

ways: the proximal extent of lesion cannot be detected and a second affected site in case of scattered lesions (median nerves, tibial nerves) would not be identified. Furthermore, measurements would be impaired if the common stimulation site is affected as well, which frequently is the case (distal upper arm/ulnar nerve, cubital region/median nerve, fibular head/peroneal nerve, popliteal region/tibial nerve). In contrast, with intraoperative electroneurodiagnostics nerves are stimulated at the most proximal possible and unaffected site of the nerve, the roots. This enables a precise localization of the disease's proximal extent.

Since five years, intraoperative electroneurodiagnostics have been performed on leprosy nerves during several international pilot studies (Bombay-India/1992+1994; Cairo-Egypt/1995; Pokhara-Nepal/1996+1997). In limb nerves, spinal root were electrically stimulated with surface electrodes, in facial nerves their exit at the pontal region were stimulated with needle electrodes over the temporal region. Efferent nerve compound action potentials were registered from the nerve's surface with bipolar wire electrodes moved proximally and distally along the exposed segments. Patient were fully relaxed to avoid volume conduction.

We report about our experience from over 2000 intraoperative recordings with various techniques, the implementation of the different methods, the interpretations of results and the limitation of the techniques.

### SU30

#### MICROSURGICAL INTERFASCICULAR NEUROLYSIS OF THE MAIN TRUNK AND ALL AFFECTED PERIPHERAL BRANCHES OF LEPROUS FACIAL NERVES CAN AVOID TRANSFER PROCEDURES

E. Turkot<sup>1</sup>, B. Richard<sup>2</sup>, E. Knolle<sup>3</sup>, B. Katri<sup>3</sup>, R. Ciovcia<sup>4</sup>, S. Tambwekar<sup>4</sup>

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2: Green Pasture Hosp., Pokhara, Nepal, 4: K.E.M. Hospital, Bombay, India

Since 1966, musculofascial transfer procedures remain the only surgical treatment of leprosy facial neuropathy. The goal of this study was to evaluate the possible benefit of invasive neurolysis in leprosy facial neuropathy given the fact that the surgeon can reliably detect all affected nerve segments.

10 patients suffering from leprosy facial neuropathy were enrolled in this international prospective pilot study. All patients were medically treated according to WHO recommendations and had undergone clinical and electrophysiological investigation prior to surgery. Interventions consisted of exposing facial nerves at the main trunk and to perform lateral parotidectomy. Subsequently, all affected nerve segments identified as such either by intraoperative electroneurodiagnostics and/or by their macroscopic and microscopic aspect were surgically treated by epineurotomy and, if necessary, by microsurgical, interfascicular neurolysis.

Follow up was performed 10 months and 22 months after surgery. Despite the fact that patients represented a negative selection as far as duration and severity of the disease was concerned, clinical evaluation showed improvement of lagophthalmos and/or other functions of facial muscles in all but one patient.

We conclude that microsurgical interfascicular neurolysis, properly performed on all affected nerve segments, can be recommended in leprosy facial neuropathy and can avoid transfer procedures.

## TRAINING

### TR01

#### METHODS OF TRAINING BASIC HEALTH WORKERS AND PATIENTS IN PREVENTION OF DISABILITY

P.D. Samson, Wong ML, Zhang Guocheng, J Jiang, J Watson, A Piefer, R Winslow, WCS Smith, Ministry of Health, Peoples Republic of China, The Leprosy Mission International, 08-06 Golden Mile Tower, 6001 Beach Road, Singapore 199589.

The prevention of disability project in the People's Republic of China is probably the largest project in the world addressing the problem of prevention of disabilities due to leprosy. Disabilities have been the major cause of social stigma in leprosy patients in China and present major hurdles in their rehabilitation.

We have implemented the Prevention of Disability (POD) programme of leprosy patients in 15 provinces in China which has involved the planning and implementation of training of both health workers and people affected by leprosy in self care. The methods of training used at National, Provincial and County levels have included lectures, group seminars, demonstrations and on the job training. Training to the health staff i.e. doctors, supervisors and basic health workers was the key to the programme's success. A total of 325 training courses were conducted and a total of 11,891 participants were present. 2,078 supervisors were also trained in this programme. The programme involved the process of transferring POD technology from experts to basic health workers to leprosy patients. However the follow-up supervision and re-reinforcement of training has been a key to the success of the programme.

