5.2 Specialised Public Health Programmes

5.2.1 Malaria

Malaria has been one of the most important communicable diseases in Sri Lanka with socio-economic burden to the country. In the control programme, a major event was the introduction of DDT spraying in 1946. All houses in malaria-endemic areas were covered by the spraying programme. Subsequently the Malaria Eradication Programme was launched in 1958, as per the concept recommended by the WHO at that time. This programme resulted in a near-eradication status in 1963 when only 17 cases wee recorded with in the country. However, due to multitude factors, resurgence of the disease occurred after a few years, which culminated in an epidemic in 1968/69. A significant technical problem subsequently seen was the first emergence of DDT-resistance in the vector mosquito in 1969 which later resulted in the change of insecticide sprayed, to malathion in august 1977. At first there was significant drop in the incidence but since 1982 there was a rise in the incidence and an epidemic occurred in 1987. The countrywide incidence showed a gradual reduction during the period 1992 to 1995, but started rising again afterwards. However, a significant reduction was seen during the year 2002 and the year 2003.

5.2.1.1 Malaria Control Programme

The activities of the Anti-Malaria Campaign (AMC) were decentralized in 1989. Since then, the AMC Directorate has been involved in the formulation of the National Malaria Control Policy, monitoring of the countrywide malaria situation, provision of technical guidance to provincial malaria control progammes, inter-provincial co-ordination, and co-ordination of training and research activities in malaria control. The provincial malaria control programmes coming under the purview of the provincial health authorities are responsible for the planning and implementation of the malaria control in the respective provinces, within the framework of the National Malaria Control Policy. The primary responsibility for malaria control within a health areas lies with the Divisional Director of Health Services/ Medical Officers of Health.

Table 5.2.1 Percentage of Malaria Cases Reported by Province, 2000 - 2003

Province	Percentage			
	2000	2001	2002	2003
Western	1.1	1.2	0.9	1.1
Central	1.1	1.1	0.9	1.3
Southern	2.7	1.3	2.8	2.7
North Eastern	50.3	66.3	70.4	60.2
North Western	10.7	10.6	8.1	6.6
North Central	8.2	7.3	9.4	20.4
Uva	22.2	7.1	2.7	5.0
Sabaragamuwa	3.6	5.1	4.8	2.6
Total	100.0	100.0	100.0	100.0

Source : Anti Malaria Campaign

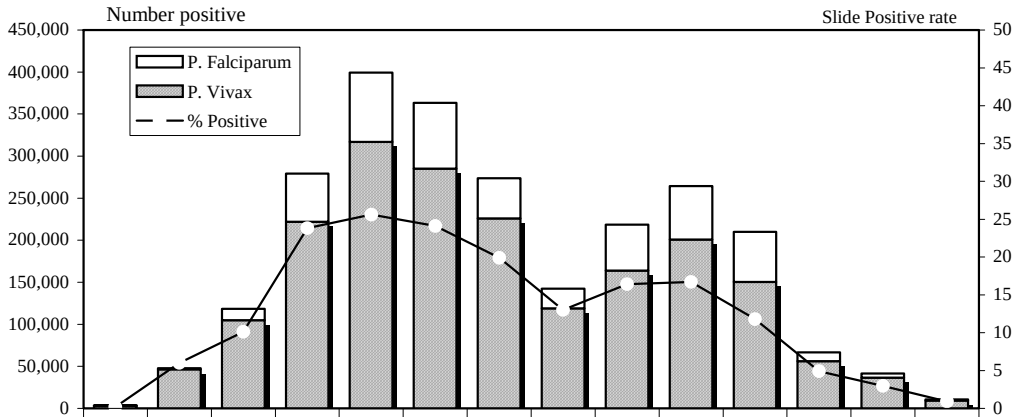
5.2.1.2 Objectives of the Malaria Control Programme

- To reduce the national Annual Parasite Index (API) by the year 2004, to level of 50% below that in 2002.
- To eliminate mortality caused by malaria by the end of year 2003.
- To reduce the nationwide morbidity due to Plasmodius falciparum to a level 50% below that in 2002 by the year 2004.
- To reduce malaria among pregnant women to a level of 50% below that in 2002 by the year 2004.
- To reduce malaria in children below 5 years to a level of 50% below that in 2002 by the year 2004.

5.2.1.3 Present Status of Malaria

During 2003, the Anti Malaria Campaign screened 1.19 million patients

Fig 5.2.1 Result of Blood Film Examination for Malaria Parasite, 1967-2003



	1967	1980	1985	1990	1992	1993	1994	1995	1997	1999	2000	2001	2002	2003
P. Falciparum	440	1,475	13,570	57,390	82,655	77,970	47,639	23,238	54,694	63,878	59,650	10,600	4,876	1,273
P. Vivax	3,026	46,474	104,759	221,782	316,694	285,227	225,864	119,056	163,856	200,671	150,38	55,922	36,535	9,237
% Positive	0.20	6.00	10.10	23.80	25.60	24.10	19.90	13.00	16.42	16.72	11.79	4.92	2.98	0.90

Source : Anti Malaria Campaign

for malaria in government medical institutions. 10,510 positive patients wee detected. *P.vivax* infection contributed towards 88% of the total, the balance being *P.falciparum* infections. When compared to the preceding year (2002) there has been a 75% decrease in the total number of confirmed patient detected by the Anti Malaria Campaign. *P.falciparum* infections have decreased by 74% in 2003, as compared to the preceding year.

During the year 2002 out of the total patients 70% of the total patients reported from North-East Province, this percentage has decreased to 60%during the year 2003. A total of 4 deaths due to malaria were reported to Anti Malaria Campaign Headquarters in 2003.

The prominent parasite species continued to be *P.vivax* (88% of total cases). *An.culicifacies* continued to be the principal vector. The secondary vectors (*An.subpictus, An.annularis*) played only an significant role in malaria transmission in the country.

5.2.1.4. Main Malaria Control Activities

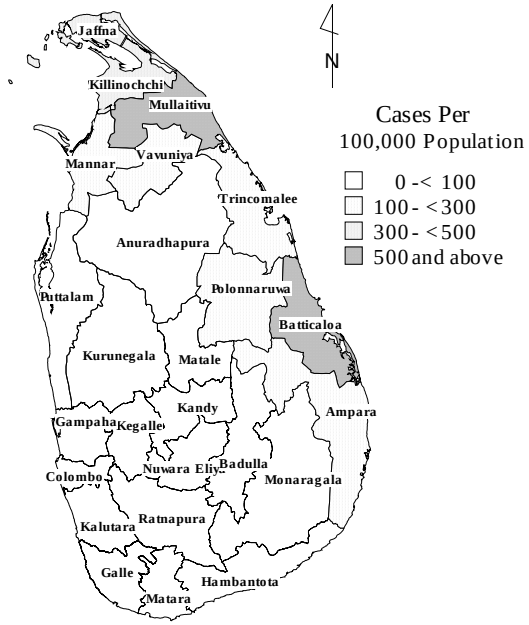
Since July 1993, the Malaria Control Programme in the country has been modified, keeping in line with the New Global Malaria Control Strategy, recommended by the World Health Organization. Accordingly, the four main components are: -

- Early detection and prompt treatment of cases.
- Detection and treatment of asymptomatic parasite carriers.
- Selective application of vector control measures based on the principles of integrated vector management.
- Forecasting and prevention of outbreaks.
- Early detection and containment of outbreaks
- Partnership building and community participation.

The following activities were carried out.

