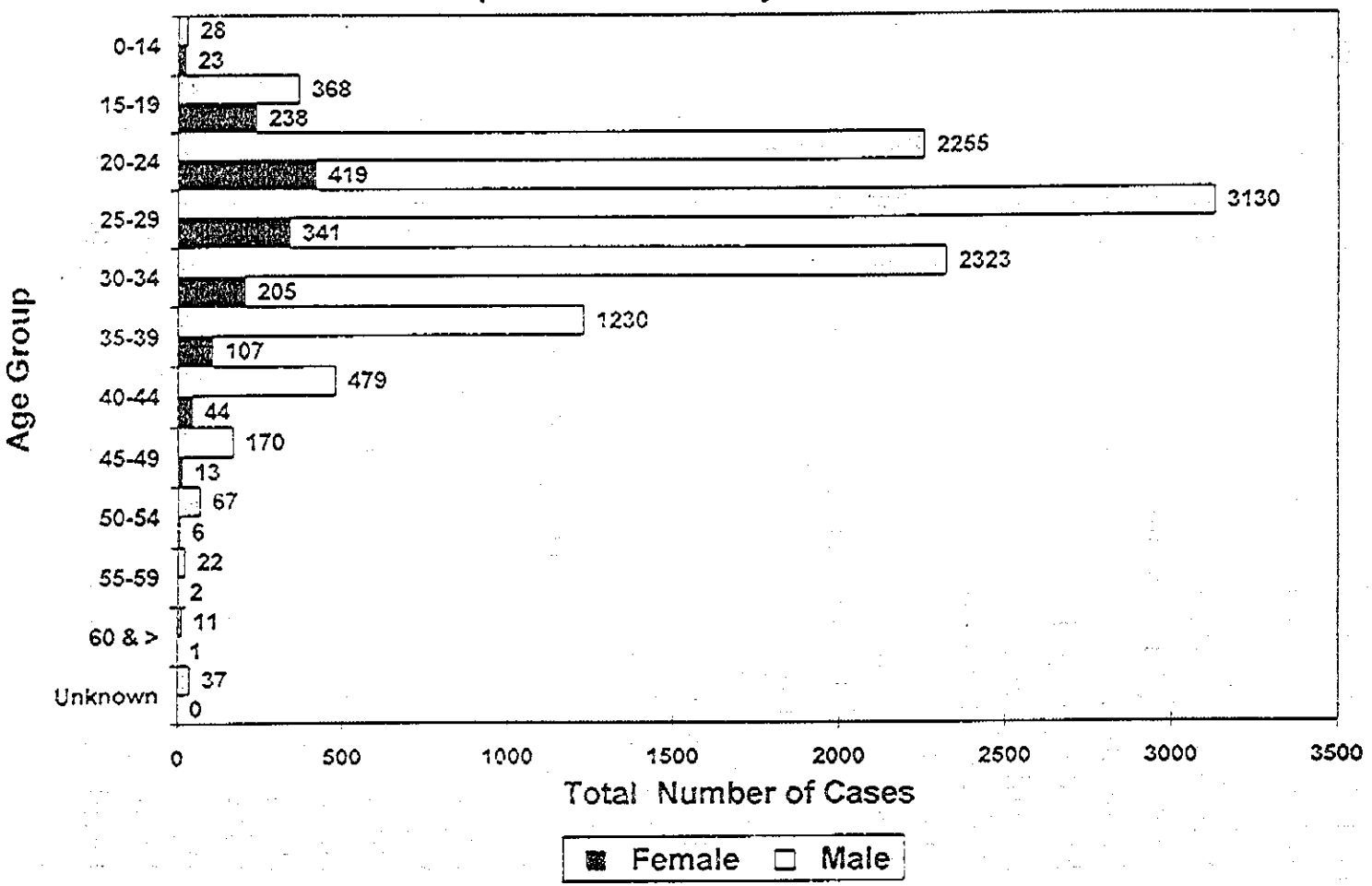
HIV/AIDS SITUATION IN MYANMAR

Total HIV +ve Cases		11568 (Dec. 95)
Total Reported AIDS Cases		1093 (Dec. 95)
Yangon Division	---	466
Tanintharyi Division	---	252
Shan State	---	217
Mandalay Division	---	26
Kachin State	---	39
Sagaing Division	---	22
Mon State	---	32
Bago Division	---	18
Aycyarwaddy Division	---	9
Kayin State	---	5
Yakhine State	---	5
Chin State	---	1
Magway Division	---	1

HIV +ve Cases detected each year

1988	---	1
1989	---	323
1990	---	1034
1991	---	2152
1992	---	1641
1993	---	2001
1994	---	2361
1995	---	2055
Total	---	11568

Age and Sex Distribution of Cumulative HIV Positive Cases (1988 - 1995, Myanmar)



Above figure does not include 49 cases with unknown age and sex

Annual number of Reported AIDS cases according to age and sex, Myanmar (December, 1995)

	0-4 M/F	5-14 M/F	15-19 M/F	20-29 M/F	30-39 M/F	40-49 M/F	50-59 M/F	60+ M/F	Not Specified M/F	Total M/F
1984										
1985										
1986										
1987										
1988										
1989										
1990										
1991				3/0	2/0	1/0				6/0
1992				21/0	15/0	5/0				41/0
1993			1/1	49/8	11/4	11/4	2/0		2/0	121/21
1994	0/2	1/0	0/2	82/15	41/4	41/4	4/1	4/0	1/0	253/32
1995	4/0	3/2	4/1	202/53	231/76	51/7	17/1		6/0	518/100
Total	4/2	4/2	5/4	357/76	424/32	109/15	23/2	4/0	9/0	939/153

M=Male/F=Female

Note : 1 case with unknown sex and risk group reported during 1994 was not included in above table.

RISK/TRANSMISSION CATEGORIES (Reported AIDS Cases, Myanmar - December 1995)

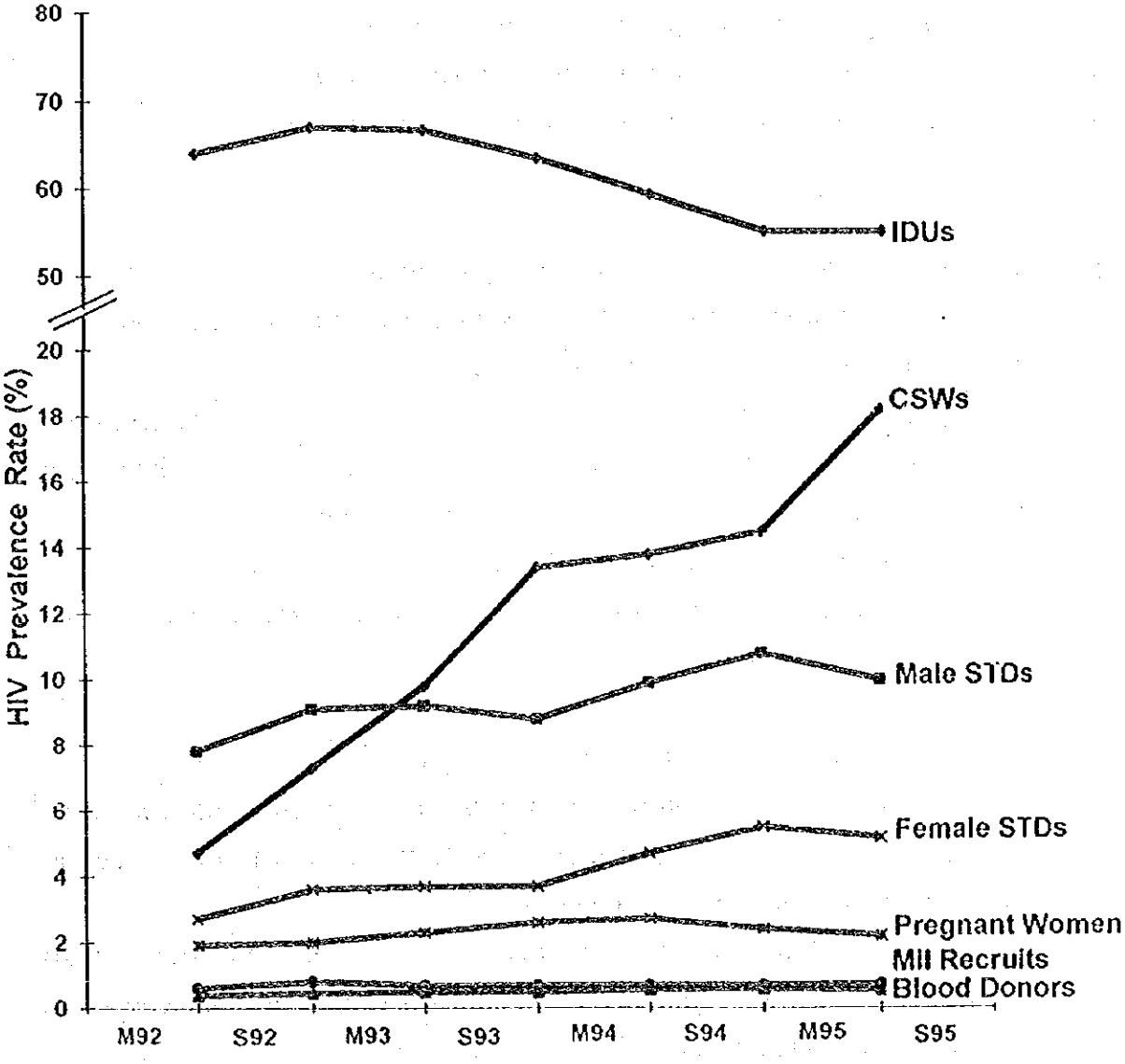
	84	85	86	87	88	89	90	91	92	93	94	95
ADULTS:												
Hetrosexual								-	3	52	131	358*
Homosexual/ Bisexual								-	-	1	1	2
Injecting Drug Users								6	38	79	124	247*
Blood Transmission/ Blood Products								-	-	1	2	2
Other								-	-	8	17	2
Not specified									-	1	7	59
CHILDREN:												
Parental											1	
Blood Transmission/ Blood Products												
Other											1	
Not specified											1	7
Total	-	-	-	-	-	-	-	6	41	142	285	677

Note: 1 case with sex unknown as well as risk group unknown reported during 1994 was not included in above table.

* 59 cases have hetrosexual as well as IDU risk/transmission categories

618 AIDS cases were reported during 1995.

HIV Seroprevalence Rates, Myanmar, 1992-95*



* "Same Site" running average (two most recent surveys)

COUNTER MEASURES AGAINST AIDS

1985	FOUNDATION OF TECHNICAL COMMITTEES FOR AIDS
1988	FIRST HIV POSITIVE PERSON DETECTED
1989	NATIONAL AIDS COMMITTEE FORMED
1990	FIRST MEDIUM TERM PLAN FORMULATED
1991	IMPLEMENTATION OF FIRST MEDIUM TERM PLAN
1994	FORMULATION OF SECOND MEDIUM TERM PLAN
1995	IMPLEMENTATION OF SECOND MEDIUM TERM PLAN

ACTIVITIES

§ PREVENTION OF HIV TRANSMISSION THROUGH SEX

DISTRIBUTION OF HIV/AIDS EDUCATION PAMPHLETS, POSTERS AND BOOKLETS THROUGH OUT THE COUNTRY.

IMPLEMENTATION OF COMMUNITY BASED AIDS PREVENTION ACTIVITIES IN COLLABORATION WITH NATIONAL NGOs SUCH AS MMCWA, MRCS, MMA AND MHA AND STD & MCH TEAMS

CONDOM PROMOTION AMONG THE HIGH RISK GROUP.

TRAINING OF BASIC HEALTH STAFF ON STD MANAGEMENT BASED ON SYNDROMIC APPROACH

§ PREVENTION OF HIV TRANSMISSION THROUGH BLOOD

ENHANCING THE EDUCATION ACTIVITIES IN COLLABOTION WITH LOCAL NGOs IN ORDER TO PREVENT TRANSMISSION OF HIV THROUGH UNSTERILE NEEDLES AND EQUIPMENT.

