Challenges of Leprosy Today: Lessons from AIFO Projects

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Introduction: As far as the situation of leprosy is concerned, there are two strong messages which are influencing the decisions and strategies of organizations like ILEP member associations, fighting against this disease and its negative impact on lives of affected persons.

The first message is coming from the Leprosy unit of World Health Organization (WHO). Initially in 1991, when the call for "Eliminating leprosy by the year 2000" was made, the word, "elimination" was defined as reduction of leprosy prevalence to below 1 case per 10,000 population. Over the years, even while the "elimination goal" has been postponed to 2005, gradually this specific definition of "elimination" has been replaced by the common dictionary definition of the word "elimination" – meaning that the disease will be under control and after 2005, there will be hardly any need for continuing the fight against leprosy. For example, a WHO brochure (WHO/CDS/CPE/SMT/2001.5) distributed in June 2001 says:

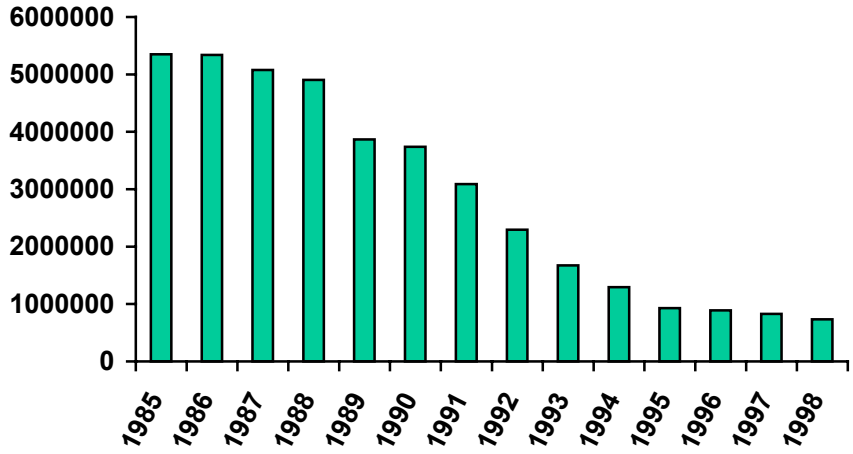
> *"The final push to eliminate leprosy*
>
> *WHO and its partners aim to detect and cure all the remaining leprosy cases in the world – according to current estimates, 2.5 – 2.8 million – by the year 2005."*

The second message coming from the field projects dealing with leprosy control activities, relates to a significant decrease in work-load for these activities.

This paper aims to look at the changing epidemiological situation of leprosy, especially in some AIFO-supported projects, with the objective of promoting a discussion in AIFO for our future directions of work.

Changes in epidemiological picture of leprosy at international level: In January 2000, in a workshop on future challenges of leprosy, organised jointly by AIFO and the Vatican, Prof. Cairn Smith had made a presentation on future challenges of leprosy.

Changes in Registered Cases of leprosy in the world



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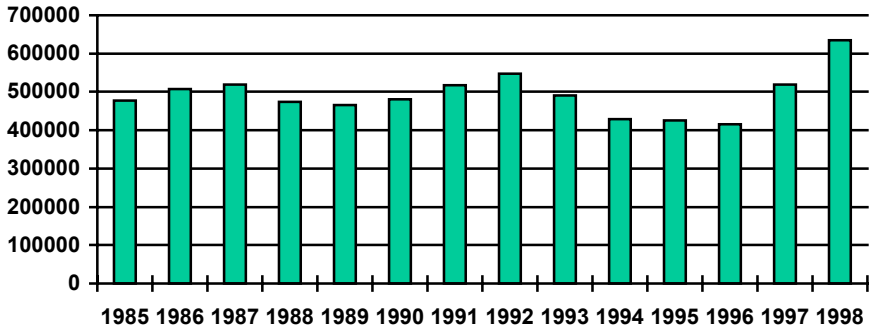
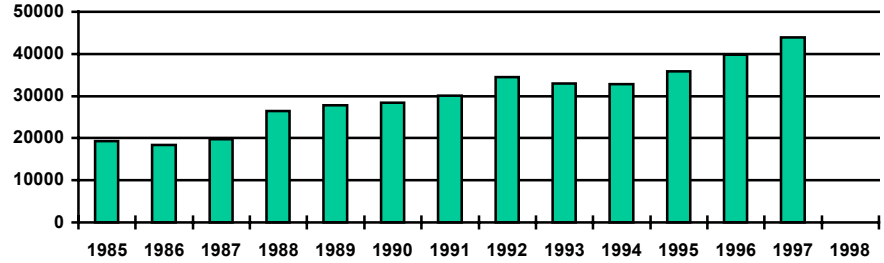
Talking about the changes in the prevalence of leprosy, Prof. Smith explained the dramatic fall in number of active cases registered for MDT at the end of each year, in the last ten years. He also explained that over the last few years (1995-98), this fall in prevalence had stabilised.

He also explained that as far the incidence of new cases detection was considered, there was hardly any change, especially in the key countries like India and Brazil, which together contribute to more than 80% of the new cases of leprosy in the world.