Evaluation of the achievements of the training programme was conducted by an independent team of national and international experts in 1998. Change in attitudes and behaviour of the patients to the problem was assessed. The response of patients to neuritis was good and patients followed the instructions carefully, particularly if there was pain associated with the neuritis. Patients learned self care of eyes well, partly because eye problems are visible and closely linked to stigma. Self care of the hand was comparatively better than self care of the foot which may be related to function of the hand and visibility.

The evaluation of the effectiveness of training reflects on the importance of follow up supervision and reinforcement of training; and patients learning related to presence of pain and the visibility of the potential disability (deformity).

### TR02

#### BASIC ACTIVITIES AND SKILLS DETERMINED IMPORTANT IN PREVENTING IMPAIRMENTS AND DISABILITY IN HD AND THEIR IMPACT ON TRAINING AND SUPERVISION IN BRAZIL IN 1997 AND 1998

Linda F. Lehman, Hannelore Vieth, Maria Beatriz P. Orsini, Maria Leide W. Oliveira

National Coordination of Sanitary Dermatology (CNDS), National Health Foundation, Ministry of Health, Brasilia, D.F., Brazil  
American Leprosy Missions (ALM), Greenville, S.C., USA

Brazil has 27 states and over 5,000 municipalities. It continues to have over 36,000 new cases of HD diagnosed yearly. The coordinator of CNDS of the Ministry of Health in Brazil requested a collaborative National Prevention of Disability (POD) Project between the government and ALM in August of 1996. One outcome expected was to integrate essential POD activities into all HD control programs. Therefore it was necessary to identify essential activities and skills needed for preventing impairments and disability.

A consensus of basic activities and skills were developed by the National POD advisory committee combined with the results from four 1997 national supervisory training workshops. The combination represented disease control realities throughout Brazil.

Using these activities and skills, standardized training courses and systematic supervision were developed and implementation started in 1997. This presentation will also show the course content and objectives of two standardized training courses. One course developed for the trainer/supervisor and the other course for local health care workers. The skills learned in the courses are than followed up in systematic supervision activities. Supervision was felt to be the key component to maintaining and improving quality care as well as key to giving feedback for future training needs.

### TR03

#### THE RESULTS OF 5 NATIONAL STANDARDIZED PREVENTION OF DISABILITY IN HANSEN'S DISEASE COURSES FOR THE TRAINER/SUPERVISOR WHICH COVERED ALL 27 BRAZILIAN STATES IN 1997 AND 1998

Linda F. Lehman, Hannelore Vieth, Maria Beatriz P. Orsini, Maria Leide W. Oliveira

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American Leprosy Missions (ALM), Greenville, S.C., USA

The coordinator of CNDS of the Ministry of Health in Brazil requested a collaborative National Prevention of Disability (POD) Project between the government and ALM in August of 1996. One of the primary goals was to integrate essential POD activities into all Hansen's disease control programs. For this to be accomplished, two standardized training courses were developed in 1997, one for the trainer/supervisor and the other for local health care workers. This presentation will focus on the results of 5 national train the trainer/supervisor courses.

The objective of this course was to prepare 2 persons in each state to provide technical and administrative support to the state by facilitating standardized courses and implementing systematic supervision of essential POD activities within the state's HD control programs in integrated public health facilities.

The results of pre and post course testing, the results of individual participant final course evaluations, the course facilitator's evaluations, and the up to date status of follow-up training and supervision activities at the state level will be presented.

The presentation will also look at needs identified during and after the courses, factors which facilitated and impeded course implementation, and recommendations for future courses of this kind.