IDENTIFICATION AND TRAINING OF PEER LEADERS AMONG INJECTING DRUG USERS & DISSEMINATION OF EDUCATIONAL MESSAGES THROUGH THEM

PROVISION OF SAFE BLOOD SUPPLY

RATIONAL USE OF BLOOD

RECRUITING OF NON- REMUNERATED VOLUNTARY BLOOD DONORS.

DONOR DEFERRAL

BLOOD SCREENING BEFORE TRANSFUSION

§ TRANSMISSION OF HIV FROM INFECTED MOTHER TO FETUS

PROVISION OF WOMEN TO WOMEN EDUCATION PROGRAM THROUGH MCH ACTIVITIES, COUNSELLING AND PROPER CONDOM UTILIZATION, AND VOLUNTARY HIV TESTING

WOMEN SELF EMPOWERMENT

PRODUCTION OF HAND BOOKS ON HAPPY HEALTHY FAMILY LIFE PREPARED BY WOMEN THEMSELVES

§ REDUCTION OF SOCIAL IMPACT BY HIV INFECTION

PRODUCTION AND DISTRIBUTION OF HAND BOOK ON HOME CARE OF HIV/AIDS PATIENTS ADAPTED TO MYANMAR CULTURAL VALUES

HIV/AIDS PREVENTION AND CONTROL ACTIVITIES IN WORKPLACE

EDUCATION PROGRAM AT THE TEACHER'S TRAINING COLLEGES AND BASIC EDUCATION DEPARTMENT TARGETED FOR THE NEW GENERATION

§ RESOURCE MOBILIZATION/ CAPACITY BUILDING

NATIONAL AND INTERNATIONAL TRAINING WORKSHOP AND SEMINAR FOR BOTH HEALTH PERSONNEL AND NON-HEALTH PERSONNEL

RESEARCH, TECHNOLOGY TRANSFER AND TRAINING IN COLLABORATION WITH OTHER COUNTRIES.

TUBERCULOSIS SITUATION IN MYANMAR (1991 - 1995)

THE FOLLOWING INFORMATION BASED ON STATISTICS COLLECTED FROM (145) TOWNSHIPS WHERE TUBERCULOSIS CONTROL TEAMS ARE LOCATED

YEAR	SPUTUM +VE NEW CASES	REPORTED DEATHS
1991	11859	596
1992	12809	541
1993	13099	500
1994	10179	598
1995	14255	574

POINT PREVALENCE RATE (1972)	0.85/ 1000 POP.
POINT PREVALENCE RATE (1994)	1.04/ 1000 POP.

* SHORT COURSE CHEMOTHERAPY INITIATED IN (145) TOWNSHIPS.

* EXISTING FUNDING SOURCES

- GOVERNMENT

- WORLD HEALTH ORGANIZATION

- UNITED NATIONS DEVELOPMENT PROGRAMME

- SASAKAWA FOUNDATION

* AREAS FOR FUTURE COLLABORATION

^ PROVISION OF ESSENTIAL ANTI TB DRUGS.

^ PROVISION OF BASIC LABORATORY EQUIPMENTS.

^ PROVISION OF SIMPLE X-RAY MACHINES.

^ PROVISION OF TRANSPORT FACILITIES FOR IMPROVED MONITORING

Information on Blood Supply System and Safety Measures for Supplied Blood in Myanmar

by Da Shi Myat Tun Director National Health Lab: 21-3-96.

Introduction

Human blood is a substance of human orgin, taken and adminstered for therapeutic and diagnostic purposes. Blood transfusion is a medical undertaking involving two human beings (the Donor and the Recipient). Medical indications to intervene and control morbidity and mortality due to lack of blood volume or individual component of Blood product are common. Nevertheless the risk of immediate or delayed consequences especially with the mode of transmission of diseases should not be overlooked. Prevention of transmission of diseases by blood (accidental or induced) is of great importance and all available measures for safe blood provision are to be encouraged.

Blood Banking System

Therapeutic transfusion of blood is to be considered as one of the procedures of blood banking system. Blood and Blood components, being products of Human orgin, have to be collected, prepared or imported and stored. Distribution and Supplies to utilization centres are important network to be considered and developed.

Measures for safety count in every step of the procedure. With the aim of acquiring or collecting safe blood free from diseases, due emphasis of screening diseases at collection points is inevitably needed.

Central Blood Banking System in Myanmar

In Myanmar Blood Banking System was organized into central blood bank in 1962. The government assigned the Director -General of the Department of Health as the chairman of the Central Blood Bank Committe. National Blood Policy has been drafted and is under active consideration by the authority.

The Central Blood Bank Committe is involved in :-

1. Organization and promotion of voluntary Blood Donors.
2. Development of measures for Blood Safety and Storage.
3. To assist regional and local blood centres to have better organized development.

Directives on Donor Criteria for Selection, Therapeutic Blood transfusion, Storage and distributions, and other relevant operational and technical instructions were issued by the Central Blood Banks Committe.

The Central Blood Bank on it part takes great care in screening infectious diseases on blood donors. Blood products viz packed cells and platelets rich plasma are produced and distributed to hospitals in Yangon.

Blood Banking Organizations Committe are established in Township Levels and NGOs. viz. - Red Cross, Fire Brigade volunteers, are found to be actively involved.

Situation on Blood Therapeutic Demand

A range of 100,000 to 170,000 units of Blood is used annually as therapentic transfusion in whole of Myanmar.

Hospitals in Yangon and Mandalay, States and Divisional and District Hospitals together account to 65% of the total load. (ခန့်မှန်း)

Township Hospitals and some of the station hospitals are found to be involved in Emergency therapeutic transfusions.

Safety Measures for Supplied Blood

In general Screening of Blood for Parasitic infection (especially Malaria), Syphilitic Infection(VDRL) is a routine procedure for all facilitated Blood Banks.

The National Health Labortory, Serology Section and Central Malaria Department are involved in screening the blood on said diseases, for hospitals in Yangon and its vicinity.

Screening on HIV

In 1989, National Health Laboratory (NHL) was initially involved in screening HIV for Central Blood Bank. In 1992 Yangon General Hospital and Mandalay General Hospital were facilitated to conduct HIV testing. In 1993 and 1994 States and Divisional and district hospitals were extended to be facilitated for screening HIV. In 1995 Township hospitals were incorporated. A total of 140 Blood Transfusion Centres have been provided with, trainings and test kits to screen HIV infection for safe blood supply.

NHL still continues to render services in screening HIV infection for Blood donors for 6 Specialist and General Hospitals in Yangon and is the only reference lab. in the Department of Health for HIV confirmation.

All work on training and facilitation on HIV screening by NHL has so far been a success due to the collaboration and support of AIDS/STD control Project of the Disease Control Division, under the guidance of the Ministry of Health.

Screening on HBs Ag:

With the concern of the endemicityof hepatitis B in Myanmar NHL was involved in testing HBs Ag. since 1987. In 1989 NHL extended its scope of testing Blood donors of Central Blood Bank.

NHL has acquired the technical know-how in preparing simple agglutination test (RPHA)on monoclonal antibody and is in the position to limitedly distribute RPHA test to major blood centres.

Concerning the Importance of Hepatitis B infection, the Ministry of Health has instructed NHL to issue HBs Ag. screening facilities to a total of 34 Blood Centres since 1992 covering most of the district hospitals and some of the township hospitals

UNIVERSAL CHILD IMMUNIZATION PROJECT

Problem statement

60. Worldwide, the Expanded Programme on Immunization (EPI) has proven to be a high quality primary health care (PHC) service. As stated in the World Bank's World Development Report (1993), EPI remains the most cost-effective PHC programme. It is a life-saving activity and the building block for all other PHC services.

61. In Myanmar, EPI was initiated as early as 1978 in 104 townships as one of the major projects in the first Peoples' Health Plan (PHP). During the second PHP 1982-1986, 72 more townships were covered. At that time, EPI protected children with only four antigens: tuberculosis, diphtheria, whooping cough and tetanus. In 1985, at the 40th World Health Assembly, Myanmar made a commitment to UCI 1990, and began to immunize infants with all six antigens (adding polio and measles) in April 1986. By the end of 1990, Myanmar achieved 80 per cent coverage for all antigens in the operational areas of 210 townships. Coverage in other areas was almost negligible. Overall national coverage in 1990 was thus estimated at 68 per cent. Starting in 1993, efforts were made to extend UCI to the remaining townships to achieve the goal of at least 80 per cent coverage for the entire country by 1995.

62. Most of the uncovered townships are situated in the border areas of the country in Kachin, Chin, Shan, Kayin, Kayah and Rakhine States and Sagaing and Tanintharyi Divisions. There are four major constraints to extending coverage: 1) security problems, 2) unreliable or no electricity supply for the cold chain, 3) transportation difficulties, and 4) a shortage of human resources. Since 1990, the first constraint has been removed in many areas with the signing of ceasefire agreements between Myanmar authorities and various ethnic minority groups. The installation of 82 solar refrigerators has extended the cold chain to over 40 townships without electricity. By the end of 1993, coverage had been extended to a total of 68 new townships, with 53 reporting regularly. However, in many of these townships, services are still limited to the township centre and nearby villages due to transportation problems. It can take 5-10 days to reach some small villages. Plans of action are now being prepared to cover all areas. Special strategies will be needed for the hard-to-reach areas. With cooperation between the Department of Health and UNICEF and in close partnership with WHO, immunization will be initiated in virtually all townships by the end of 1995.

63. A major constraint in about 50 of the remaining townships is the lack of health staff. Human resource shortages are particularly severe in remote, ethnic minority communities of the border areas.

General objectives

64. Outcome objectives

To achieve, consolidate and sustain 90 per cent UCI coverage of all infants in all townships by the year 2000.

- To reduce measles deaths by 95 per cent and measles cases by 90 per cent of 1990 levels in all townships by the year 2000.

- To achieve or consolidate the elimination of neonatal tetanus by the year 2000.

- To eradicate poliomyelitis in all townships by the year 2000.

- To strengthen the national, sub-national and local capacity to develop a sensitive disease surveillance system that can be used as a management tool to investigate all suspected cases of poliomyelitis, identify high-risk areas of measles and NNT, control disease outbreaks and ensure rapid and efficient elimination or eradication measures.

- To create a universal awareness among parents, community leaders, service workers, NGO leaders and policy makers of the essential benefits of immunization.

Specific objectives

65. Output objectives

- To enable all townships to provide regular, fixed services for childhood immunization to all village tracts.

- To conduct campaigns in selected areas for children under one during the first two years, to raise coverage in these areas, and to create universal awareness of the benefits of immunization.

- To conduct two national immunization days per year within a short period at 4- to 6-week intervals for three years beginning in 1998, for the eradication of poliomyelitis.

- To add micronutrient supplementation (Vitamin A) to immunization services (EPI Plus).

- To identify high-risk areas for neonatal tetanus and immunize all women of childbearing age in those areas with tetanus toxoid 2 (TT2).

- To identify high-risk areas for measles and provide adequate treatment of measles cases to reduce fatality rates.

- To update township medical officers and basic health staff on UCI operations and train them on disease surveillance and monitoring.

- To monitor coverage and conduct yearly evaluations at the township level.

- To conduct at least two state or division coverage evaluation surveys per year, and a National Coverage Evaluation Survey in 1998.

- To conduct special surveys for polio eradication in 1998.

- To phase in national responsibility for the purchase of cold chain equipment and vaccines.

- To mobilize communities to maintain birth registers locally, create community awareness and increase informed demand for immunization services.

66. **Input objectives**

- To provide and replenish vaccines as well as cold chain and vaccination equipment in all townships.

- To provide transportation (primarily bicycles and outboard motors) for Midwives and Auxiliary Midwives to reach remote villages, as well as two trucks for vaccine distribution.

- To provide inputs for training community health workers in border areas.

- To provide inputs for state/division and national coverage surveys.

- To provide health staff with skills for immunization.

- To provide transportation costs for health staff.

- To provide costs for vaccine distribution.

- To provide trained technical staff at central, state/division and township levels for supervision, monitoring and training.