Trends in New Cases detection in India



Trends in New Cases detection in Brazil



Looking at the situation in some AIFO supported projects: Given the situation presented by Prof. Cairn Smith, we decided to look at some of the AIFO supported projects to understand the changing situation. The question we posed was – are there projects which satisfy all the following conditions?:

- Projects, which have been implementing MDT for the last ten years, with good MDT coverage, good MDT completion rates and low rates of disability in the new cases
- Projects, where there were no wars or natural disasters over the last ten years, which could have interrupted the leprosy control services
- Projects, which had uninterrupted presence of qualified medical officers supervising the leprosy control activities for the last ten years
- Projects, which had provided good quality data and information about their leprosy control activities over the last ten years

Six such projects were identified – four in India (Gudivada, Warangal, Bhalki and Cochin), one in Brazil (Acre state programme) and one in Africa (Ghana national programme). All these projects show very low visible disability among the new cases (5% or less), showing that cases are detected early. The population of the four Indian projects varies from 80,000 to 2.5 million, while in Acre and Ghana, it is 0.5 and 17 million approximately.

Data from 1987 was taken as baseline and compared with data for the last five years (1996-2000) and the following situation emerged:

A. *Change in prevalence*: As shown by Prof. Smith, there has been a significant fall in number of registered cases after the introduction of MDT and after the reduction of duration of treatment. One project (Cochin in India) shows steady fall in prevalence while in others, it seems to be quite stable over the last 3-4 years. However, in spite of 10 years of good coverage with MDT, it is still much higher than the WHO goal of elimination.

Changes in Prevalence of Leprosy (per 10,000 population)

	1987	1996	1997	1998	1999	2000
Gudivada	89,7	8,6	9,5	7,4	6,1	6,7
Warangal	39,5	5,1	6,2	5,8	6,7	2,7
Bhalki	91,2	7,1	3,9	4,4	11,0	4,2
Cochin	38,9	1,2	0,6	1,2	0,4	0,1
Acre	105,5	15,2	14,0	10,4	10,4	5,2
Ghana	8	1,2	1,2	0,7	0,8	0,8

B. *Change in new case detection:* While some of the projects show a decrease compared to the baseline of 1987, it is by no way uniform and in some cases, it remains unchanged. Even Acre and Ghana, which had a very low new case detection rates compared to the projects in India, not withstanding good MDT coverage for the last ten years, there is hardly any change in new case detection rates. The only project, which seems to show a real decrease in Cochin in Kerala state of India.

New Case detection rates (for 100,000 population)

	1987	1996	1997	1998	1999	2000
Gudivada	204	108	149	134	110	132
Warangal	182	95	107	157	115	173
Bhalki	272	233	201	234	206	282
Cochin	20	17	10	14	4	1
Acre	67	144	140	65	70	62
Ghana	9	12	12	9	9	9

Following this analysis, we have asked Cochin project to carry out a sample survey in their project population to confirm this information. This will be carried out in March 2002.

C. *Changes in MB-PB ratio among new cases:* There doesn't seem to be a significant change in the MB-PB ratios in the new cases over the past five years. Since this information was not collected in 1987, it is not possible to compare it with the baseline data.

MB/PB ratio among new cases

	1996	1997	1998	1999	2000
Gudivada	1/8,7	1/8,9	1/9,6	1/13,6	1/5,8
Warangal	1/3	1/7,2	1/6,7	1/3,6	1/4,5
Bhalki	1/3,7	1/4	1/3,9	1/4,7	1/10,1
Cochin	1/7	1/2,6	1/2	1/0	0/13
Acre	4,1/1	2,3/1	1,9/1	1,3/1	4,3/1
Ghana	9,7/1	2,5/1	2,1/1	2,6/1	6,9/1

D. *Percentages of children among the new cases:* The percentage of children among the new cases is considered a sensitive indicator of risk of infection of leprosy in a population. The information collected from the six projects presents the following situation:

Percentage of Children among new cases (%)

	1987	1996	1997	1998	1999	2000
Gudivada	44	52	50	42	54	40
Warangal	17	41	41	58	41	40
Bhalki	27	31	23	20	23	23
Cochin	43	77	25	9	75	0
Acre	15	5	6	11	12	8
Ghana	12	6	6	8	10	9

As can be seen from the data, the percentage of children among the new cases in India is much higher compared to that in Acre and Ghana. However, excluding Cochin, there hardly seems to be any change in this data over the last ten years which suggests that not withstanding consistently good leprosy control activities, the risk of infection for the population has not yet decreased.

What does it mean for AIFO's future work?

This analysis raises serious questions about the impact of leprosy control through MDT on the interruption of the transmission of the infection. Considering that in many parts of the key countries like India, Brazil and Mozambique, the MDT coverage has arrived fairly recently, over the last 1-2 years and there still remain uncovered areas, we are unlikely to see any significant changes in the new case detection rates and in the risk of infection to the populations of these areas, over the next years. In any case, we are far away from the "Final Push".

At the same time, there is a significant reduction of work-load for projects involved in leprosy control because of a fall in total number of registered cases requiring MDT and because of other operational changes like not carrying out any active surveys, not carrying out any follow-ups, not carrying out any bacilloscopy examinations, decrease in number of new disabilities, etc.

Considering this analysis the following strategies are suggested for future work of AIFO:

- To maintain the focus of AIFO's work on control of leprosy and rehabilitation of leprosy affected persons, using the new case detection rate as a criteria for accepting new projects for support from AIFO. All AIFO supported projects should be asked to maintain good quality of leprosy control work and should be encouraged to develop good monitoring systems for follow-up of complications and relapses, especially where new treatments like ROM are being implemented.

- All AIFO supported leprosy control projects should be encouraged to extend their activities to primary health care services, including mother & child care, community preventive health, diarrhoea control with home-made oral rehydration, malaria control, fight against infectious diseases and health education. The national and state level leprosy control programmes, especially in areas where the new case detection rates are low, should be encouraged and supported to integrate with other vertical programmes or with primary health care services.
- All AIFO supported rehabilitation projects should be encouraged and supported for promoting community-based rehabilitation approach, aimed at all the disabled persons in the communities.

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