## TR04

### THE DEVELOPMENT AND IMPLEMENTATION OF NATIONAL STANDARDIZED PREVENTION OF DISABILITY TRAINING COURSES FOR ALL 27 BRAZILIAN STATES

Linda F. Lehman, Hannelore Vieth, Maria Beatriz P. Orsini, Maria Leide W. Oliveira

National Coordination of Sanitary Dermatology (CNDS), National Health Foundation, Ministry of Health, Brasilia, D.F., Brazil  
American Leprosy Missions (ALM), Greenville, S.C., USA

The coordinator of CNDS of the Ministry of Health in Brazil requested a collaborative National Prevention of Disability (POD) Project between the government and ALM in August of 1996, to start in 1997. This presentation will focus on the POD training courses currently being adopted in Brazil.

The essential components to be discussed are:

1. The recognition of the size of the HD problem in Brazil with 27 states and over 5,000 municipalities.
2. The recognition that POD is "an essential component of leprosy control programs" (WHO).
3. The identification and selection of a project coordinator.
4. The identification and selection of a national POD advisory committee.
5. The identification of POD needs in training and supervision.
6. The consensus of a working definition for POD and essential POD activities and tasks.
7. The elaboration of two types of courses, one for training trainers/supervisors and the other for training local health care workers.
8. The elaboration of educational material and training methods.
9. The establishment of a strategy which would enable each state to have its own capacity to train and supervise POD activities.
10. The development of evaluation criteria.
11. The identification of needed political and financial support required for a successful outcome.

## TR05

### DISTANCE EDUCATION IN LEPROSY

V. Uma, John Stephen, S. Arunthathi, P. Krishnamurthy, N.B.B. Reddy  
Damien Foundation India Trust, 27, Venugopal Avenue, Spurtank Road, Chetpet, Chennai - 600 031, India.

In the context of the goal of elimination of leprosy as a public health problem by 2000 AD, and impending disbandment of vertical leprosy services in many areas, it becomes imperative to ensure that general health personnel are equipped with skills and knowledge to diagnose and manage leprosy. A distance learning programme has been developed by the DFTT in leprosy as an innovative educational strategy to cater to those health personnel who do not have the time and resources to undergo formal training in leprosy. The distance learning curriculum includes 10 modules of self directed, problem based learning materials. The requirements include participation in 2 contact sessions and the completion of 10 sets of assignments. Individualised feedback was given for the assignments. Contact sessions relied on task based, small group

learning. Candidate performance was measured with objective structured clinical examinations. The distance education programme has been pilot tested on a total of 12 participants who were enrolled in 1997. Preliminary evaluation suggests that, with improvisations, distance education could become a highly effective and efficient educational intervention. The results of the final evaluation of one year experience with distance education will be presented at the conference.

## TR06

### TRAINING FOR LEPROSY: WHERE DO WE GO FROM HERE?

S.A.R. Krishnan, Guido Groenen, Tesfaye Bulto



ALERT, P.O.Box 165, Addis Ababa, Ethiopia

The number of leprosy patients is decreasing world-wide. Specialized leprosy control projects, and even special services specifically aimed at leprosy patients (rehabilitation, vocational training, etc.) will become less and less cost efficient. At the same time, the number of leprosy patients that a single health worker will see, be it in a specialized leprosy programme or in an integrated general health care setting, risks becoming too low to maintain the necessary skills for diagnosis, treatment and prevention of disabilities.

How can we ensure the sustainability of the essential leprosy control functions in a situation of low endemicity?

Training of the general health staff at all levels would seem to be one of the key areas. However, specialist training of long duration (the kind of training still being given at the various leprosy training institutions) will not be acceptable, nor would it be appropriate. We have to devise new approaches to training in order to reach our target group. Some of the possibilities that are being examined:

- ready-made training packages, tailor made for a specific programme by one of the specialized institutions, to be used peripherally by local facilitators, trained in the use of the package by the specialized institution.
- distance learning courses (could be a suitable strategy for supervisors at the district level and above).
- inclusion of the essentials of leprosy control in the curricula of the medical and paramedical training institutions: this would ensure that all future doctors, nurses, lab technicians, physiotherapists, etc. are aware of leprosy.

It is the task of institutions like ALERT to develop these new training strategies together with the National Leprosy Control Programmes and the ILEP members.