- To provide leadership skills to community members through NGOs.

- To provide media support for increased awareness of immunization benefits.

Strategies

67. **Universalization.** To achieve universal immunization, national disparity reduction will be emphasized. The goal is to reach 90 per cent coverage at national, state/division and township levels by the year 2000. The immunization policy must comply with the WHO recommended schedule, which includes BCG at or near birth (within two weeks); DPT and OPV at 6, 10 and 14 weeks of age; and measles at 9 months. The DPT/OPV series requires four weeks between doses. Specific strategies will be designed on the basis of accessibility.

68. **Involvement of private sector.** In accessible areas, which account for the majority of the population, the private sector will be mobilized to provide immunization services to complement the efforts of the public sector.

69. **Community and NGO's participation in underserved areas.** For hard-to-reach-areas, the following specific strategies are planned :

- Organizing group discussions under local leadership (AMWs, religious leaders, teachers, etc.) to strengthen community participation and social demand for services. Wherever they are present, the Myanmar Red Cross, the Myanmar Maternal and Child Welfare Association, the Kachin Baptist Convention and other NGOs will play an active role in promoting immunization.

- In the border areas, Auxiliary Nurse Midwives (ANMWs) will undergo UCI training in the context of the Border Areas Primary Health Care and Development Project. The first two services provided by this new category of locally recruited health workers will be health education and immunization.

- Special campaigns will be organized for remote areas. State and area immunization days will be held for low coverage and high-risk areas.

- Regular monitoring of coverage at all levels will be a key element to ensure targets are met and high coverage levels are sustained throughout the period of the Country Programme.

70. **Disease surveillance.** The routine monthly disease surveillance system must be strengthened to achieve the goals of measles control, neonatal tetanus elimination and poliomyelitis eradication. Improved community-level disease surveillance will strengthen community outreach and overall quality control.

71. **High-risk approach.** For the control, elimination and eradication of diseases, supplementary immunization activities for high-risk areas and population groups are essential. The "high-risk approach" will be used for defining special interventions.

72. **Campaign approach and National Immunization Days.** As a minimum, the campaign approach will be utilized in 1996 and 1997 to deliver appropriate EPI vaccines to 100 per cent of eligible children under one in selected areas. For a three-year period and pending support from Rotary or other donors for polio and other vaccines, national or sub-national immunization days can be conducted with the aim of expanding polio-free zones. In such campaigns, OPV will be given to all children under five, irrespective of their immunization status, within a short period of time, and repeated 4-6 weeks later. DPT and measles vaccines will also be administered, as well as TT for women in high-risk areas, either at the same time or during special sweeping operations in the weeks prior to national or sub-national immunization days.

Project activities

73. **Immunization targets.** All children under one and all pregnant women will be immunized. Midwives will organize their immunization activities in a planned and phased manner. Crash programmes will be carried out by volunteers in distant and remote areas. All townships with regular electricity or solar refrigerators will have fixed weekly services for immunization. All infants and pregnant women will be targeted. Three doses of polio will be

given to infants, starting at six weeks. In high-risk areas, TT2 will be provided to all women of child-bearing age.

74. **Multi-antigen immunization days.** Immunization days for polio eradication will be organized. For the first two years, they will be conducted in selected areas with high disease incidence. All children under one will receive DPT, polio and measles. TT will be given to women of child-bearing age. Starting in 1998, national immunization days covering the entire country will be organized. All children under five will be immunized against polio, and all children under one will receive the other antigens. These activities will depend on the availability of UNICEF Supplementary Funding and donor support for vaccines.

75. **Training.** Currently, UCI is being implemented in 263 townships. About 50 townships in the border areas in Kachin, Chin, Shan, Kayah and Rakhine States do not have sufficient Midwives to administer the vaccines. Locally recruited Auxiliary Midwives (AMWs) will be trained on immunization and primary health care. Ten-day training on immunization will also be conducted for AMWs. Also, Auxiliary Nurse Midwives (ANMWs) will be recruited from local communities, and their progressive training will be part of the Border Areas Primary Health Care and Development Project. One thousand ANMWs (20 per township) per year will be trained for five years. The first training for ANMWs will run for one month and can be complemented by a 3-month course at the township level during the rainy season. UNICEF will bear the training costs for ANMWs. Volunteer kits including vaccination equipment will also be supplied by UNICEF.

76. **Township level planning.** The State and Divisional Health Departments will provide mid-level management training. This training will be given to new Township Medical Officers (TMOs) who do not have prior UCI experience, and to TMOs responsible for townships where coverage rates are low (less than 80 per cent). The mid-level managers will be responsible for monitoring coverage, incidence of the EPI target diseases, cold chain status as well as for the training of Basic Health Staff (BHS) and volunteers.

77. **Advocacy, communication and community involvement.** UCI advocacy will target authorities at the highest level, enabling staff to focus on implementation at the state/division and township levels.

78. **Social mobilization efforts.** At the national level, a communication campaign will be organized using mass media such as daily TV spots and radio broadcasts. Spots will also be disseminated through video parlors, which are very popular and operate even in some of the most remote areas. National immunization days will function as a tool for social mobilization. In addition, videos will be used in focus group discussions and in debates to create awareness of and demand for immunization services and to promote community involvement, especially mothers.

79. **Community partnerships for immunization.** At the local level, TMOs will advocate for active community involvement, including township inter-sectoral health committees and NGOs, such as MMCWA, the Myanmar Red Cross and religious organizations. Village birth registers will be maintained by the local administration, NGOs or any interested volunteers. The township inter-sectoral health committee will be responsible for preparing plans of action for UCI e.g. delegating responsibility for immunization of all children in a specific area to a community volunteer or NGO member, and organizing health education for poor, uneducated and at-risk

families. Communication strategies will specifically target different ethnic groups, and audio-visual aids will be used whenever possible. Mothers will be empowered to participate in and even lead immunization activities.

80. **Supplies and equipment.** Together with parallel funds from Japan, UNICEF funds will cover all vaccines for routine immunization and, in the first year, all cold chain equipment. During the remaining four years, UNICEF will fund only 80 per cent of the costs needed for replenishing cold chain and injection equipment; 20 per cent will be borne by the the Department of Health. The Department of Health will continue to assume responsibility for maintaining cold chain equipment, including solar refrigerators. The implementation of immunization days will depend on the availability of Supplementary Funding which are needed for additional vaccines and social mobilization efforts.

81. **Support to monitoring and logistics.** UNICEF will place at least three national staff in locations around the country to support programme development and, in particular, to monitor the six states and one division with low coverage.

82. **Links between activities and between sectors.** Immunization activities are the foundation for all other primary health care services, such as control of diarrhoeal diseases and acute respiratory infections, nutrition, women's health and HIV/AIDS prevention, water supply and environmental sanitation. These services can be progressively introduced once infrastructures and capabilities are in place for immunization.

Implementation structure

83. In close collaboration with WHO, the programme will be implemented mainly by the Ministry of Health. National and international NGOs such as MMCWA, MMA, MRCS and Action Internationale Contre la Faim will be involved. Private practitioners will play a role in providing immunization services. Other governmental departments such as the General Affairs Department, the Immigration and Manpower Department, Road Transport, Myanmar Airways, and Myanmar Railways will be involved to ensure logistical efficiency and promote the long-term sustainability of UCI, including the Ministry for Progress of Border Areas and National Races and Development Affairs. The Ministry of Education will also be involved in disseminating immunization messages through school children and teachers to communities.

Indicators, mechanisms, responsibilities and schedule for monitoring, review and evaluation

84. Routine monitoring of coverage indicators and surveillance of the six target diseases will be conducted every month by TMOs, Health Assistants, Lady Health Visitors and Midwives at the field level. Review of strategies and micro-planning will also be carried out at the township level. The Central EPI Unit will be responsible for supervision and yearly evaluations. Major milestones will be monitored by the Department of Health and UNICEF. A joint Tripartite Review with the Ministry of Health, WHO and UNICEF will be conducted in 1998 to assess national coverage.

85. Indicators of success

- Proportion of children immunized against diphtheria, pertussis, and tetanus (DPT3) before their first birthday.
- Proportion of children immunized against measles before their first birthday.
- Proportion of children immunized against poliomyelitis (OPV3) before their first birthday.
- Proportion of children immunized against tuberculosis before their first birthday.
- Proportion of pregnant women immunized against tetanus (TT2).
- Proportion of children protected against neonatal tetanus through immunization of their mothers.
- Annual number of cases of neonatal tetanus.
- Proportion of districts reporting neonatal tetanus cases (including districts reporting zero cases).
- Annual number of deaths due to measles in children under 5 years of age.
- Annual number of measles cases.
- Annual number of cases of poliomyelitis.
- Proportion of districts reporting poliomyelitis cases (including districts reporting zero cases).

Supplementary Funds

(US$ '000)

S/N	Project	1996	1997	1998	1999	2000	Total
1	UCI Project	900	900	900	890	890	4,480
2	CDD/ARI Project	350	350	350	350	350	1,750
3	Women's Health Project	120	120	120	120	120	600
4	HIV/AIDS Prevention Project	250	250	200	180	180	1,060
5	Nutrition Project	350	350	470	470	430	2,070
6	Border Areas' Primary Health Care and Development Project	200	200	200	220	220	1,040
Total SF		2,170	2,170	2,240	2,230	2,190	11,000

National Budget

Kyats (million)

S/N	Project	1996	1997*	1998*	1999*	2000*	Total
1	UCI Project	2.9	2.9	2.9	2.9	2.9	14.5
2	CDD/ARI Project	1.5	1.5	1.5	1.5	1.5	7.5
3	Women's Health Project	178.0	178.0	178.0	178.0	178.0	890.0
4	HIV/AIDS Prevention Project	4.1	4.1	4.1	4.1	4.1	20.5
5	Nutrition Project	26.3	26.3	26.3	26.3	26.3	131.5
6	Border Areas' Primary Health Care and Development Project	37.5	42.0	43.0	43.0	43.0	208.5
Total		250.3	254.8	255.8	255.8	255.8	1,272.5

* = *Projection*

Besides this allocation in Kyats, the Ministry of Health's input in foreign currency is estimated at around US$ 519,000 per year.