1. Anti-parasite measures:
   - Detection and treatment of malaria cases
     - In medical institutions.
     - In the field by visiting houses.
     - By mobile malaria clinics.
   - Chemoprophylaxis to select groups (including pregnant mothers) living in malaria endemic areas.

Fig 5.2.2 - Malaria Cases Reported by District,2003



Source : Medical Statisics Unit
Prepared by Medical Statistics Unit

2. Anti-vector measures:

- Indoor residual spraying of houses in malarious localities. The following groups of residual insecticides were used in different districts.
  - Organophosphates.
  - Synthetic pyrethroids.
- Use of bed-nets, impregnated with a synthetic pyrethroid insecticide (*Permethrin*).
- Use of chemical larvicide (*Temephos*), in selected breeding sites.
- Use of larvivorous fish (Poecelia *reticulate* and *Aplocheilus dayi* were deployed in many localities).
- Use of insect Growth Regulator (*Pyriproxyfen*) for larval control in abandoned gem pits.

5.2.1.5. External Assistance

During 2003, WHO assistance was received in the following arrears.

- Local training.
- Training in regional countries.
- Provision of critical supplies.

5.2.1.5.1 Roll Back Malaria Initiative (RBMI)

The Government of Sri Lanka is committed to the global Roll Back Malaria Initiative of the WHO which is a social movement drawing its strength by improved health sector development. The operationatization of RBM is based on six strategies, i.e., enhanced diagnosis and treatment, disease transmission control, enhanced surveillance, health sector development, community mobilization and advocacy.

The districts of Jaffna, Kilinochchi, Mullaitivu, Anuradhapura and Moneragale have been chosen for implementation of RBMI during the year 2003. Following activities were carried out under the RBMI.

- Development and implementation of communication and advocacy strategy at the country level.
- Establishment of Community Based Organizations.
- Establishment of country inter-agency partnership.
- Support districts to expand access to early detection and prompt treatment.
- Capacity building in epidemic preparedness & response, drug resistance detection & surveillance and drug quality assurance.

The Global Fund to fight Aids, Tuberculosis and Malaria (GFATM) funded special activities carried out to enhance malaria control in districts of Anuradhapura, Polonnaruwa, Jaffna, Kilinochchi, Mannar, Vavuniya, Trincomalee and Batticoloa. These activities included:

- Conducting of malaria mobile clinics in the high risk arrears.

- Conducting of school parasite surveys.
- Enhanced supervision of malaria control activities.
- Monitoring and Evaluation of malaria control activities.
- Protection of population at risk using Long Lasting Insecticidal Nets (LLIN).
- Capacity building.
- Procurement of vehicles for malaria control activities.

5.2.2 National Programme for Tuberculosis Control and Chest Diseases

In Sri Lanka, Tuberculosis and respiratory diseases control is implemented by a decentralized unit which functions through a network of 23 district Chest Clinics and 2 Chest Hospitals in close coordination with other general health institutions. The main function of the programme is the control of tuberculosis (TB), as well as other respiratory diseases in the country.

The resurgence of tuberculosis globally and its association with HIV, and the emergence of multidrug-resistant TB, accords top priority for its control.

The overall objectives of the National TB Control Programme are:-

- To reduce the mortality, morbidity and the transmission of the disease in the community, until it is no longer a public health problem.
- To prevent the emergence of multi-drug-resistant tuberculosis.

In achieving the above objectives the main strategies adapted by the Programme are:-

- Passive case finding by sputum smear microscopy of symptomatic patients who attend any health facility.
- Treatment of all diagnosed cases with short-course chemotherapy.
- Direct observation of treatment by trained health personnel (DOTS).
- To monitor results of treatment of every patient registered through a standardized recording and reporting system and quarterly cohort-analysis.

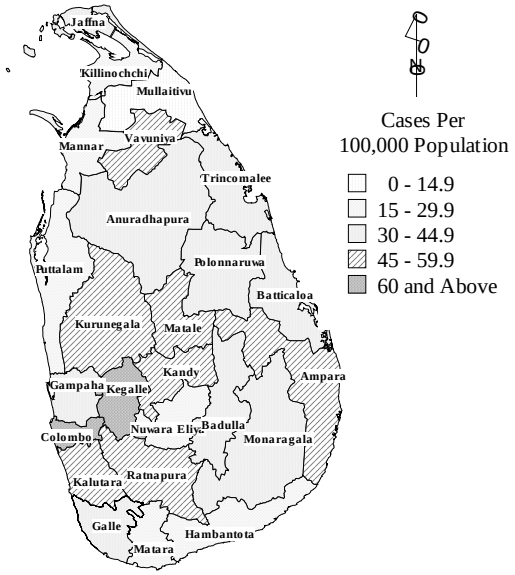
5.2.2.1 Morbidity

There has not been a significant decline in the incidence over years. Around 8,500 – 9,000 new cases of TB are detected annually and tuberculosis still continues to pose a major public health challenge in Sri Lanka.

A marginal increase in the number of new cases detected since 1996 is evident. This is due to improved case detection, especially in districts where TB control activities have been inadequate in the past and also due to regularisation of referrals and improved notification.

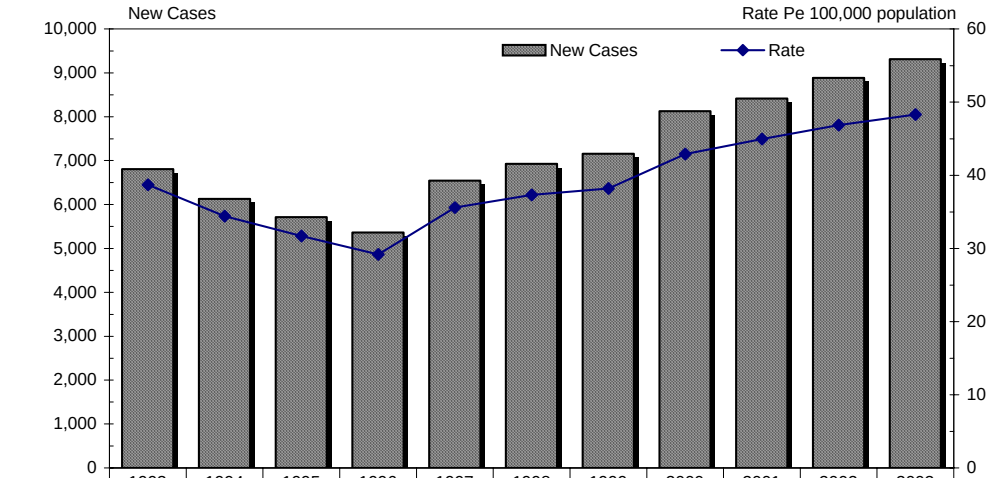
During the year under review, 9,312 new TB cases, 339 relapses, and 35

Fig 5.2.3 - Distribution of Tuberculosis New Cases by Health Region, 2003



Source : Respiratory Disease Control Programme
Prepared by Medical Statistics Unit

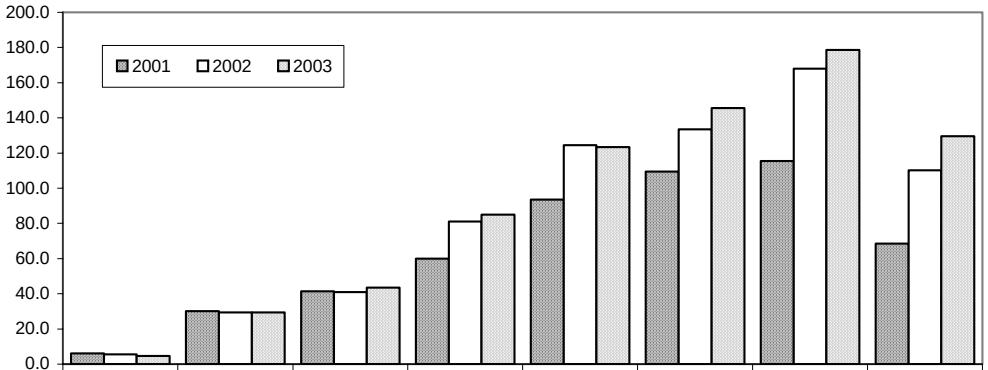
Fig 5.2.4 Tuberculosis New Cases Detected 1993-2003