## TR07

### FIELD BASED TRAINING IN HEALTH EDUCATION IN LEPROSY - A NEW APPROACH

T. Ethiraj, V. Uma, P. Krishnamurthy  
Damien Foundation India Trust, 27 Venugopal Avenue,  
Spurtank Road, Chetpet, Chennai : 600 031, India

On the eve of entering the phase of horizontalisation of leprosy eradication programme, active case detection methods will have to be replaced by passive ones, the prime among them being voluntary reporting of leprosy cases. Proportion of voluntary cases among the new reflects to a large extent on the level of awareness about leprosy among the people. In this context, DFTT has made an effort in this direction. A workshop for training of trainers was conducted in order to train the workers in health education at different projects.

The training methodology involved one day exposure to the participants to theoretical aspects through practical exercises, and two days of field based training which included, situation analysis, problem identification, setting objectives, selection of suitable methodology, implementation and evaluation.

A core team of trainers was selected to train the workers in each project. Each worker developed an action plan for his subcentre.

Details of methodology and post training experience will be discussed.

## TR08

### LCA/LCS Training, Present and future, in Bangladesh.

Dr. Md. Delwar Hossain, DBLM - Nilphamari

#### Abstract :

Wanting to change the poor quality services that have been prevailing in the field of leprosy all over the country, we have developed a system which has been implemented experimentally over 70 paramedical workers and 20 supervisors of our own organization in different relevant courses. We found our system has successfully been producing able, confident and committed best ever staff. Careful candidate selection, providing task-oriented training and smooth absorption of newly graduated staff under close supervision, at least for the first few months, are vital for ensuring the quality services in the field. We found 4 months and 2 months basic courses for the PMWs and Supervisor respectively are essential at present context.

## TR09

#### FOLK-A POTENTIAL MEDIA IN HEALTH COMMUNICATION

Sudhakar Bandyopadhyay  
Gandhi Memorial Leprosy Foundation,  
Balarampur Control Unit: Purulia:723143 : INDIA:

Folk is an attractive entertaining and educative media for mass communication with special relevance to rural people. Folk media could effectively be explored to disseminate messages, to increase people's awareness and possibilities for action, to solve difficult social issues. Action on stage have led to real life actions in many instances.

In Balarampur Unit of Gandhi Memorial Leprosy Foundation Folk media mainly puppetry and street Play are being employed for Health communication. A well-equipped team with locally prepared puppets, dresses, folding diars and music system perform the programmes. Stories for both the puppetry and street play are related to local incidents and scripts are prepared by the Leprosy workers.

An analysis of data collected for last 5 year (1992-96) produces encouraging outcome. Total 19% (Puppet-161 and Street Play-350) programmes were conducted in 151 villages with an average audience of 400. The effects include onspot reporting of 94 persons with suspicious lesions. Total 207 patients were reported and registered including cases referred by teachers, community leaders and family members being influenced by the programmes. It also helped prepare grounds to solve unfavourable social issues. It has also helped regularizing treatment compliance of patients.

The above findings suggest that folk media has potential contribution to creat mass-awareness in Leprosy and to change behavioral pattern as well.

## TR10

#### FUNCTIONAL MANAGEMENT TOOLS IN LEPROSY WORK

J. Ravichandran, T. Jayaraj Devadas  
GLRALES-INDIA, #4, Gajapathy Street, Shenoy Nagar, Chennai 600030.

A Management Tools Workshop was designed by Ilep working committee for the project managers keeping the specific needs of Leprosy control programme. German Leprosy Relief Association and Swiss Emmaus Leprosy Relief Work India conducted a series of workshops during the two years 1996-97 covering about 40 NGOs in South India. A study was made to evaluate the effect of this training. Following are the findings:

- ◆ 86.4% reported that they are able to analyse the present situation of the project and accordingly they could prepare annual plan of action as well as a long term plan of action.
- ◆ 91.8% of the NGO's stated that now the vision about the mission is cleared. They could specify their priorities more precisely.
- ◆ 81.3% of the NGO's are now in a position to forecast a financial budget in a scientific manner different from the traditional manner.
- ◆ More than 73.9% of the NGO's could identify the areas where cost control is possible. Their annual financial outlay for 1998 is about 22 to 34 % less than that of 1995 budget.
- ◆ 64.2% of the NGO's acknowledge that they have improved inter personal relationship with staff and between staff.
- ◆ 39.6 % of the NGO's were in a position to identify excess staff who could be reduced without affecting the delivery of prevailing quality services.
- ◆ More than 74.1% of the NGO's informed that they are able to appreciate the significance of data available from their own ILEP 'B' forms (annual report)

The study revealed that Functional Management Tools will bring cost effectiveness and efficient management of Leprosy programmes.

## TR11

#### WORKING WITH NON-BIOMEDICAL HEALTH CARE PROVIDERS FOR LEPROSY ELIMINATION

Nimal Kasturiratne<sup>1</sup>, Penny Grewal<sup>2</sup>, Mitchell Weiss<sup>3</sup>, Padmini Gunawardene<sup>4</sup>, Dayamal Dewapura<sup>5</sup>, Sunil Settinayake<sup>6</sup>, Lakshmi Somatunga<sup>7</sup>, Vinya Ariyaratne<sup>8</sup>

<sup>1</sup>University of Peradeniya, Sri Lanka, <sup>2</sup>Novartis Foundation for Sustainable Development, Switzerland, <sup>3</sup>Swiss Tropical Institute, Switzerland, <sup>4</sup>Anti-Leprosy Campaign, Sri Lanka, <sup>5</sup>University Sri Jaywardenepura, Sri Lanka

Misdiagnosis of leprosy among general health care providers, particularly ayurvedic practitioners, is common and has serious implications for the elimination of leprosy and the deformity load in the community.

A study was carried out in Sri Lanka among different types of health care providers, using photographs of representative signs of leprosy and a vignette describing the disease symptoms, in order to assess their diagnostic knowledge, treatment and referral patterns and sources of information.

The findings reveal that ayurvedic practitioners, particularly the non-graduates, tend to misdiagnose leprosy. There are primarily two reasons for this: First, a lack of training in leprosy and/or inadequate clinical exposure for the few who were trained. Second, the existence of ayurvedic illness categories which resemble the symptomatology of early manifestations of leprosy which lead them to misdiagnose leprosy.

As health care providers with non-biomedical backgrounds outnumber those with a biomedical background in many Asian countries, it is important to include them in leprosy control activities. They are also easily accessible and charge relatively low consultation fees. Moreover, with the low incidence of leprosy, affected persons may not suspect are suffering from leprosy and would consult ayurvedic practitioners.

However, developing training programmes for such practitioners poses special challenges. One key issue is to incorporate biomedical knowledge into the ayurvedic ideological framework so that they entertain a differential diagnosis of leprosy. Another is to motivate them to refer persons suspected with leprosy for treatment as they lack a tradition of referrals. It is also crucial to develop innovative and cost effective methods of training to reach a significant number of ayurvedic practitioners.

## TR12

#### IMPACT OF LEPROSY TRAINING TO GENERAL HEALTH WORKERS IN BANGLADESH

Ahsan Ali, Jalal Uddin Ahmed, Derek Lobo, Nepisha Begum

National Leprosy Control Programme, Dhaka, Bangladesh

Leprosy services were integrated into the general health services of Bangladesh in phases as of November 1993.

Prior to the establishment of MDT services at Government Health Centres, a 6-day training for doctors and a 1-day training for all the general health staff was given. The objectives of general health staff training were simple :

- \* to recognise early signs, suspect leprosy and refer the suspect case to the nearest health centre.
- \* to follow-up on treatment defaulters and motivate them.
- \* to provide basic information on leprosy to the public.
- \* to support the leprosy services in the health centre.

Over 31,000 general health workers and 1,100 doctors from health centres and medical colleges were provided the training over a 5-year period from mid-1993 to date.

The details, outcome and impact of this massive training programme and its contribution to achieving the leprosy elimination goal in Bangladesh will be presented and discussed.