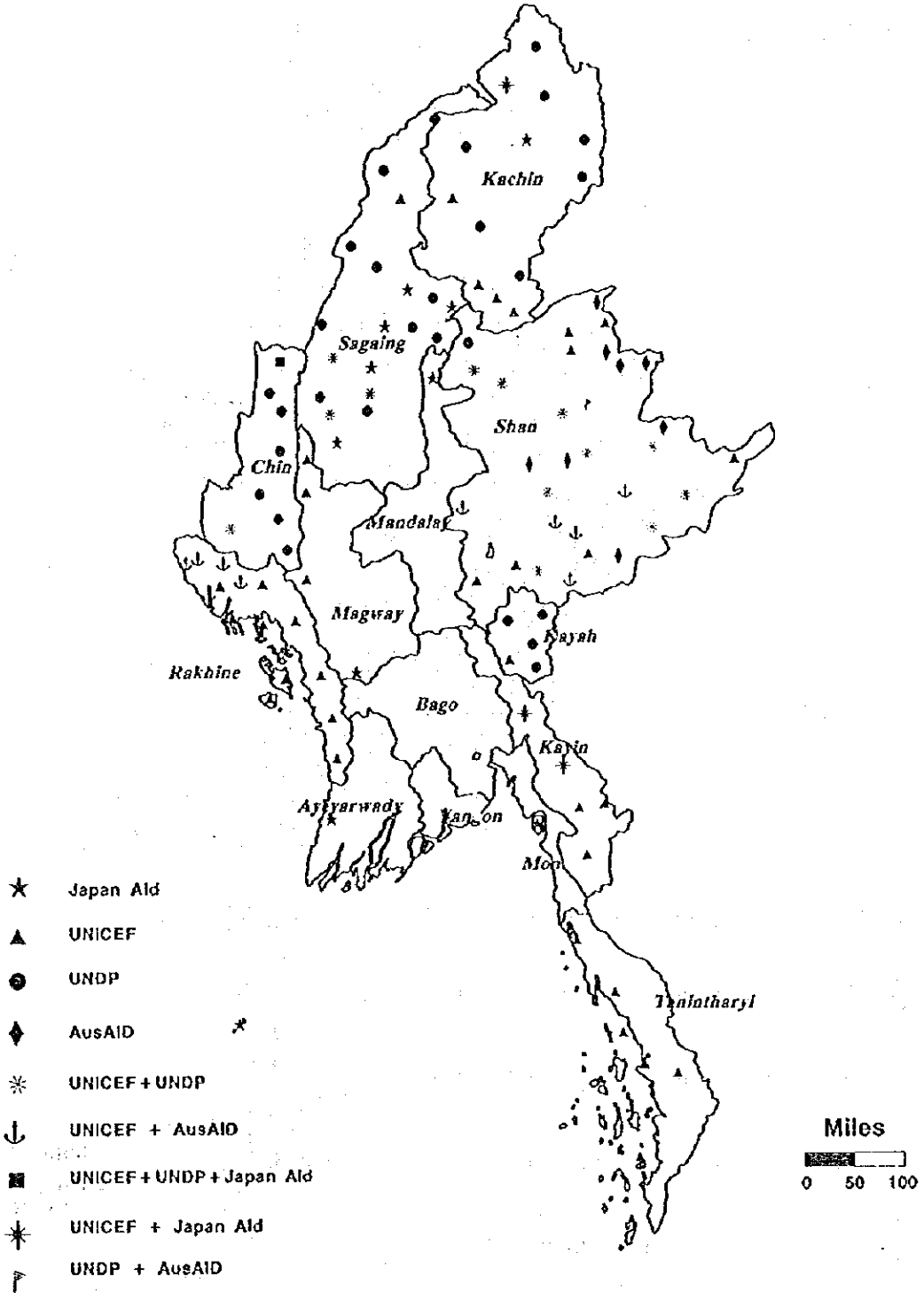
BUDGET - UNICEF INPUTS

General Resources

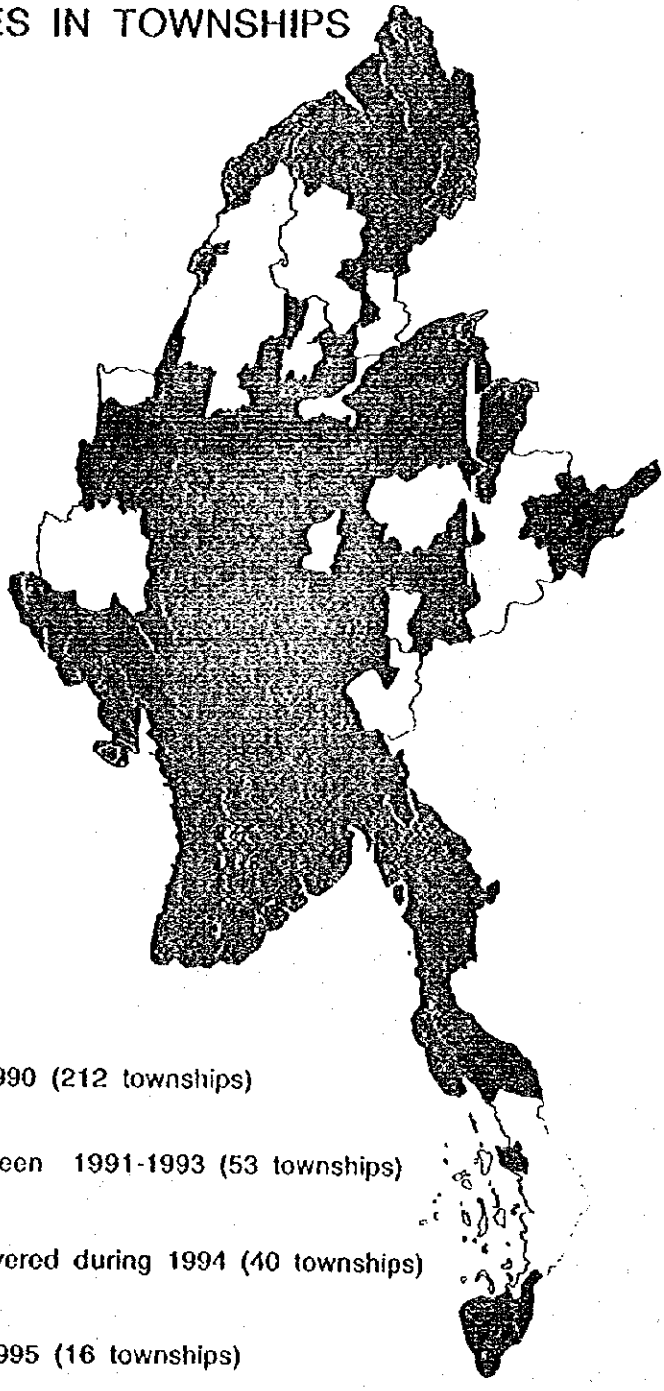
(US$ '000)

S/N	Project	1996	1997	1998	1999	2000	Total
1	UCI Project	1,390	1,390	1,390	1,390	1,390	6,950
2	CDD/ARI Project	310	310	350	350	350	1,670
3	Women's Health Project	120	120	130	130	130	630
4	HIV/AIDS Prevention Project	190	190	140	140	140	800
5	Nutrition Project	490	490	490	460	460	2,390
6	Border Areas' Primary Health Care and Development Project	100	100	100	130	130	560
	Total GR	2,600	2,600	2,600	2,600	2,600	13,000

Geographical Distribution of Solar Cold Chain



OPERATIONALIZATION OF UCI SERVICES IN TOWNSHIPS (1990-1996)



Covered in 1990 (212 townships)

Covered between 1991-1993 (53 townships)

Additional Covered during 1994 (40 townships)

Covered in 1995 (16 townships)

To be covered in 1996 (3 townships)

Miles

0 50 100

SURVEILLANCE OF ACUTE FLACCID PARALYSIS (AFP)

EXAMPLE OF FIELD GUIDE

for Supplementary Activities

Aimed at Achieving

Polio Eradication

DRAFT VERSION

Union of Myanmar

20 March 1996

afpguid3.doc
20 March 1996

1. Surveillance: General Concepts

What is disease surveillance?

Disease surveillance means collecting and analyzing information about the cases of a disease as a basis for planning disease control activities.

How are EPI target diseases reported in Myanmar?

Monthly Reporting: in Myanmar, EPI target diseases should be reported by every health facility on a monthly basis and include the number of cases of polio, measles, tetanus, neonatal tetanus, pertussis, Diphtheria, and tuberculosis. Township Medical Officers should compile the reports from their township and send a copy to the State/Division Health Office and the Central Epidemiology Unit in Yangon at the same time. If no cases of the target diseases are seen, the health facilities should state that '0 cases' were seen (zero reporting).

Two additional types of surveillance must be established for the polio eradication programme in Myanmar:

1) Immediate AFP Reporting: starting in 1996, each case of acute flaccid paralysis (AFP), must be immediately reported and investigated to determine whether or not it is due to polio (see below).

2) Active Surveillance: Township Medical Officers (TMOs) and State/Division Epidemiologists must conduct regular (i.e. weekly) visits to the major pediatric hospitals and general hospitals with pediatric wards to search for and investigate any unreported cases of AFP.

2. AFP Surveillance:

Why is AFP Surveillance Important?

To achieve and confirm polio eradication in Myanmar, every case of Acute Flaccid Paralysis (AFP) must be immediately reported. The information is needed to:

- monitor progress towards the eradication goal,
- identify areas at high risk for cases, and,
- allow immediate investigation of cases.

Acute Flaccid Paralysis (AFP) is not a disease, but a nonspecific diagnosis which can have one of several underlying causes. To ensure that all polio cases are detected, all cases of AFP are considered to be 'suspected polio' until they have been investigated and either confirmed as polio or discarded as non-polio AFP.

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An AFP reporting system must be:
1. *rapid*: resulting in immediate investigation and action;
2. *complete*: detecting all cases of the target disease; and
3. *accurate*: supplying correct case information and diagnoses.

What is AFP? Standard Case Definition

The surveillance case definition for polio eradication is:

> **Acute Flaccid Paralysis (AFP): any case of Acute Flaccid Paralysis (AFP) in a child under 15 years of age, including Guillain-Barré Syndrome, for which no other cause is apparent.**

How are AFP cases rapidly reported? Immediate Notification

When a case of AFP is detected in a township, state/divisional or national hospital, the person responsible for AFP reporting must send an 'AFP Immediate Report' to the State/Division Epidemiologist and the Central Epidemiology Unit as soon as possible.

This is an example of the information that should be included in an AFP Immediate Reporting Form:

AFP IMMEDIATE REPORTING FORM

Reporting Site Information

1. Reporting Site:_____

2. AFP Reporter:_____

3. Date of Report: __/__/__

Case Information

1. Name of AFP Case:_____

Age:___years___months Sex: male___ female:___

2. Date of Onset of Paralysis: __/__/__

3. Current Location of Case:_____

4. Mother's Name:_____ Father's Name:_____

5. Mother's Address:_____

How are AFP Cases Investigated and Followed?

Each case of AFP must be fully investigated with 2 stool samples for laboratory examination and a follow-up examination to look for residual paralysis 60 days after the onset of paralysis. The case investigation guidelines are found at the end of this guide.

As soon as an AFP case is reported to a State/Division Health Office, an identification number should be assigned to the case, and the name, sex, age, location, date of onset and date of report should be entered on a Line Listing. The other information will be entered as the investigation proceeds.
AFP Line Listings are used to:

1) ensure that all cases are fully investigated and have a follow-up exam, and
2) monitor the performance of the investigating units.

All States and Divisions will keep a line listing of AFP cases and send a copy to the Central Epidemiology Division in Yangon every 6 months. The Central Epidemiology Division will maintain a line listing of all cases in the country.

An example of the AFP Line Listing form that will be used by States and Divisions is attached to the AFP case investigation guide.

How are AFP Case Investigation Numbers Assigned?

Every AFP case must have a unique case investigation number that can be used to follow-up the case and track the stool samples and other information.

The case investigation number will consist of twelve digits:
Example: *### - ## - ## - ## - ###*

The first three digits will identify the country, i.e. Myanmar (MMR); the next two digits identify the State/Division where the case was detected and investigated; the next two digits indicate the township where the case was detected; the next two digits identify the year in which the case is reported (e.g. 96, 97, 98 etc.); the next three digits identify the number of the case detected in that State/Division in the calendar year (for example, the the first case in each State/Division will be 001, the second case will be 002, etc.).

Example of Case Identification Numbers: MMR-02-03-96-001

This is a Case Identification Number for the first case in 1996 from the township of {XXXXXXXXX} in the Division of {YYYYYY} in the Union of Myanmar.

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The two-digit identification numbers for the 16 State and Division are listed in Annex 1, and the two-digit identification numbers for each township are listed in Annex 2.

How is complete AFP reporting ensured? Zero Reporting:

To confirm that all health facilities are looking for AFP cases, 'zero-reporting' must be ensured. Even if no AFP cases are seen, a report must be sent each month stating zero cases.

3. Active Surveillance and Zero Reporting of AFP Cases:

Because many AFP cases may not be reported on time for a full investigation, TMO's and State/Division Epidemiologists must conduct weekly visits to the major hospitals in their areas (especially Pediatric Hospitals and general hospitals with pediatric wards). During these visits they should search for unreported cases of AFP by asking physicians and nurses and reviewing the outpatient and inpatient registers.

The unreported cases should be immediately investigated and stool samples should be collected.

Step 1: Decide Which Health Facilities Will be Active Surveillance Sites

Any health facility that sees pediatric patients (children 0-15 years) as either inpatients or outpatients should be included in the active surveillance system. Active Surveillance sites will eventually include national, state/division and township hospitals.

TMO's and State/Division staff should complete "Table 1: AFP Active Surveillance Sites and Designated Personnel" to identify the facilities that should be in the AFP Active Surveillance System.