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
New Cases	6,809	6,132	5,710	5,366	6,542	6,925	7,157	8,129	8,418	8,884	9,312
Rate	38.7	34.4	31.7	29.2	35.6	37.3	38.2	42.9	45.0	46.9	48

Source : National programme for Tuberculosis & Chest diseases

Fig 5.2.5 Tuberculosis Incidence Rate by Age Groups, 2001 - 2003



	0 - 14	15 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	75 +
2001	6.2	30.2	41.4	60.0	93.5	109.4	115.5	68.5
2002	5.6	29.4	41.0	81.1	124.4	133.4	167.9	110.2
2003	4.6	29.4	43.5	85.0	123.4	145.6	178.6	129.6

Source : National programme for Tuberculosis & Chest diseases

treatment failures were registered. The notification rate was 48.3 per 100,000 population. Out of the new cases, 82 per cent were cases of pulmonary TB. Colombo had the highest number of cases. Total number of deaths notified among the TB cases was 396.

5.2.2.2. Age and Sex Distribution

The lowest number of TB patients was under 14 years of age. Comparing with the other age groups, a higher number is reported in 65-74 group. But the rate of new TB cases per 100,000 population is higher in older ages. Increased rates can be seen with the rising of age. Male to female sex ratio was 2:1 as in the previous years.

5.2.2.3. Case finding and treatment

The chest clinics, branch clinics and chest hospitals are the main centers for case finding. All diagnosed patients are provided with a short course of

chemotherapy. The best way to ensure cure of patients and prevent the spread of tuberculosis is by the use of 'DOTS' strategy (directly observed treatment, short course). This is a strategy to provide a short course of chemotherapy to all sputum- positive patients, under the direct observation by health personnel and to ensure that patients complete the full course of treatment.

In 1997, the DOTS strategy was started in the Galle district as a community-based programme, and was carried out through the general health institutions and in remote areas through the field staff. Community based DOTS are now being implemented in 13 districts covering approximately a population of 74 per cent. It will be extended to cover the entire country by year 2005.

5.2.2.4. X-ray and Laboratory Services

Case finding and follow up of treatment depend mostly on sputum microscopy. Improvement of laboratory services, therefore, is given high priority; especially since the follow up of treatment is monitored by sputum smears. X-rays, too, play an important role mainly in the diagnosis of sputum smears negative TB and other chest diseases.

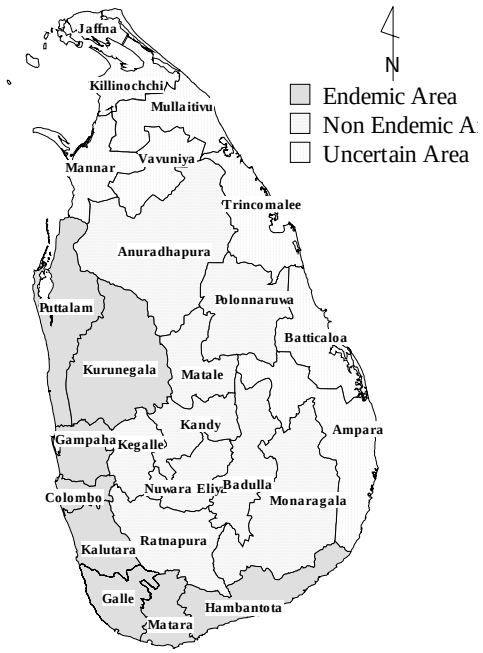
5.2.2.5. B.C.G. Vaccination

B.C.G. vaccination of all newborn babies is done under the Expanded Programme of Immunization. The Respiratory Diseases Control Programme does training of staff on the administration of B.C.G.

5.2.3 Filariasis

Lymphatic filariasis, commonly known as elephantiasis, is a painful and profoundly disfiguring disease that has a major social and economical impact in Sri Lanka, having a high morbidity with no mortality. Until recent times, little could be done to relieve the suffering and disability caused by this disease. Recently, however, there had been several developments which promise better prospects for the control of the disease

ɜ 5.2.6 - Filaria Endemic Areas by Distict, 2003

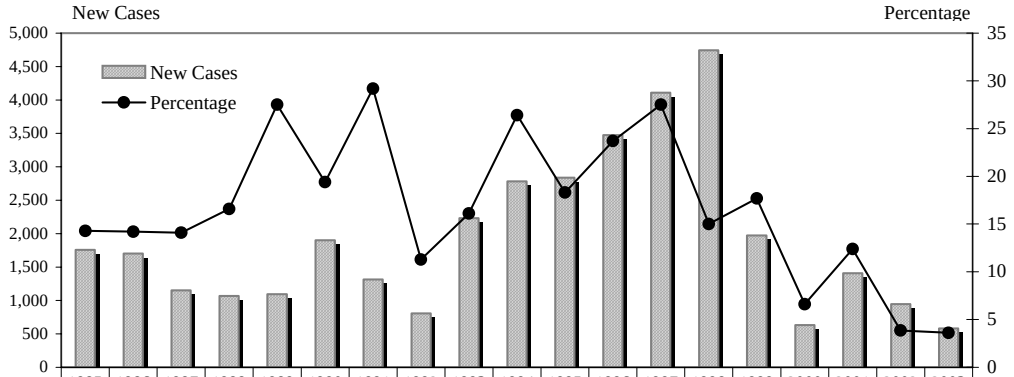


urce : Anti Filaria Campaign
Preparde by Medical Statistics Unit

Lymphatic Filariasis is caused by the parasite *wucheraria banorofti* the adult of which live usually in the lymphatic system of a person. The adults produce live embryos, which find their way into the blood stream, where they are capable of living for a considerable period of time, without developing further. The life span of the microfilaria is about a year at the most.

The only insect vector responsible for the spread of urban filariasis in Sri Lanka is the *Culex quinquefasciatus* mosquito, which serves as the intermediate host, in which the microfilaria count coincides with the biting habits of the vector. This mosquito breeds in highly polluted collections of water, such as blocked

Fig 5.2.7 Percentage and New Cases Among Patients With Clinical Manifestation at Clinics in the Endemic Areas, 1985-2003



	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
New Cases	1,760	1,700	1,150	1,067	1,092	1,898	1,314	806	2,233	2,783	2,838	3,474	4,108	4,743	1,974	629	1,408	946	580
Percentage	14.3	14.2	14.1	16.6	27.5	19.4	29.2	11.3	16.1	26.4	18.3	23.7	27.5	15.0	17.7	6.6	12.4	3.848	3.617

Source : Anti Filariasis Campaign

drains, damaged septic tanks, and latrine pits etc, which abound in urban habitats.