### TR13

#### TRAINING NEED ASSESSMENT IN THE SUPERVISION SKILL OF THE DISTRICT LEPROSY SUPERVISORS IN INDONESIA

Djohan Kurnia  
National Leprosy Training Centre, Ujung Pandang, Indonesia

The training need in supervision skill of the district leprosy supervisors (wasors) in Indonesia who supervise the health centre leprosy workers were assessed to ensure the achievement of the national (and global) goal of elimination of leprosy / 2000. Thirty three among approximately 300 district wasors ( 11% ) from 8 province representing arbitrary the eastern, central and western part of the country, were assessed by the provincial leprosy doctors or the leprosy supervisors. Data was obtained by interview and observation method using a check-list. The assessment study revealed that no special training course in supervision is needed provided constant guidance is given to the district supervisors. The guidance should include the importance of using a check-list during supervision (preferably providing a model check-list) , improving ST and VMT techniques, the knowledge about the signs of severe reactions, identifying inadequacy in the performance of the health centre workers, improving it on the spot and recording the supervision which will serve as a report, feed back and material for the next visit.

### TR14

#### THE PATIENT AS A COMMUNITY EDUCATOR IN THE CITY OF SÃO BERNARDO DO CAMPO, BRAZIL

Costa, Maria de Fátima da  
SORRI-Sorocaba, Brazil

Education is a fundamental component in the efforts towards Leprosy elimination. The distance between the health workers language and the patient's is often an obstacle to communication.

The paper presents a report of 10 years of health education performed by patients in Brazil. The impact of the efforts are discussed and suggestion for Leprosy education are proposed.

### TR15

#### INCOME GENERATION PROJECT FOR PERSONS AFFECTED BY LEPROSY AND DISABILITIES IN THE AREA OF SOROCABA, BRAZIL

Bakirtzief, Zoica  
Sorri-Sorocaba, Brazil

The income generation project for persons affected by Leprosy and disabilities is being implemented in the area of Sorocaba, Brazil. The objectives are to equip persons affected by Leprosy and disabilities to develop economically viable businesses so that they can contribute to the socioeconomic development of their families and communities restoring their dignity.

There are 791 persons affected by Leprosy in their economically active years (15-60 years of age) in the region, and 12,500 persons with disabilities. There are good public services in health and education. But there are no socioeconomic rehabilitation programs available.

The training methodology was developed at the University of Georgia (USA) where the whole business administration curriculum is taught to low income students by using role play activities that simulate a business experience and procedures. The curriculum was translated to the local language and the games were adapted to the situation and a pilot training was conducted.

The results of the pilot training are discussed and suggestions are made as to the use of hands-on approach to teach business administration to persons affected by leprosy and disabilities with little formal education. The project was developed with the partnership of the patients their participation is discussed.

### TR16

#### HEALTH MANPOWER FORMATION IN POST-ELIMINATION ERA IN LEPROSY.

D. S. Chaudhury, Kunal Saha and M. Chaudhury  
Leprosy Training Centre, German Leprosy Relief Association - Calcutta, India.

Training of Health Workers in Post-elimination era need conceptual reassessment. The curricula contents need be revised.

With the expected decline of prevalence in countries the needs of disabled persons have to be attended to. A part of this work would be within the ambit of the social welfare services. However the major responsibility will be with the health services to ensure care after cure as well as to interact with the Social Service Institutions for promotion of physical, economic and social well-being of the persons.

All Health Workers, would be required for early case detection, identification of persons at risk and for surveillance to detect relapses.

All these require purposeful training and orientation of the Staff as has been discussed in the paper.