Step 2: Designate the Person Responsible for Conducting the AFP Active Surveillance in Each State/Division and Township:

Each State, Division and Township must designate someone to conduct the active surveillance and establish a means of communication for sending reports to the Central Level.

The person responsible for AFP active surveillance must:

1) immediately report every AFP case to the State and Central Epidemiology Unit, *and*

2) conduct an active search for AFP cases every week, and report the result to the State/Division Health Unit, *and*

3) investigate each AFP case, including the collection of two stool samples and a clinical follow-up exam 60 days after the onset of paralysis.

TMOs and State/Division Epidemiology personnel should complete Table 1 and send a copy to the Central Epidemiology Unit.

Table 1: State/Division AFP Active Surveillance System: Active Surveillance Sites and Designated Personnel

Active Surveillance Site (name & location)	Person Responsible for Conducting the Active Surveillance
State/Division Hospital	
1._____	_____
2._____	_____
Township Hospitals	
1._____	_____
2._____	_____
3._____	_____
4._____	_____
5._____	_____
6._____	_____
7._____	_____
8._____	_____
9._____	_____
10._____	_____

Step 3: Define the Responsibilities at Each Level

The State/Division and TMO's will investigate each case of AFP, collect stool samples and complete the 60 day follow-up exam. The State/Division epidemiology personnel should maintain the line listing of AFP cases.

The following table summarizes the responsibilities of personnel at each level:

Level	Responsibilities
Township hospitals, RHC's, etc	-- Immediately notify TMO's of AFP cases -- Send a monthly report of AFP cases to TMO and Central Epidemiology (zero report if no cases)
TMO's	-- Immediately report all AFP to State/Division -- Investigate AFP, collect specimens, perform follow-up examinations -- Conduct weekly active surveillance visits
State or Division hospitals	-- Immediately report AFP to State/Division Health Units -- Send monthly report of AFP to TMO and Central Epidemiology Unit (zero report if no cases) -- Assist TMO's with weekly active surveillance
State or Division Epidem-iologists	-- Assist TMO's with all AFP investigations -- Assign identification number to each AFP case -- Maintain a line listing of AFP cases -- Send copy of each AFP investigation to Central Epidemiology and line listing every 3-6 months
National hospitals	-- Immediately notify State/Division AFP cases -- Send monthly zero report of AFP to State or Division -- Assist TMO's with weekly active surveillance
Central Epidemiol. Unit (DOH)	-- Assist State/Division AFP investigations -- Maintain national line listing of AFP cases -- Coordinate stool sample results with National Polio Laboratory -- Collect and compile monthly AFP 'zero reports' from States/Divisions and forward to WHO.

Step 4: Monitor the Performance of the Monthly Zero Reporting:

For the surveillance system to work effectively, all monthly 'zero reports' must be sent on time. To monitor how well the 'zero reporting' system is working, State/Division Health Units and the Central Epidemiology Unit will check:

1) Completeness of reporting and
2) Timeliness of reporting.

The following form could be used at all levels to monitor the reporting performance. This information will help focus efforts to improve reporting.

Monitoring the Timeliness and Completeness of Monthly Zero Reports

State/Division: _____

Person Responsible: _____

Reporting Sites	Month											
	J	F	M	A	M	J	J	A	S	O	N	D
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												
Total Number of Sites Reporting												
Total Sites Reporting on Time												

NOTES:

Month: the date that the report for that month was received.

Total Number of Sites Reporting:

afpguid3.doc
20 March 1996

- the number of sites that filed a report for that month.

Total Number of Sites Reporting on Time:

- the total number of sites whose monthly report was received on time.

Example of Forms and Method for

AFP Case Investigation and Follow-up

Introduction:

To achieve and confirm polio eradication, each case of 'acute flaccid paralysis' must have a full investigation and follow-up examination to determine whether or not it is due to polio.

Who Will Conduct the AFP Case Investigations?

AFP investigations will be conducted by the Township Medical Officer (TMO) with assistance from the Division or State Epidemiologists.

For each AFP investigation, the TMO and State/Division must:

1) conduct the initial investigation and decide if the patient has 'acute flaccid paralysis'
2) collect 2 stool specimens and send to the Poliovirus Laboratory in Yangon by reverse cold chain,
3) conduct a follow-up clinical examination 60 days after the onset of paralysis, and,
4) enter the information on the line listing and send a copy of the case investigation form to the Central Epidemiology Unit.

How are AFP Cases Investigated?

This paper contains examples of the forms which should be used to investigate and monitor AFP cases:

1) State/Division AFP Line Listing: the line listing is used to follow AFP cases during investigation and follow-up.

2) AFP Case Investigation Form: the AFP form is used collect the necessary information on each case.

An example of each form has been attached and will be explained in this guide. The steps that are needed to conduct a full AFP case investigation are explained below:

Step 1: Assign a Case Identification Number to the AFP Case:

Every AFP case must have a unique case investigation number that can be used to follow-up the case and track the stool samples and other information. Refer to Page 4 and to Annex I and Annex II for detailed instructions on the

assignment of the Case Identification Number. The Case Identification Number should be assigned at the State/Division level.

Step 2: Enter the Case on the State/Division AFP Line Listing:

Write the identification number, name, sex, age, location, date of onset and date of report on the AFP Line Listing (see attached line listing). The other information on the line listing will be entered as the investigation proceeds.

Step 3: Immediately Examine the Child

The TMO should investigate the AFP case as soon as possible, usually within 24-48 hours. The investigator must go to the hospital or village where the child is located. The investigator should introduce himself to the child's mother and explain that children with AFP must be examined to see if they have polio.

The investigator should then interview the mother and examine the child. The 'AFP Case Investigation Form' should be used to collect the information.

The following information explains how the attached example of an AFP Investigation Form is to be completed:

Section 1. Report/Investigation Information:

Reporting Site: record the health facility that reported the patient to the TMO.

Reporting Date: write the date that the case was reported to the TMO.

Date of Investigation: write the date that the TMO first examined the patient.

Section 2. Case Identification: This section will be used to find the patient for the follow-up exam 60 days after the onset of the paralysis. Complete all questions, especially:

Permanent Address: record the place where the child can be found for the follow-up clinical examination.

Section 3. Hospitalization: Ask the mother if the child was taken to hospital for the paralysis. If 'yes' (the patient was hospitalized), fill in the information on the date, place and doctor.

Section 4. Immunization History:

Total OPV doses received through routine EPI: ask how many doses of oral polio vaccine the child was given through the routine EPI programme. The immunization card can be inspected if it is available.

Total OPV doses received during NIDs: ask how many total OPV doses the child received during National Immunization Days.

Date of the last dose of OPV (routine or NID): record the last date that the child received any dose of polio vaccine. If the mother doesn't know the exact date, you should estimate it.

Section 5. Signs and Symptoms:

Date of Onset of Symptoms: ask the mother if the child was ill immediately before the paralysis began. Symptoms such as fever or diarrhea may have begun a number of days before the paralysis. Record the day that the child became ill.

Symptoms at Onset: question the mother about fever, muscle pains, headache, and cough/cold. Record 'yes', 'no' or 'unknown' for each.

Any Injections (30 days): ask the mother if the child was given any injections in the month before the paralysis began.

Site of Paralysis: examine the child and determine where the weakness is. Record each arm or leg that is paralyzed. If the face or respiratory muscles are involved, describe the site under 'other'.

Date of Onset of Paralysis: record the first day that the mother noticed the child had weakness in an arm or a leg.

Acute Paralysis: answer 'yes' if the paralysis began in the last 2 months, otherwise answer 'no'.

Flaccid Paralysis: examine the child and determine whether the weakness is 'floppy' or 'rigid'. Answer 'yes' if the weakness is 'floppy', otherwise 'no'.

Asymmetrical Paralysis: examine the child and determine if the paralysis is not equal in both arms and legs. If the paralysis is not equal on both sides, answer 'yes'.

Ascending Paralysis: ask the mother if the paralysis began in the hands and moved up the arms (or in the feet and moved up the legs). Answer 'yes' if the paralysis moved up the limbs, otherwise answer 'no'.

Sensation Loss: gently touch or pinch the skin of the weak arm or leg and watch the child's face to see if it hurts. If the child cannot feel the touch, answer 'yes'.

Step 4. Collect 2 Stool Specimens and Send to National Polio Laboratory in Yangon:

If the child has AFP, 2 stool specimens must be collected for examination for poliovirus.

To maximize the chance of finding poliovirus, 2 stool specimens should be collected 24-48 hours apart, within 14 days of the onset of paralysis.

Section 6. Stool Specimen Collection

Write the date that each specimen was collected in this section.

The following guidelines should be observed when collecting, storing and transporting the specimens:

- collect 2 specimens 24-48 hours apart.
- each specimen should be about 1/2 the size of an adult's thumb.
- each specimen should be put in a separate clean screw-topped container (Use any small, dry, clean, leakproof, capped container).
- on each container write: name of the patient, address, date of paralysis and date specimen was collected.
- store samples in a refrigerator or coldbox (0-8°C).
- when both specimens have been collected, deliver the specimens and a copy of the AFP Investigation Form as quickly as possible to Yangon by 'reverse cold chain' (use a vaccine carrier, if necessary, and keep the specimens surrounded by ice or 4 ice packs).

After the initial investigation and collection of stool samples, thank the mother and tell her that you will return 60 days after the onset of paralysis to conduct a follow-up exam.

Step 5. Conduct a Search for Additional Cases:

Before leaving the hospital or village of the AFP case, ask the doctors, nurses or villagers if there are other cases. If other cases of AFP are found, enter their names on the Line Listing, conduct a case investigation and collect 2 stool specimens.

Step 6. Conduct a 60 Day Follow-up Examination:

The purpose of the follow-up examination is to determine if the child still has paralysis.

> **If there is residual paralysis 60 days after the onset of the paralysis, the AFP is probably due to polio.**

To conduct a follow-up exam, the TMO must examine the child and interview the mother again. First, interview the mother about whether the paralysis has gotten better. Secondly, observe the child to see how he/she moves the paralyzed arm or leg, how well he/she can walk, and if there is atrophy of the muscles. Thirdly, examine the child to see if the paralysis is flaccid and if the sensation is normal.

Section 7 on the attached example of the AFP Case Investigation Form shows the information that should be collected:

Section 7, Follow-up Examination:

> 60 Day follow-up Exam Completed: if the child is located, circle 'yes ' and write the date. If the exam could not be done write the reason (child moved away, child absent, etc). If the child has died, write the date of death.
>
> Residual Paralysis Present: ask the mother and examine the child to determine if there is still a flaccid paralysis. Circle 'yes' if there is paralysis, and circle the limbs that are affected.
>
> Ability to Walk: have the child walk 10 meters, if possible, and note if he/she 'cannot walk', 'walks with a limp', or 'walks normally'.

Step 7. Complete the State/Division AFP Line Listing:

Use the information from the 'AFP Case Investigation Form' to complete the State/Division AFP Line Listing for the patient.
On the line listing enter the date and result of the follow-up exam. (If the follow-up exam was not conducted, indicate the reason under the heading 'Follow-up Result').

Final Classification: there are four criteria that will be used to classify an AFP case as 'confirmed polio':

1) wild poliovirus is found in the stool examination, or
2) there is residual paralysis 60 days after onset, or
3) the child died before the follow-up exam, or
4) the child was lost to follow-up.

If any of these criteria are true, the case should be classified as 'confirmed polio'. It may not be possible to confirm a case until the results of the stool specimens are available. This may take 2-3 months.

Step 8. Send a Copy of the Line Listing and Case Investigation Forms to the DOH:

When the follow-up exam has been completed and the information has been recorded on the State/Division AFP Line Listing, a copy of the line listing and case investigation forms should be sent to the DOH. All sections of the form should be completed.

Annex
Assignment of AFP Case Identification Numbers

The case investigation number will consist of twelve digits:
Example: *### - ## - ## - ## - ###*

The first three digits will identify the country, i.e. Myanmar (MMR); the next two digits identify the State/Division where the case was detected and investigated; the next two digits indicate the township where the case was detected; the next two digits identify the year in which the case is reported (e.g. 96, 97, 98 etc.); the next three digits identify the number of the case detected in that State/Division in the calendar year (for example, the the first case in each State/Division will be 001, the second case will be 002, etc.).