5.2.3.1 Strategies and Control Methods Adopted

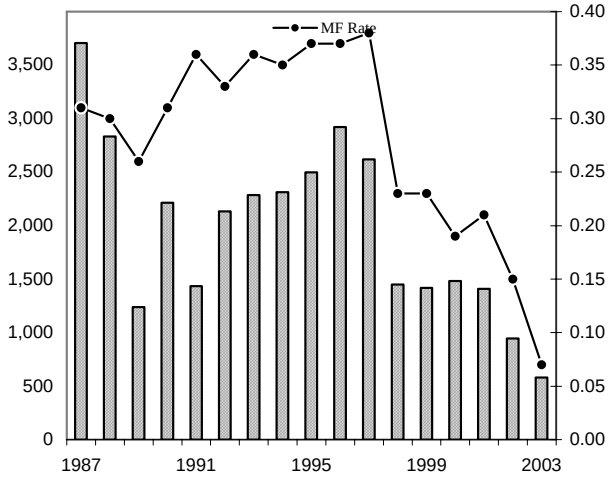
The aim of the Anti filariasis Campaign is to eliminate lymphatic filariasis as a public health problem, over the next 10 years.

Present operational areas are confined to 3 main provinces namely Western, Southern and North Western, covering an area of approximately 16,482 sq km in extent with a population of 9.8 million at risk. In keeping with the global elimination programme, the Anti-Filariasis Campaign has laid down the following goals and objectives.

- To stop the spread of filarial infection (i.e interrupt transmission - MDA).
- To reduce the vector density in the endemic areas.
- To alleviate the suffering and disability of affected individuals (i.e control morbidity)
- To develop a data base for monitoring and evaluation of the control programmes.

The control measures adopted by the Campaign are:

- Parasite control through screening the population annually by night blood screening and treating the positives with *Diethyl Carbamazine Citrate* (DEC), until they are free of infection.
- Single dose mass treatment to stop the spread of filarial infection (i.e. to interrupt transmission).
- Vector control by eliminating breeding sites of the vector mosquitoes.
- Morbidity control – lymphoedema management.



Source: Anti-Filariasis Campaign

5.2.3.2. Morbidity

In Sri Lanka, the highest endemicity is found in the Western, Southern and the North-Western Provinces (Figure 5.2.6). It is mainly seen in these areas due to rapid and unplanned urbanization. The migration of people to and from the endemic zone has resulted in spreading the disease to other areas as well.

Table 5.2.2 Trends in Entomological Evaluation, 1995-2003

Year	Cx.q * Mosquitoes Dissected	Infection Rate	Infective Rate
1995	32,419	0.63	0.06
1996	56,587	0.72	0.06
1997	48,671	0.55	0.05
1998	49,238	0.56	0.05
1999	52,621	0.49	0.04
2000	45,539	0.47	0.07
2001	43,347	0.46	0.03
2002	38,012	0.8	0.05
2003	30,125	0.4	0.05

* Culex quinquefaciatus *Source : Anti-Filariasis Campaign*

During the year under review 716,538 night blood films were examined for microfilaria by the thick blood smear technique. This includes cases screened at the night blood filming centers and by special surveys conducted in the endemic areas. 580 positive cases were detected giving a microfilaria rate of 0.07%.

In 2003 the number of patients with clinical manifestation visited the AFC clinics are 16,034 when compared to 24,585 in 2002.

5.2.3.3 Single Dose Mass Treatment Campaign and Other Activities

The single dose mass treatment programme commenced in selected areas of Sri Lanka during 1997. A national programme was launched in October 1999. In 2001 Dec. Albendazole combination was used in Colombo District for the first time while all other 7 districts were given DEC only. 2 to 12 year of age were given 150 mg of DEC and those above 12 years were given 300 mg as a single dose and Albendazole 400 mg irrespective of the age.

Pregnant and lactating women, seriously sick persons were excluded. It is necessary to reach coverage of 80 per cent to achieve the desired objectives. According to the reported figures 87% coverage have been achieved in 2003.

5.2.3.4 Entomological Investigations

The Entomological Unit, by collecting indoor resting *Culex quinquefasciatus* mosquitoes, detected an infection rate of 0.4 and an infective rate of 0.05 (Table 5.2.2).

5.2.3.5 Vector Control

As the vector generally rests on cloths and furniture, residual spraying of insecticides is of questionable value, and there is no alternative but to depend on larval control which can be achieved either by elimination or treating the breeding places with larvicides Baytex or Fenthion in mixed concentration. The permanent breeding places that could not be eliminated have to be treated with larvicide on weekly cycle. Temporary breeding sites consisting of empty tins, pots, spent coconuts, gutters out of alignment and old tyres etc., are eliminated after soliciting the co-operation of householders.

5.2.4 STD/AIDS Control

In Sri Lanka, the National STD/AIDS Control Programme (NSACP) is responsible for the implementation and co-ordination of activities at central and regional level, related to prevention and control of sexually transmitted diseases (STDs), including Human Immunodeficiency Virus (HIV) infection which leads to Acquired Immune Deficiency Syndrome (AIDS).

The strategies adopted by the NSACP includes screening, case detection & management, partner notification, contact

tracing, health education, counseling, condom promotion and surveillance of STD and HIV/AIDS. During 2003 there were 24 full time STD Clinics and 14 branch clinics in operation all over he country.

5.2.4.1 Sexually Transmitted Diseases (STD)

A total of 14,389 new persons were registered in the STD Clinics during the year 2003. Of these, 7,095 persons (49%) were diagnosed as having one or more sexually transmitted infections. Male to Female ratio among newly registered persons with STIs during 2003 was 1.2:1.

The number of new episodes of STIs recorded during 2003 was 8,233. This included STIs diagnosed in new and previously registered persons. It must be noted that one person may be diagnosed with more than one STI and therefore the number of new patients with STIs and the number of new episodes of STIs may not be the same. Among new episodes of STIs that were reported in 2003, 24% episodes among males and 23% among females were in the 20-39 year age group.

Candidiasis was the commonest diagnosis made among STD clinics attendance in 2003 followed by genital herpes. It is disturbing to note that the new episodes of gonorrhoea showed a marked increase in 2003. In contrast non-gonococcal infections showed a reduction from 2002 value (Table 5.2.3). Two cases of early congenital syphilis cases were reported to he NSACP. The trends of selected STIs from 1997 to 2003 are given in Table 5.2.3.

Table 5.2.4 Antimicrobial Susceptibility of Gonococci, 2000 - 2003

Antimicrobial Agent	% of Isolates Fully Susceptible			
	2000	2001	2002	2003
Ceftriaxone	100.0	100.0	100.0	100.0
Spectinomycin	…	…	…	100.0
Cefuroxime	88.9	90.0	94.0	99.5
Ciprofloxacin	55.2	63.0	62.0	17.4
Penicillin	…	6.0	11.0	2.2
Tetracycline	…	…	59.5	43.7

Source: STD/AIDS Control Programme

A total of 649 new commercial sex workers (male & female) wee registered in the STD clinics during the year. Of them 372 (57%) were diagnosed having one or more STIs. The number of STIs diagnosed in the new and previously registered sex workers was 557. The commonest reported STI among them was bacterial vaginosis.

All new females STD clinics attendees at the central STD clinic, Colombo undergo cervical cytology screening (PAP smear screening). During 2003, total number of 714 smears were taken and of them reports were available in 627. Of this, 95% had normal smears, 4% had inflammatory changes, 1% reported as CIN-I or CIN-II.