Example of Case Identification Numbers:

MMR-02-03-96-001

This is a Case Identification Number for the first case in 1996 from the township of (XXXXXXXXX) in the State of Kayah in the Union of Myanmar.

MMR-13-07-97-004

This is a Case Identification Number for the fourth case in 1997 from the township of (XXXXXX) in the State of Shan (East) in the Union of Myanmar.

The two-digit identification numbers for the 16 State and Division are listed in Annex 1, and the two-digit identification numbers for each township are listed in Annex 2.

Annex I
Myanmar State/Division Codes

The following 2-digit codes should be used to indicate the State/Division where the AFP case was detected when assigning Identification Numbers to AFP cases.

Numeric Code	Name of State/Division
01	Kachin
02	Kayah
03	Kayin
04	Chin
05	Sagaing
06	Tanintharyi
07	Bago
08	Magway
09	Mandalay
10	Mon
11	Rakhine
12	Yangon
13	Shan (East)
14	Shan (North)
15	Shan (South)
16	Ayeyarwady

Every AFP case must have a unique case investigation number that can be used to follow-up the case and track the stool samples and other information.

Annex II
Myanmar Township Codes

The following 2-digit codes (Township Serial Number) should be used to identify the township where the AFP case was detected when assigning Identification Numbers to AFP cases.

State/Div. Serial Number	State/Division	Township Serial Number	Township
01	Kachin	01	
		02	
		03	
		04	
		05	
		06	
		07	
		08	
		09	
		10	
		11	
		12	
		13	
		14	
		15	
		16	
		17	
		18	
02	Kayah	01	
		02	
		03	
		04	
		05	
		06	
		07	

03	Kayin	01	
		02	
		03	
		04	
		05	
		06	
		07	
04	Chin	01	
		02	
		03	
		04	
		05	
		06	
		07	
		08	
		09	
05	Sagaing	01	
		02	
		03	
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		34	
		35	
		36	
		37	
		38	
06	Tanintharyi	01	
		02	
		03	
		04	
		05	
		06	
		07	
		08	
		09	
		10	
07	Bago	01	
		02	

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		28	
08	Magway	01	
		02	
		03	
		04	
		05	
		06	
		07	
		08	

		09	
		10	
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09	Mandalay	01	
		02	
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10	Mon	01	
		02	
		03	
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		05	
		06	
		07	
		08	
		09	
		10	
11	Rakhine	01	
		02	
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12	Yangon	01	
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		39	
		40	
		41	
		42	
		43	
13	Shan (East)	01	
		02	
		03	
		04	
		05	
		06	
		07	
		08	
		09	
14	Shan (North)	01	
		02	
		03	
		04	
		05	
		06	
		07	
		08	
		09	
		10	

		11	
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		14	
		15	
		16	
		17	
		18	
		19	
		20	
		21	
		22	
15	Shan (South)	01	
		02	
		03	
		04	
		05	
		06	
		07	
		08	
		09	
		10	
		11	
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		13	
		14	
		15	
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		17	
		18	
		19	
		20	
		21	
16	Ayeyarwady	01	

		02	
		03	
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Division/State:_____ **EXAMPLE: AFP Case Investigation Form** ID No:_____

1. Report/Investigation Information:
Name of Investigator:_____
Reporting Site:_____ Date of Report: __/__/__
Place of Investigation:_____ Date of Investigation: __/__/__

2. Case Identification:
Patient's Name:_____
Sex: ___ Date of Birth: __/__/__ Age: years___ months___
Mother's Name:_____ Father's Name:_____
Permanent Address (to find child for followup exam):_____
(include village/township):_____

3. Hospitalization: Yes/No Date of Hospitalization: __/__/__
Name of Hospital:_____ Doctor's Name:_____

4. Immunization History:
Total OPV doses received through routine EPI: _____
Total OPV doses received through NIDs: _____
Date of last dose of OPV (routine or NID): __/__/__

5. Signs and Symptoms:
Date of Onset of Paralysis: __/__/__
History in month before parallysis (circle):
Number of days from onset to maximum paralysis:___

Cough/cold:	Yes/No/Unknown	Fever on the day of onset:	Yes/No/Unknown
Any Injections:	Yes/No/Unknown	Acute paralysis:	Yes/No/Unknown
Symptoms (circle):		Flaccid paralysis:	Yes/No/Unknown
Diarrhea:	Yes/No/Unknown	Asymmetrical paralysis:	Yes/No/Unknown
Muscle Pains:	Yes/No/Unknown	Ascending paralysis:	Yes/No/Unknown
Headache:	Yes/No/Unknown	Sensation loss:	Yes/No/Unknown
		Other:_____	

Site of Paralysis (circle): right arm / left arm / right leg / left leg / other(describe):_____

6. Stool Specimen Collection:

	Date Collected	Date Sent	Date of Result	Laboratory Result
Stool 1	__/__/__	__/__/__	__/__/__	
Stool 2	__/__/__	__/__/__	__/__/__	

7. 60 Day Follow-up Examination: Yes/No Date: __/__/__ if no, why?_____
Died? (circle): Yes/No if yes,date: __/__/__ If died, cause:_____
Residual paralysis present: Yes/No
Site of Paralysis (circle): right arm / left arm / right leg / left leg / other(describe):_____
Ability to Walk (circle): cannot walk / walks with a limp / walks normally
Comments:_____
Name of examiner:_____

8. Final Classification:

	Confirmed Polio: Yes/No	If Discarded, why?
Criteria:	1. Virus Isolation: ___	1. Guillain-Barre ___
	2. Residual Paralysis: ___	2. Transverse Myelitis: ___
	3. Died: ___	3. Traumatic Neuritis: ___
	4. Lost to Followup: ___	4. Other:

Division/State:_____ Division/State AFP Line Listing Epidemiology Officer:_____

Period of Report:__/__/__ to __/__/__

ID No.	Name of Case	Date of Birth	Sex (M/F)	Address (village/district)	Date of last OPV	*Date of						*Follow-up Exam Result	Stool Result	*Final Classification
						Onset	Report	Investigate	1st Stool	2nd Stool	Follow-up			
1														
2														
3														
4														
5														
6														
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Dates: Onset = onset of paralysis; Report = report to TMO; Investigate = date investigated; 1st/2nd Stool = stool samples collected; Follow-up = 60 day exam

Follow-up Exam Result: no paralysis / residual paralysis / lost to follow-up / died Stool Results: positive or negative for wild poliovirus

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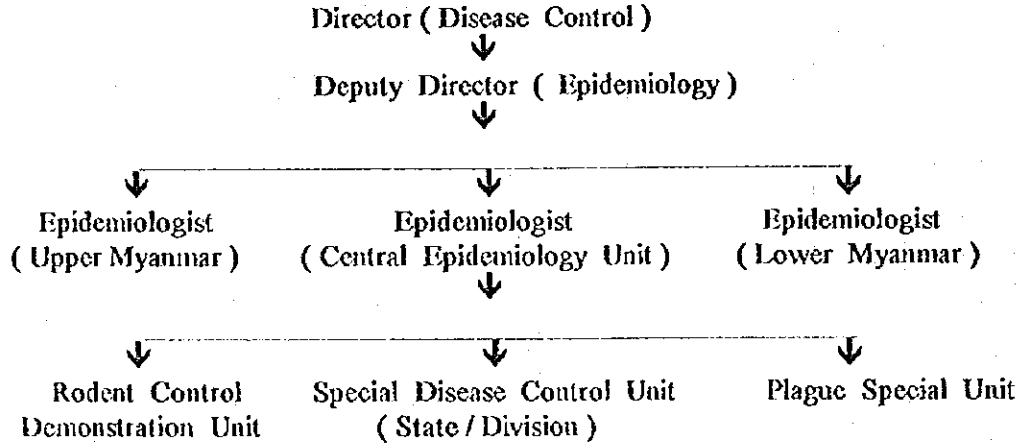
Epidemiological Surveillance on Immunizable Diseases In Myanmar

Introduction

Communicable diseases still constitute a major public health problem in Myanmar. Epidemiological surveillance plays an essential role in health services in the control and prevention of communicable diseases.

Organization



In the Department of Health, under the Director (Disease Control), Deputy Director (Epidemiology) is responsible for the prevention and Control of Communicable Diseases.

Central Epidemiology Unit was established under Deputy Director (Epidemiology). Surveillance, Prevention and Control of Communicable and Non-communicable diseases and epidemiological investigation of outbreak were carried out by the unit, (3) Epidemiologists (one at Central Epidemiology Unit, one in the Lower Myanmar and an other one in the Upper Myanmar) are responsible for those activities.

Special Disease Control Units were formed at States and Divisions, headed by an assistant epidemiologist. The unit of the principle core in the surveillance, prevention and control of diseases, is technically under the guidance of Central Epidemiology Unit.

Rodent Control Demonstration Unit at Yangon and Plague Special Unit at Mandalay were established. These units work in their own specific field under respective team leaders.

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Principle Epidemic Diseases

Cholera, Plague, Dengue Haemorrhagic Fever and HIV / AIDS are notifiable diseases in Myanmar.

Diseases Under National Surveillance

This includes (17) diseases listed below which are the Public Health Problems.

1. Diarrhoea
2. Dysentery
3. Food Poisoning
4. Typhoid and Paratyphoid
5. Viral Hepatitis
6. Poliomyelitis
7. Diphtheria
8. Whooping Cough
9. Measles
10. Neonatal Tetanus
11. Other Tetanus
12. Meningitis / Encephalitis
13. A R I
14. Rabies
15. Snake Bites
16. Malaria
17. Tuberculosis

Type of Surveillance for E P I diseases

Surveillance of EPI Target diseases was done at all level by following means.

(1) Establishment of case definition.

Case definition for EPI target diseases were published and train all health workers. At current situation EPI target diseases are diagnosed by clinical picture of disease Laboratory confirmation was done occassionally depending availability of facilities

(2) Surveillance through routine reporting

At township, EPI target diseases are compiled and reviewed every monthly meeting, that was held on the last day of a month (ie. Pay day) 2 copies of townships reports are submitted one to Special Disease Control Unit of State / Division Health Department and one to Central Epidemiology Unit, where surveillance was done.

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(3) Surveillance at Sentinel Sites.

(a) 22 townships are selected as sentinel sites for surveillance of diseases including EPI target diseases at State and Division, Preliminary analysis and timely reporting are done.

(b) In the capital of State / Division , Special Disease Control Unit teams are assigned specifically to collect EPI target diseases admitted to Paediatric Unit of General Hospital every week and review the situation and investigation were done if it is necessary.

(c) (5) General Hospitals are selected and staff from Central Epidemiology Unit are assigned to collect all admission including EPI diseases from Paediatric Unit every week. Weekly reviews are done by assitant epidemiologist at Central Epidemiology Unit and following actions are under taken.

(d) Special Surveys

Special surveys are sometimes carried out for EPI target diseases.

They are -
(a) School Lameness Survey
(b) Lot Quality Assurance Survey
(c) EPI Coverage Survey

(e) Outbreak investigation and immediate response

Outbreak situation of immunizable diseases are always analysed and immediate investigation, early case detection and immunization responses were done by members of local, State / Division and Central Health Department.