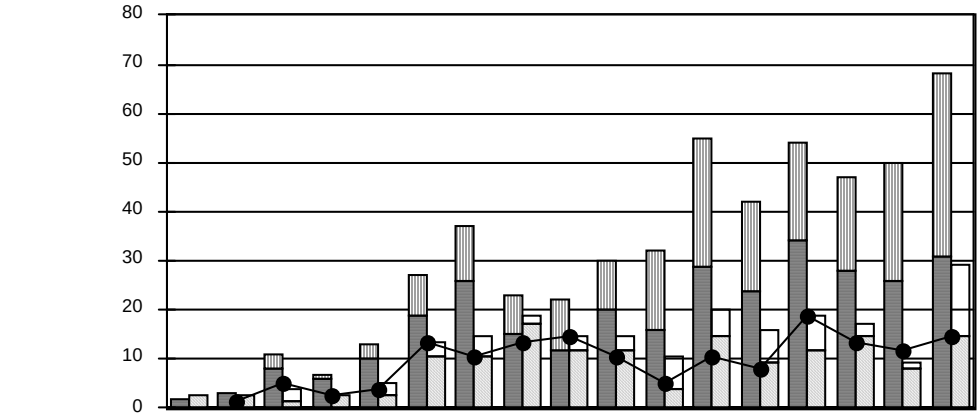
Antibiostic sensitivity monitoring of *Neisseria gonorrhoeae* is an important activity carried out by the Central STD Laboratory of the NSACP. This information is

Table 5.2.3 Percentage of Reported Episodes of Sexually Transmitted Diseases 2000 - 2003

STD	2000		2001		2002		2003	
	No.	%	No.	%	No.	%	No.	%
Infectious syphilis	274	4.3	188	2.5	203	2.6	138	1.7
Late syphilis	626	9.9	705	9.6	795	10.0	618	7.8
Congenital syphilis (Early)	8	0.1	5	0.1	5	0.1	2	0.0
Congenital syphilis (Late)	10	0.2	10	0.2	17	0.2	3	0.0
Gonorrhoea	670	10.6	532	7.2	732	9.2	955	12.0
Non-gonococcal infections	948	14.9	1,242	16.9	1,678	21.2	1,305	16.5
Trichomoniasis	200	3.2	205	2.8	187	2.4	122	1.5
Genital herpes	1,327	20.9	1,368	18.7	1,438	18.1	1,427	18.0
Genital warts	500	7.9	603	8.2	592	7.5	633	8.0
Ophthalmia neonatorum	10	0.2	7	0.1	9	0.1	20	0.3
Chancroid	50	0.8	24	0.3	18	0.2	1	0.0
Candidiasis	1,045	16.5	1,494	20.3	1,564	19.7	1,626	20.5
Bacterial vagimosis	0	0.0	650	8.8	768	9.7	618	7.8
Other Venereal	677	10.7	312	4.2	430	5.4	465	5.9
Total	6,345	100.0	7,345	100.0	8,436	106.3	7,933	100.0

Source : STD/AIDS Control Programme

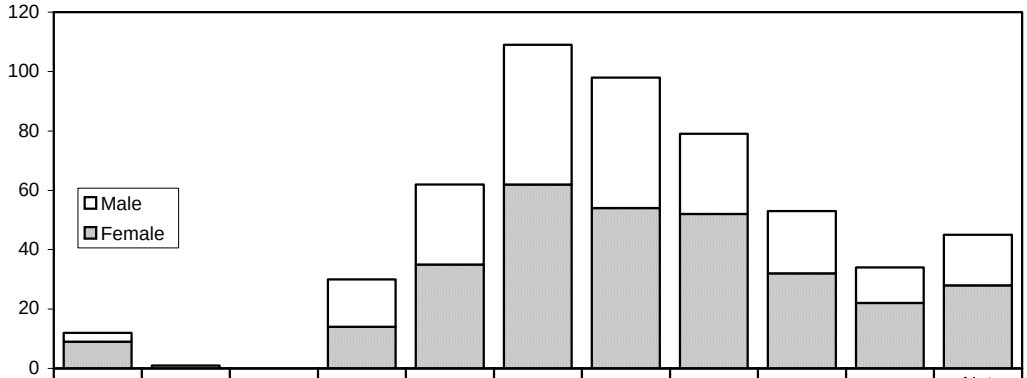
Fig 5.2.9 HIV Cases and AIDS Cases and Deaths 1987- 2003



	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
HIV+ Male	2	3	8	6	10	19	26	15	12	20	16	29	24	34	28	26	31
HIV+ Female			3	1	3	8	11	8	10	10	16	26	18	20	19	24	37
AIDS-Male	2	2	1	2	2	8	8	13	9	9	3	11	7	9	11	6	11
AIDS-Female			2		2	2	3	1	2	2	5	4	5	5	2	1	11
Deaths-From A		1	4	2	3	10	8	10	11	8	4	8	6	14	10	9	11

Source: STD/AIDS Control Programme

Fig 5.2.10 Age and Sex Distribution of HIV Positive Reported During, 1987-2003



	Under 10	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	Over 50	Not known
Male	3	0	0	16	27	47	44	27	21	12	17
Female	9	1	0	14	35	62	54	52	32	22	28

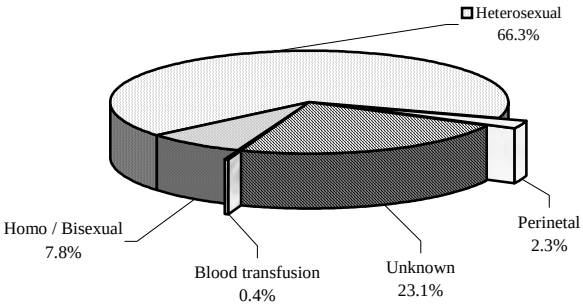
Source : STD/AIDS Control Programme

invaluable for all clinicians treating patients with gonococcal infections.

5.2.4.2 HIV Infection and AIDS

The first Sri Lanka infected with HIV was reported in 1987, and the first indigenously transmitted HIV infection was reported to the NSACP in 1989. The cumulative number of HIV infections reported from 1987 to end 2003 was 523. Of this, 161 persons were diagnosed as having AIDS and 119 were already deceased. In addition, 51 foreigners were also reported as HIV positive during this period. UNAIDS estimated that 3500 persons were living with HIV/AIDS by end 2003. Under-diagnosis, under-

Fig 5.2.11 Reported HIV Positives During 1987-2003 by Mode of Transmission



Source: STD/AIDS Control Programme

reporting and delays in reporting probably account for the difference between the reported number and the estimated number. However, the reported data indicate an increasing trend in HIV infection.

Of the 523 reported HIV infections, the age was known in 478 (91%). Of these, 90% were in the 15-49 year age group with the majority in the 30-39 (43%). The male to female ratio by the end of year 2003 was 1.4:1.

The probable mode of transmission of reported HIV infection was available for 402 cases. Of these, 86.3% were heterosexual, and 10.2% were homosexual /bisexual. Twelve cases (3%) have been reported as perinataly transmitted while two cases were due to transmission through blood/blood products. Transmission of HIV via the injecting use has not been reported yet .

In 2003 there were 68 HIV positive detected while 33 (48.6%) of them were from Western province. The cumulative total HIV infection by the end of 2003 was 523. The place of residence was known for 498(95%) of the reported HIV infections. Of these, majority (64%) were from the Western Province. However, HIV infections have been reported from all the other provinces.

5.2.4.2.1 Sentinel Surveillance for HIV

HIV sentinel surveillance is an ongoing activity carried out annually by the NSACP. It is carried out according to the WHO guidelines since 1993.In 2003, sentinel surveillance was carried out from 1st July to 15th October 2003 in all nine provinces. In addition to STD clinics attendees female sex workers and patients diagnosed with tuberculosis, two new groups were included in the 2003 survey. They were armed services personnel and transport workers. All groups were surveyed on an unlinked anonymous basis. Of the 9,765 sample tested, 10 HIV positive samples were detected in the 2003 survey. Of these HIV positives, 8 were STD clinic attendees, the remaining two samples were from a female sex worker and from a TB patient.

Table 5.2.5 Tests Done by the Central and Out-station STD Laboratories During 2003

Tests	Central Lab	Outstation STD Labs
VDRL	41,826	131,845
HIV (screening)	36,484	12,512
HIV (confirmatory) test western blot	242	-
TPPA	7,558	5,227
Gonococcal culture	5,609	1,776
Hepatitis B surface antigen	1,412	-
Chalamydia ELISA	1,291	424
Syphilis IgM ELISA	417	-
HSV Ag ELISA	785	-
HSV Serology	409	-
HIV PCR (Viral load)	30	-
Pap smears (Started in Nov 2003)	86	-
Total	96,149	151,784

Source : STD/AIDS Programme

5.2.4.2.2 HIV Sero-prevalence

A total of 256,435 HIV antibody tests were carried out and reported to the NSCAP in 2003. However, only a few private medical institutions in Colombo reported data on the total number of HIV tests carried out by their laboratories. The HIV seropositivy rate was 0.03% during 2003.

5.2.5 Leprosy

Of all the diseases that continue to plague humanity, leprosy has the most notorious history as a cause of deformity, disability, loathing and fear. From ancient times until the recent past, the disease was considered both highly contagious and impossible to cure. Victims were universally shunned; their physical suffering compounded by the misery of being treated or social outcast. Even at the medical level the sole option for control was the isolation of patients in colonial or leprosaria.

Invention and subsequent expansion of Multi Drug Therapy (MDT) by World Health Organization (WHO) in 1981, was a dawn of new era in the path towards elimination of Leprosy. Well tolerance, effectiveness and high acceptance of MDT by patients led the way to the rapid cure of patients and interruption of further transmission of the disease. This invariably was the stepping-stone to the WHO resolution to eliminate leprosy as a public health problem by the year 2000. With MDT and highly successful Social Marketing Campaign (SMC) which was launched in 1990, Sri Lanka reached the elimination target at national level in 1995, well ahead of the targeted year ser by WHO. Just prior to dawn of the new millennium, Sri Lanka embarked upon integration of leprosy services into General Health Services, the final push towards the elimination of leprosy.

The field programme of leprosy is jointly funded by the Swiss Emmaus, Novarits Foundation for Sustainable Development (NFSD) form Switzerland and WHO. The SMC, training of health workers o integration and field monitoring activities including the Management System are exclusively funded by NFSD.

Vision of the proramme

To reduce the leprosy and related distress by reducing the reservoir of leprosy sustainable and by improving the quality f life of people affected by leprosy.

General Objective

To reach elimination target at sub-national level (in remaining endemic MOH areas) with the integration of elimination activities into the General Health Services.

Specified Objectives

1 To re-orientate curative medical officers of he GHS in the diagnosis and management of leprosy (Capacity Building –MOO and RMOO of curative sector).

2 To train Regional Epidemiological (RE), Medical Officer of Health - (MOH) and the staff attached to those officers in the epidemiological assessment of leprosy at local level (Capacity Building –MOO and other staff attached to the preventive sector).

3 To develop simplified records, registers and software on leprosy management information system (LMIS) to facilitate the monitoring of leprosy situation and maintenance of the surveillance both at local and central levels. (Monitoring and Evaluation).

4 To conduct awareness programme for general public to reduce the stigma and to inform the availability of drugs in all health units (Social Marketing Campaign).

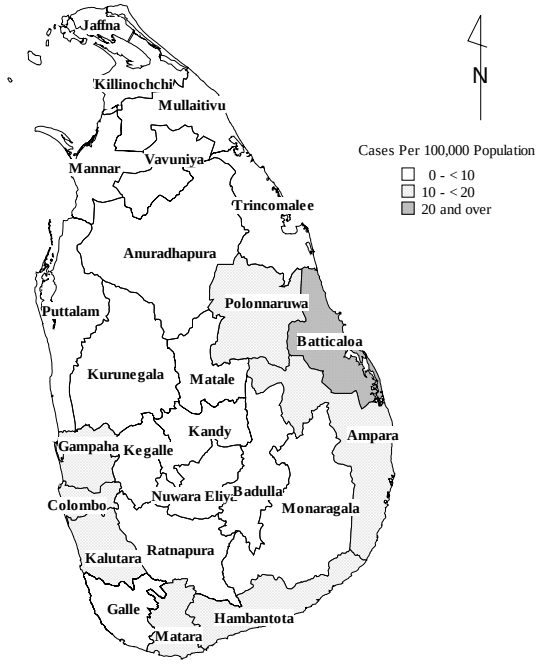
5 To make leprosy drugs (MDT blister packs) available in all health units (Easy Accessibility of MDT).

6 To provide rehabilitative care for ‘cured’ patients with disabilities.

5.2.5.1 Current Status of Leprosy

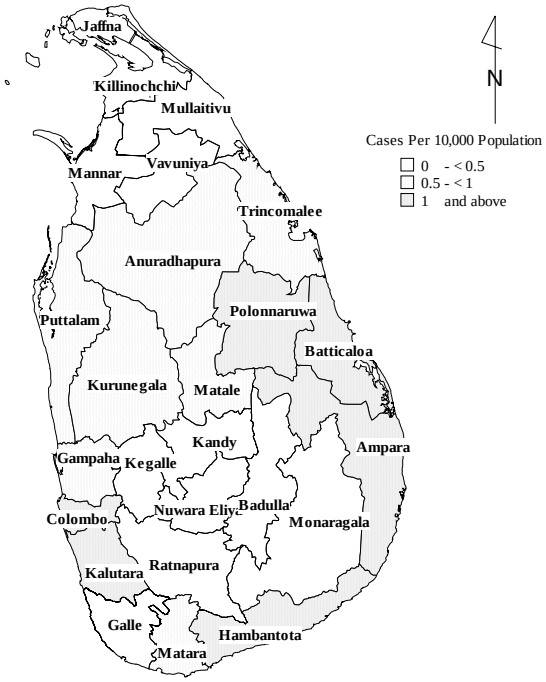
Though the new case detection increased with the integration of leprosy services to the General Health Services in 2001, since then there has been a decline

Fig. 5.2.12 - Distribution of New Leprosy Cases (New Case Detection Rate) by District, 2003



Source : Anti Leprosy Campaign Prepared by Medical Statistics Unit

5.2.13 - Distribution of Active Leprosy Cases (Prevelence) by District, 2003



Source : Anti Leprosy Campaign Prepared by Medical Statistics Unit

in new cases. At the end of 2003, three years after the integration , 1,925 new cases have been detected showing further decline in new cases. The new case detection rate has been shifted to 1/10,000 from 1.16/10,000 in 2002).

Prevalence of leprosy has also decreased from 0.85/10,000 in 2002 to 0.68/10,000 in 2003. However, prevalence in six districts namely Colombo, Kalutara, Hambantota, Polonnaruwa, Batticoloa and Ampara/Kalmunai were above the elimination target of 1/10,000. Percentage of MB cases among the newly detected cases has increased from 35.% in 2002 to 37% in 2003. Deformity rate has shown further decline trend (From 8.6% in 2002 to 8.2% in 2003) suggesting the detection of patients at early stages. Increased child rates witnessed in traditionally high endemic areas like Western province, Matara and Hambantota in the Southern province and Eastern province are indicative of the still continuing transmission.