MC. 395 (59)

Situation of EPI target diseases in Myanmar

Poliomyelitis

Distribution by Age (1992)

Age Group	Proportion
Under 1 yr	26.3
1 - 4 yrs	42.1
5 - 9 yrs	21.1
10 - 14 yrs	5.3
15 + yrs	5.2
Total	100

Reported cases of Poliomyelitis in Myanmar

Year	Case
1978	260 / 0 before EPI
1987	89 / 0
1988	60 / 0
1989	64 / 0
1990	36 / 0
1991	58 / 0
1992	38 / 0
1993	72 / 1
1994	25 / 0

TREND ; Reduction of Polio = - 11.2 Cases every year

MC. 395 (6/9)

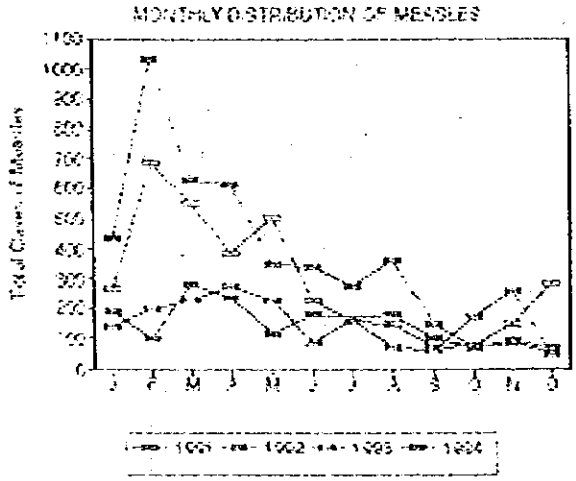
MEASLES

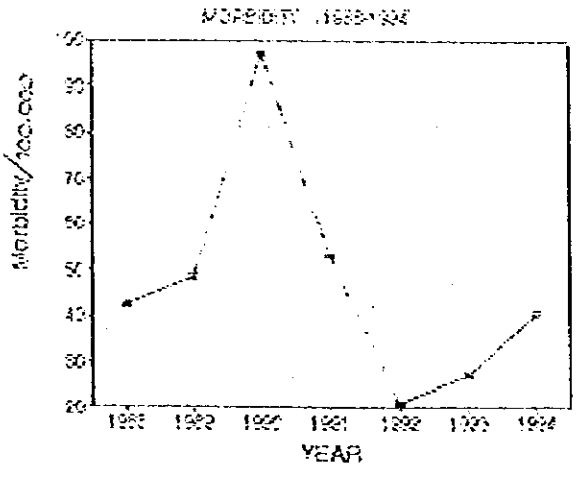
Distribution By Age

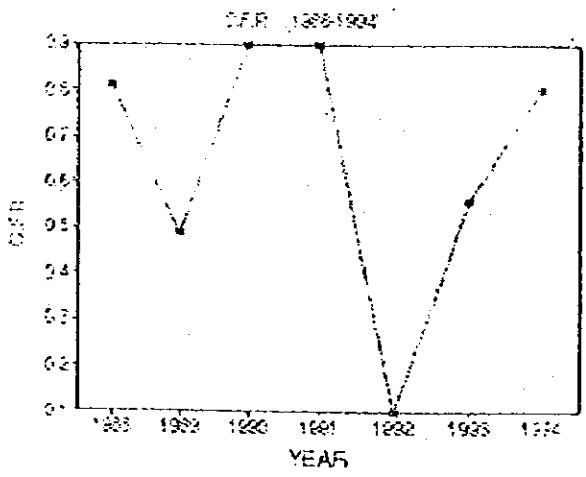
Age Group	Proportion
Under 1 yr	12.9
1-4 yrs	35.4
5-9 yrs	34.4
10-14 yrs	9.1
15 + yrs	8.2
Total	100

Age Specific CFR
0
0
0.8
0
0
0.3

Distribution by sex
M : F
45 : 55







MC. 395 (1/9)

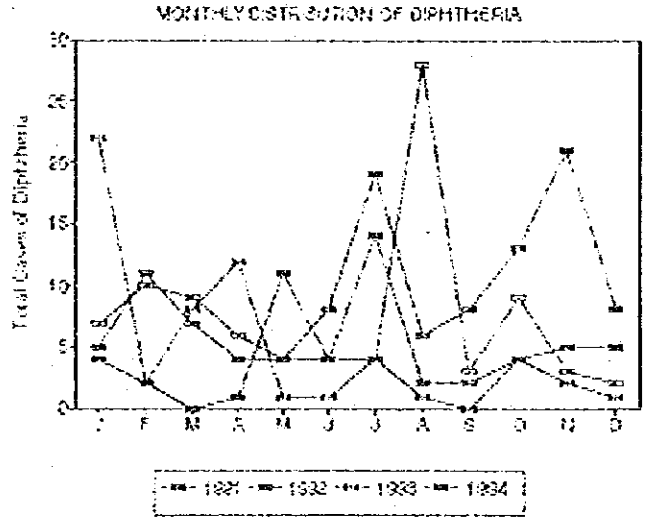
DIPHTHERIA

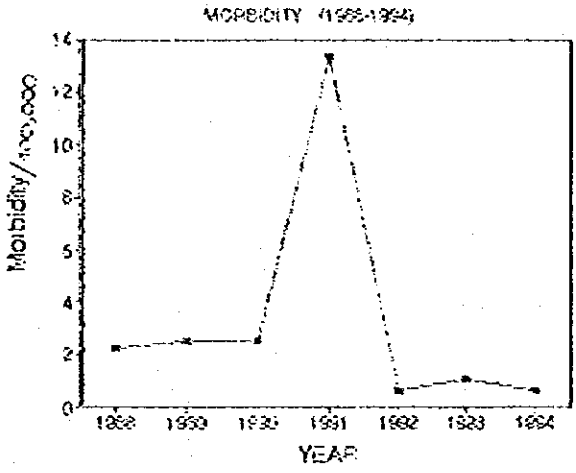
Distribution By Age

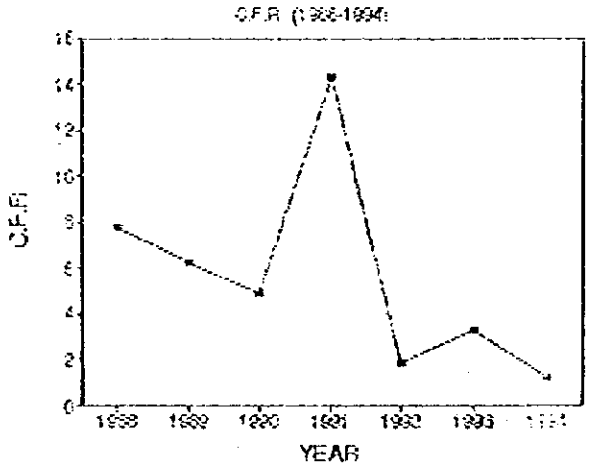
Age Group	Proportion
Under 1 yr	12.5
1-4 yrs	62.5
5-9 yrs	25
10-14 yrs	
15 + yrs	
Total	100

Age Specific CFR
0
20
50
25

Distribution by sex
M : F
38 : 62







Mc. 395 (8/9)

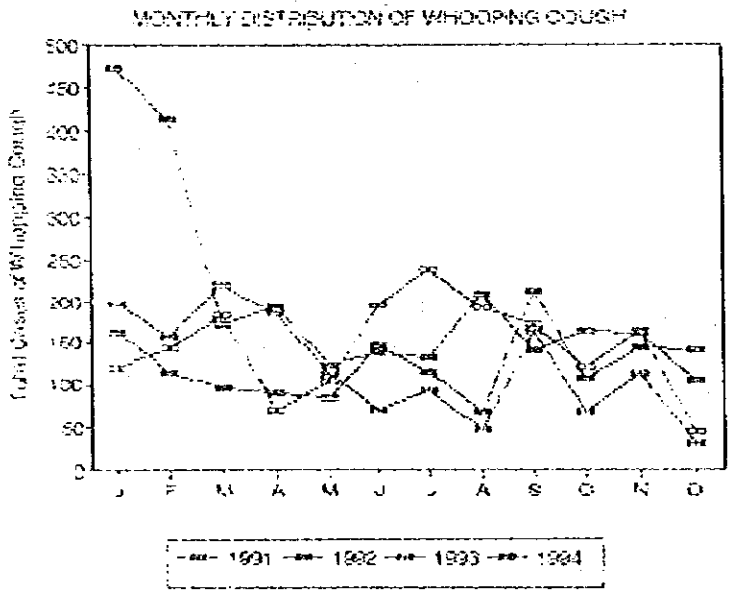
WHOOPING COUGH

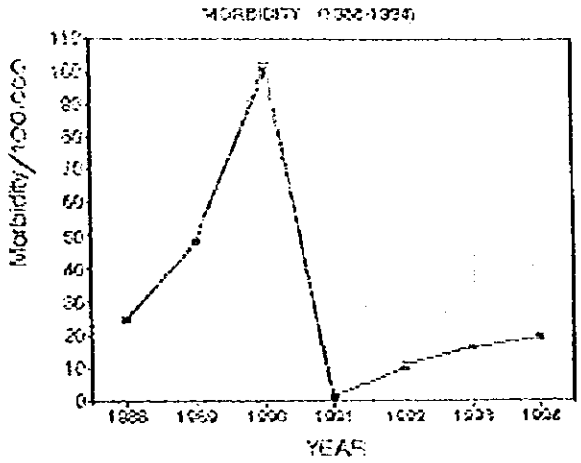
Distribution By Age

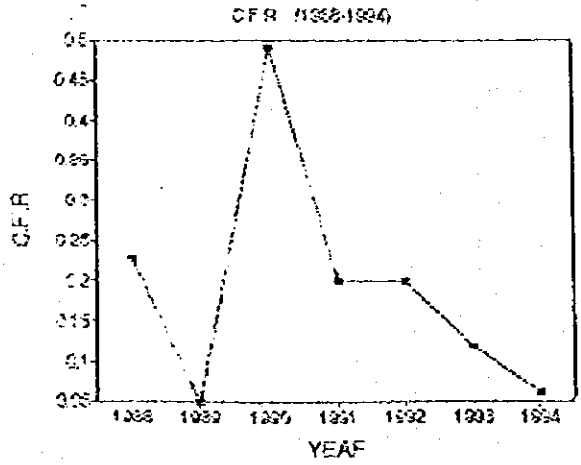
Age Group	Proportion
Under 1 yr	15.8
1-4 yrs	41.8
5-9 yrs	41.1
10-14 yrs	1.3
15 + yrs	
Total	100

Age Specific CFR
0
0
0
0
0

Distribution by sex		
M	:	F
51	:	49







Mc · 395 (9/9)

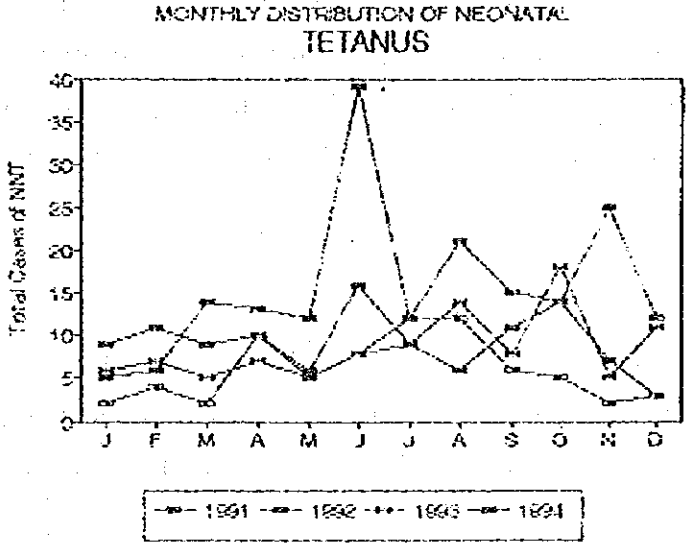
NEONATAL TETANUS

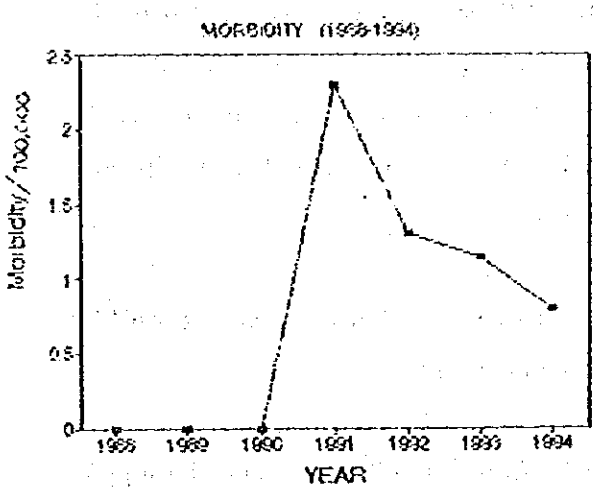
Distribution By Age

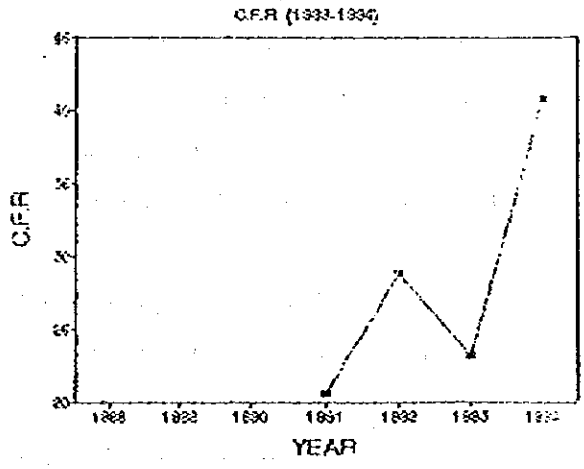
Age Group	Proportion
Under 1 yr	100
1-4 yrs	
5-9 yrs	
10-14 yrs	
15 + yrs	
Total	100

Age Specific CFR
22.4
0
0
0
0
22.4

Distribution by sex
M : F
57 : 43







MC. 393 (5/11)

History of Immunization in Myanmar

In Myanmar smallpox vaccination was introduced in 1885 after the British occupation of upper Myanmar. Since that time smallpox vaccination was given to children at random and epidemics of smallpox occurred throughout the country.