5.2.5.2 Infrastructure

The two Leprosy Hospitals at Hendala and Mantivu and the Central Leprosy Clinic (Room 21, National Hospital Sri Lanka) function under the administration of the Anti-Leprosy Campaign (ALC). The Central Leprosy Clinic is the main referral centre for patients with complications and for those who need specialized services for deformities. It also functions as the main operational centre for field activities of the country. Maintenance of the register of leprosy patients, dissemination of leprosy statistics and other information are carried out by the CLC. A field staff of 25 PHII/Leprosy attached to the provincial health ministries assist Regional Epidemiologists to

implement the programme at district level. ALC co-ordinates all field activities.

Admission to the two Leprosy Hospitals has been completely stopped since the introduction of MDT in 1982. However, patients who have been admitted two decades ago still remain in these hospitals. The Government policy as practised in other countries is to look after these 'ex-patients' for the rest of their lives as they have been admitted against their will by legal measures. Since 1980, several attempts have been made to transfer the remaining patients in Mantivu to Hendala hospital, but this did not materialize until year 2001, when patients for the first time agreed to do so. Policy decision has to be taken about the closure of these two hospitals as the number is declining rapidly. Steps have been initiated to prepare the cabinet memorandum to repeal the obsolete lepers' ordinance and to delete the section on medical leave for leprosy patients in the establishment code.

5.2.5.3 Intergration of Leprosy Services into the General Health Services

To sustain the achievements gained so far, the entire health service, in this low endemic situation needs to be on the alert to detect remaining new patients. In Sri Lanka, the vertical structure (ALC) has achieved its maximum. Integration is an important part of the WHO strategy of leprosy elimination. WHO strongly recommends that low endemic countries such as Sri Lanka should integrate the services, as continuing the vertical programme is no more cost effective. Hence preliminary discussions by way of focus group discussions with new stakeholders were initiated in 1998 for the integration of leprosy services into the general health services.

The overall goal of this project is to eliminate leprosy at sub-national level (DDHS/MOH) and to integrate leprosy services with the general health services. It took about two years to prepare a comprehensive plan of action for the integration and also for the strengthening of the infrastructure for the integration.

The major achievements for the year 2003 are given below.

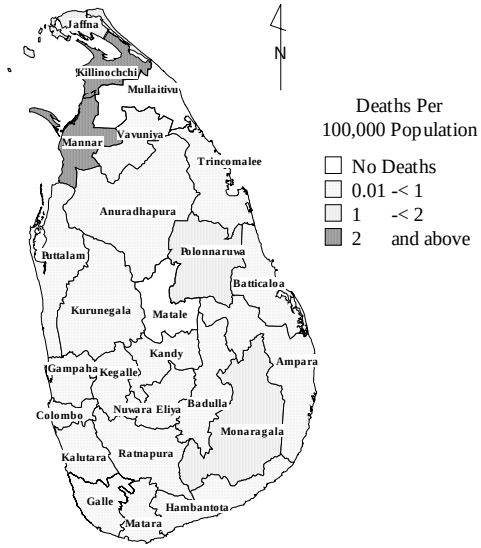
- Training programmes for MOO, who are newly recruited and previously untrained, General Practitioners and Medical Students on diagnosis, management and epidemiological assistance of leprosy were completed.
- Currently existing forms and registers were revised and RE/PHI were updated on the revision with the view to improve quality of data.
- Integration of MDT distribution was completed by handing over the distribution of MDT to the MSD.
- A comprehensive plan of action was prepared to intensify leprosy elimination activities in the North and East. Presentation of the plan to the administrators, training of MOO, PHC staff on leprosy, Provision of software programme of the leprosy MIS, review of MDT situation and preparation of IEC materials in Tamil were carried out under this plan.
- Epidemiological situation of the leprosy was assessed quarterly and annually with the district leprosy elimination terms.
- All child cases and deformity cases were investigated in depth to identify areas at risk.

5.2.6 Public Health Veterinary Services

5.2.6.1 Status of Human Rabies

Rabies control measures launched in Sri Lanka since 1975 have had a tremendous effect on the incidence of

Fig 5.2.14 - Distribution of Rabies Deaths by Health Region, 2003



Source : Medical Statistics Unit
Prepared by Medical Statistics Unit

rabies. The number of rabies deaths declined from 377 in 1973 to 154 in 1990 and 124 in 1995, and 109 in 2000. These reported numbers of deaths were annually declined gradually, and during the year 2003, 76 human rabies were reported.

5.2.6.2 Animal Rabies

The dog is the main reservoir as well as the transmitter of rabies in Sri Lanka. A dog ecology study conducted in the past has revealed a dog to human population of 1:8. Study conducted in 1980s and Survey during 1997, in Mirigama, a recently urbanized area reveals an increased dog population of 1:4.6. Further, study indicates that 20% per cent of the dogs were owner less.

During 2003, 89.5% of animal rabies was reported among dogs. The reported positive cases were, 479 dogs (67.75%), 28 cats(21.8%), 11 cattle, 1 pole cat, 2 mongoose, 1 fox and 2 rock squirrels.

5.2.6.3 Strategies of Rabies Control

- Immunization of domestic dogs against rabies.
- Immunization of community dogs and stray dogs against rabies, with the auto injector and oral rabies vaccine.
- Controlling the growth of the stray dog population.
- Destruction of stray dogs suspected of incubating the rabies virus.
- Promotion of responsible dog ownership and birth control for dogs.
- Prevention of human rabies among suspected dog bite victims.
- Surveillance of rabies.
- Training and Health Education.
- Enforcement of rabies control legislation.
- Promotion of multi-sectoral co-operation and community participation.

5.2.6.4.1 Training Programs and Health Education

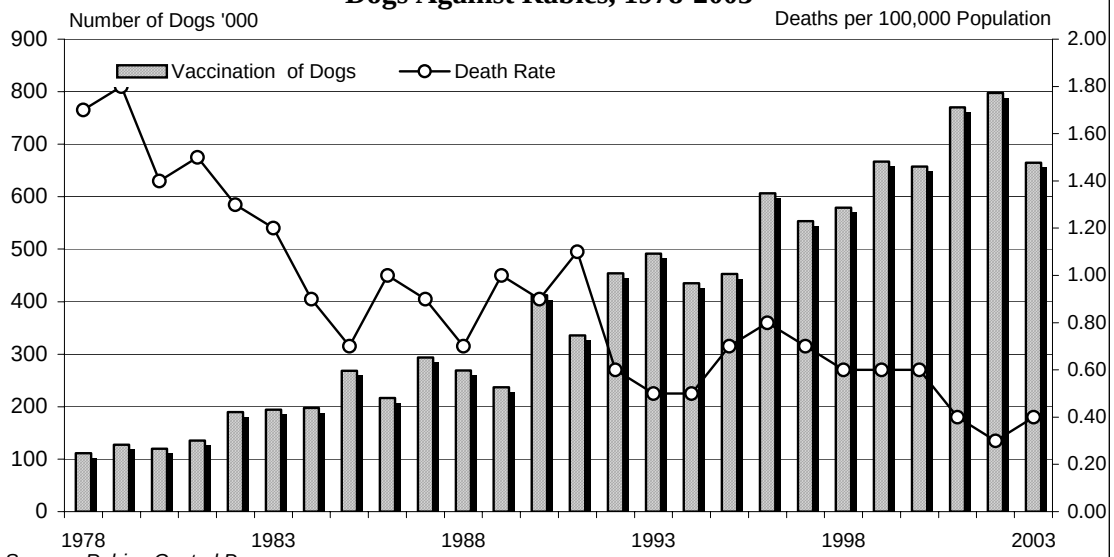
Training was provided for primary Health Care Staff and Curative Staff on following teams.

1. Economical & prompt Rabies Post Exposure treatment – for 142 participants.
2. Divisional Planning implementation of rabies control – for 131 participants.
3. Oral Rabies vaccination of dogs-for 529 participants.
4. Vaccination of domestic free roaming dogs – for 24 participants.
5. National level monitoring and facilitating – for 27 participants.

Also the following health education activities were carried out during year 2003.

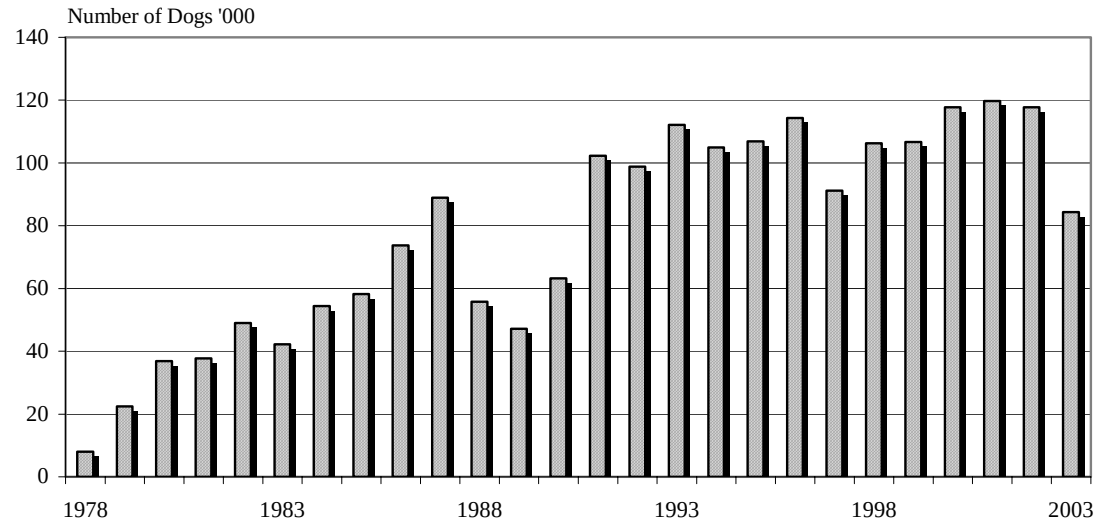
1. Thirty minutes Cartoon film was telecast -6 telecasts.
2. Creating awareness through exhibitions – 35,000 people were participated.

Fig 5.2.15 - Trends in Human Rabies Mortality and Vaccination of Dogs Against Rabies, 1978-2003



Source : Rabies Control Programme

Fig 5.2.16 - Trend in Elimination of Stray Dogs, 1978-2003



Source : Rabies Control Programme

5.2.6.4.2 Special Activities

Pilot project was conducted in 2003 in the Puttalam district, an area of 2,882 sq km with a human population of 725,000, to access feasibility of achieving the herd immunity against rabies among dogs.

Routine Parenteral Vaccicination Programme was carried out for domestic dogs and marked with collars. A house to house survey identified the residual non-vaccinated dog in the selected area. Oral vaccine was offered to the on-vaccinated domestic dogs and marked, as third step free roaming community dogs without marks were vaccinated with parenteral cell culture rabies vaccine. 13,757 (12%) non vaccinated dogs in the households selected and vaccinated orally with Vaccinia recombinant lycoprotien oral rabies vaccine containing bait Total vaccination coverage achieved was 76%.

Two Three-Wheelers were issued to Amapra district with the support of WHO

country programme to establish a vaccination programme for free roaming dogs and vaccination progrmme for domestic dogs.

Quarterly meetings were held. Feed back were provided through production of Quality Statistical Bulletin of Rabies Control to Provincial and District Authorities.

5.2.6.4.3 Control of Japanese Encephalitis

The Public Health Veterinary Services also handle the control of Japanese Encephalitis among pigs. This programme was implemented in collaboration with the department of Animal Production and Health. During the year under review, 70,000 doses of J.E. swine vaccine was supplied to all provinces except to the Central, North Eastern and Uva provinces. Funds were supplied by Provincial health services and, department of Animal Production &Health provided the human resources.

5.2.7 Unit of Youth, Elderly, Disabled and Displaced Persons

The overall vision of the programme is to improve the quality of life of Youth, Elderly, Disabled & Displaced Persons through improvement of the health facilities, disease prevention & health promotion.

5.2.7.1 Vision, objective and activities for Youths.

Vision:

A Healthy & productive adolescent & youth population.

General Objectives

To improve the life skills (life competencies) among school & out of school children as a means of reducing adolescent & youth problems & to improve their well being.

Specific objectives:

1. Improve the capacity of the health & education staff on promoting life skills among school & out of school adolescent & youth.
2. To identify the context and the methodology for improving life skills education through school curriculum, teacher training and through education of parents & community leaders.

Activities:

1. Training Peripheral Health & Education Dept. staff to conduct LS program on pilot scale.
2. Conducting workshops & lecture discussions of LSE by trainers at divisional level (MOH, HEO, Master teachers of LS, LS teachers).
3. Conducting evaluation meetings with trainers.
4. Develop Health Learning Materials (HLM) to train the trainers.
5. Conducting Steering Committee & Task Force meetings on adolescent health to prepare adolescent health policy.
6. Training of teacher counselors on reproductive health counseling in collaboration with NIE.
7. Training of peer communicators on LSE in collaboration with NIE.
8. Training of adolescents & their guardians in Children's villages on reproductive health, life skills & on parenting skills.
9. Training of child care officers on National Child Protection Authority on life skills.
10. Training of Girl Guide leaders on adolescent health.
11. Training of under graduate & post graduate students on Adolescent Health including LSE.

5.2.7.2 Vision, objective and activities for Elderly.

Vision:

Healthy active productive elderly population.

General Objectives

1. To improve the physical, mental & Social well beings of the present elders.
2. To achieve a healthier more active, more productive, elderly population in future.

Specific Objectives

1. To improve awareness among all age groups regarding "Active Ageing" and through promotion of healthy life style.
2. To improve awareness among elders & their family members regarding common health problems of elderly.
3. To improve early detection of common health problems of elderly and referral for treatment & through timely management of common impairments to minimize & postpone disability.
4. To promote the physical, mental & social well being of elderly by establishment of day centers.

As a means of achieving the above objectives, the programme of Promotion of Active Ageing through Community Health Care for Elderly was established in another 25 MOH areas this year (This programme which was launched in year 2000 has covered 139 MOH areas by now).

Activities:

1. Regional level meetings in selected districts for trainers.
2. Training of PHC & institutional staff.
3. Preliminary level meetings for improving inter-sectoral coordination at MOH level.
4. Needs Assessment of elderly in the community by a survey.
5. Printing & distribution of screening clinic cards and distribution of gluco meters.
6. Training of health volunteers in Moneragala District on elderly care.
7. Fact finding visits to existing day care centers & review progress of activities.
8. Meetings of Monitoring & Follow-up.
9. Training of undergraduate & post graduate students of Medicine on Care of Elderly. Adolescent Health & on health of the disabled.

5.2.7.3 Vision, objective and activities for Disabled.

Vision

To improve the quality of life of disabled persons

General Objectives

To improve the health services for disabled persons

Specific Objectives

1. To improve the early detection referral & treatment of cataract among older persons.
2. To improve awareness among members of the community regarding prevention of disability.

Activities:

1. Training MOOH & selected trainers at divisional level on minimizing disability among members of the community during old age through physical exercise.
2. Conducting mobile cataract camps for reducing disability in old age.