After independence, the Ministry of Health extended the Smallpox Eradication Programme through out the country and vaccinators were appointed in all the Rural Health Centres (RHC) and Urban Health Centres (UHC). Children under 5 years of age were given vaccination systematically according to the plan of action in all areas. With the concerted effort of all the health staff combined with the cooperation of the community as a whole, smallpox was eradicated in Myanmar in 1970, 7 years ahead of the world.

The Expanded Programme on Immunization (EPI) was started in the year 1978 with the first cycle of the Peoples' Health Plan (PHP) during which it covered 176 townships out of 320. At the beginning of EPI, TT for farmers, workers and pregnant women, DPT for under-1 infants, DT for primary school children and BCG for the newborns were introduced.

In 1986 within the second cycle of PHP, EPI strategy was accelerated to the Universal Child Immunization programme (UCI) which covered under-1 infants with two additional vaccines namely OPV and Measles and strengthened the cold chain system in all operational areas. By the year 1990, UCI/EPI covered 210 townships and reached the target of 80% and more for all vaccines.

Since then, UCI programme extended year by year to hard-to-reach townships which constitute a small percentage of the whole population.

In 1995, with the concerted effort of the Central EPI unit and substantial support of the community all 320 townships were kept under EPI programme.

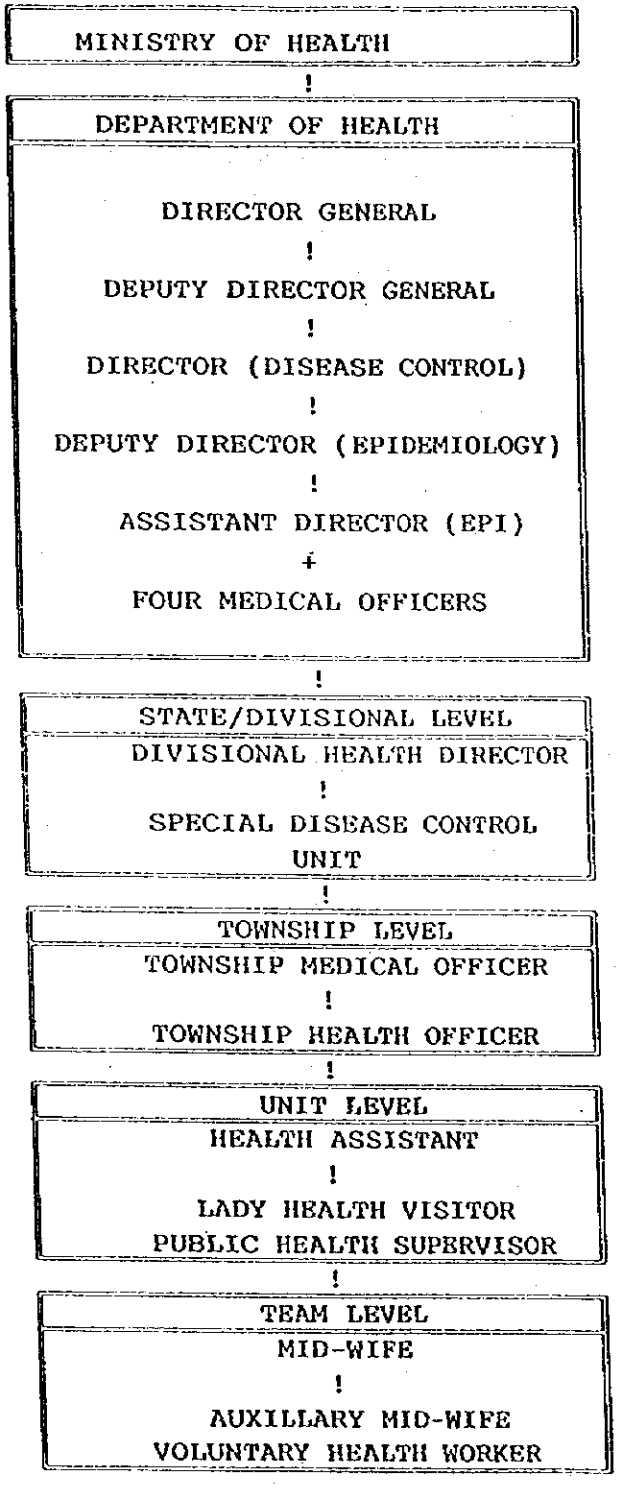
MC-393 (6/11)

HISTORY OF EXPANDED PROGRAMME ON IMMUNIZATION (EPI) IN MYANMAR

YEAR	EPI COVERED TOWNSHIPS	TYPE OF ANTIGENS	PROGRESSIVE TOWNSHIP COVERAGE	PROGRESSIVE POPULATION COVERAGE
1978-1982 1st. PHP	104	BCG,DPT, TT	33%	
1982-1986 2nd. PHP	72	BCG, DPT, TT (OPV to 34 TSHS)	56%	
1986-1990 UCI-1990	34	BCG, DPT, TT OPV, MSL	66%	80.1%
1992	35	" "	77%	81.4%
1993	33	" "	87.4%	94.9%
1994	25	" "	94.6%	98.8%
1995	17	" "	100%	100%
	320			

MC. 393 (7/11)

ORGANIZATION OF EPI·



Mc - 393(8/11)

PERCENTAGE COVERAGE - BCG, OPV3, DPT3, MSL, TT2

1987 - 1994

YEAR	BCG	OPV3	DPT3	MEASLES	TT2
1987	72.0	14.0	37.0	23.0	38.0
1988	65.0	38.0	47.0	42.0	38.0
1989	86.4	59.4	66.0	66.0	55.2
1990	85.7	88.2	87.6	86.4	71.1
1991	87.1	84.2	84.2	85.0	81.1
1992	94.6	86.6	86.9	83.9	81.9
1993	98.3	91.1	89.9	87.5	81.5
1994.	93.7	87.8	87.5	87.6	77.2

MC-393 (9/11)

National Immunization Days - Union of Myanmar 1996

1. Dates: 10 February and March 1996.

2. Antigens: 10 Feb: Oral Polio Vaccine (OPV) for all children < 5 years.
10Mar: Oral Polio Vaccine (OPV) for all children < 5 years.

3. Target Pop: 5.5 million children aged less than 5 years.

4. Target Area: NIDs activities will be conducted in all 320 townships of Myanmar.

5. Manpower: Total immunization teams: 33,000.
Total immnization posts: estimated at nearly 50,000
(some teams will move between morning and afternoon posts).
Immunization team members: 150,000
- basic health staff (health assistants, lady health visitors, midwives, etc),
- auxiliary midwives, community health workers,
- Community volunteers and leaders, including:
  - local SLORC authorities (State Law and Order Restoration Council),
  - MMCWA (Myanmar Women's Association),
  - USDA (Union Solidiery and Development Association),
  - Local Red Cross and Volunteer Fire Brigades,
  - religious groups,

6. Political Support: NIDs have received political support from the highest levels.
Examples:
- The State Law and Order Restoration Council (SLORC) has sent down-the-line instruction to all states, divisions, townships, wards and villages to make NIDs a top priority.
- The Minister and Deputy Minister of Health have personally appointed and overseen a team of upervisors from the hightest level.
- The Director General has personally ensured the availability planes, vehicles and other transport to deliver over 45 tons of NIDs materials to states/divisions.

MK - 393 (19/11)

7. Multi-sectoral Support:

- Ministries of Health, Education, Transport and most other Ministries have an active role in NIDs and are members of the Central Steering Committee.

8. Role of International Organization and Partner Agencies:

1) Rotary International: US$ 1.21 million for oral polio vaccine and 95,000 NIDs posters through Rotary Thailand (approx. US$20,000). Rotary is also assisting the rehabilitation of the National Polio Laboratory and training of its staff (approx US$35,000).

2) UNICEF: US$498,000 for OPV; $74,800 for Vitamin A; $57,000 for training/supervision; $45,000 for social mobilization (largely through the UNICEF National Commitee of Japan).

3) Govenment of Japan through JICA: US$401,000 for 18,600 vaccine carriers.

4) WHO: Technical support - full time in country NIDs consultant from Nov '95 to Feb '96. US$50,000 for OPV; $72,000 for training of community volunteers; $50,000 for local production of social mobilization materials (TV spots; 10,000 urban NIDs post banners; 280 street banners; 20,000 NIDs stickers; 100,000 routine EPI posters).

5) Centers for Diseases Control (CDC) of the USA: US$ 100,000 for OPV.

6) Other: AusAID (Australia) routine immunization funds are assisting NIDs activities in 2 states. UNHCR are assisting NIDs activities in Rakhine State. UNDP has recently donated approx. US$250,000 in solar refrigeration units.

9. Other Key Aspects of Myanmar Polio Eradication Activities:

- OPV was introduced into routine childhood immunization schedule in 1986. Coverage has risen from approx. 10% in 1986 for over 77% by 1994.
- as of 1995, routine EPI activities have recently been extended to all of the 320 townships in Myanmar.
- national AFP surveillance workshop for State/Division level personnel in May 1996.
- national commitment already expressed for 1997 and 1998 NIDs. Next NIDs are scheduled for between December 1996 and February 1997 to include with neighboring country NIDs.

MC-393 (11/11)

10. **Results of National Immunization Days**
1st round (10 February 1996)
Union of Myanmar

Sr. No.	State/ Division	Townships	Total Population	Children under 5	Number Immunized	Coverage percent.
1	Kachin	18	1,159,959	145,472	127,938	88%
2	Kayah	7	236,579	33,367	31,016	93%
3	Kayin	7	1,347,742	143,474	121,626	85%
4	Chin	9	442,970	65,501	62,183	95%
5	Mon	10	2,234,051	275,852	263,140	95%
6	Rakhine	17	2,522,300	396,248	377,503	95%
7	Shan (South)	21	1,737,182	246,914	220,578	89%
8	Shan (North)	22	2,030,091	206,065	171,276	83%
9	Shan (East)	9	697,030	74,601	53,385	72%
10	Yangon	43	5,150,013	543,032	517,279	95%
11	Bago	28	4,679,551	562,532	535,700	95%
12	Mandalay	30	5,950,084	771,135	758,240	98%
13	Magway	25	4,156,870	524,226	510,561	97%
14	Sagaing	38	5,003,693	642,861	624,992	97%
15	Ayeyarwady	26	6,192,599	753,418	729,354	97%
16	Tanintharyi	10	1,195,971	144,645	132,191	91%
	Total	320	44,736,685	5,529,343	5,236,962	95%

ORGANIZATION OF LABORATORY SERVICES