### TR17

#### A QUESTIONNAIRE-BASED SURVEY IN ASSESSMENT OF KNOWLEDGE AND SKILLS IN EARLY DIAGNOSIS OF LEPROSY AMONG MEDICAL STAFF AT DIFFERENT LEVELS

Shu-min Chen, \* Rong-tao Zheng, \* Bing Li, \* Lin Zhang \* Cun-lian Han, \*\* and  
Xun-long Wang \*\*  
\* Shandong Provincial Institute of Dermatology.  
\*\* Ji Ning Leprosy Hospital, China

In order to assess the knowledge and skills regarding early diagnosis of leprosy, 33 village doctors, 34 township doctors, 27 doctors in county hospitals from 3 counties, 22 physicians and surgeons as well as 13 dermatologists in two provincial hospitals were selected to complete self-administered questionnaires. Following were the results: correct answers of pathogen of leprosy were 82%, 94%, 81%, 86% and 100% respectively; of life-long medications were 91%, 88%, 89%, 72% and 85%, respectively; of MDT were 0%, 0%, 19%, 0% and 62% respectively; of infectivity of sole ulcers were 30%, 38%, 15%, 18% and 62% respectively; of early symptoms of leprosy (defined as numbness of extremities) were 52%, 26%, 30%, 5% and 77% respectively; of early signs of leprosy (defined as anesthetic skin lesion with or without peripheral nerve enlargement) were 0%, 3%, 33%, 5% and 100% respectively; of how to do physical examination when a person was suspected of leprosy were 36%, 6%, 18%, 0% and 100% respectively; of having the knowledge in skin smear and biopsy when a person was suspected of leprosy, were 30%, 29%, 41%, 23% and 100% respectively. Many of the investigated subjects did not know where or whom to refer a suspect or a diagnosed leprosy patient for confirmation of diagnosis and treatment.

The authors recognized that majority of the medical staff at different levels in this group, except dermatologists, were lack of knowledge and skills in early diagnosis of leprosy, so that a relevant training programme in early diagnosis of leprosy should be conducted in a planned manner.

**TR18****IN SERVICE TRAINING MODULE FOR SOCIAL ASSISTANTS AND THEORETICAL METHODS OF ASSESSMENT OF SUCH PRACTICES IN THE ATTENTION FOR HANSEN'S DISEASE PATIENTS**

Otilia Simões J. Gonçalves, Heleida N. Metello, Wagner Nogueira, Angelina Lopes, Carmem Luisa M.P. Guisard, Ana Angela Alcantara C. Cardoso, Maria Sebastiana F. Bizetto, Raquel C. Jesus, Marcia H. Verri, Rute Pereira M. Coutinho

This paper relates the experience of the construction of the theoretical and practical module of in-service training for Social Assistants in the actions for social attention of Hansen's disease patients.

The authors present the phases and strategies for the development of this process at central level and the necessary interfaces with the regional realities that insure the theoretical identification and the operation of specific actions of the Social Assistants with the patients and the work of these professionals integrated with the other professionals of the team in health services.

It concludes with the presentation of the lines that design the practice of these professionals in the services offered to our clients, especially regarding Hansen's disease patients, through the definition of the attributions and actions left to them and therefore, the profile of the theoretical insertion of their routine practices.

**TR19****INFORMATION ABOUT LEPROSY**

Joke Moet, Hans Reesinck, Ati Kisyanto, Shafiq, Tanny Hagens

Health Department Republic Indonesia, The Leprosy Mission International

'Info Kusta' is Indonesian for Information about Leprosy. The poster is in the form of a cartoon story. The pictures are clear, showing the early signs of leprosy.

One person is pointing at the patches on the back of his friend. The person with the patches is advised to go to the health centre for examination. At the time of examination, the patient mentions that the patches are not itchy and have no feeling. Leprosy is confirmed by the doctor.

He expresses fear but health education is given and he is reassured.

In the summary, the early signs are mentioned, and the necessity of going quickly to a health centre for examination, because if it is leprosy, it can be cured if treated while still in the early stage.

**TR20****HELPING HEALTH WORKERS LEARN TO DIAGNOSE TUBERCULOSIS AND LEPROSY:**

S.A.R. Krishnan



ALERT, P.O.Box 165, Addis Ababa, Ethiopia.

The aim of this presentation is to explain the clinical teaching approach as an effective method of training rural health workers to diagnose early tuberculosis and leprosy.

It deals with what to teach and how to teach it, in a realistic clinical situation. Trainees should be able to detect any patient with early signs of leprosy or tuberculosis.

The following important points are covered in detail in the poster:

- Matching aims and methods
- Mapping out the concept for a deeper understanding
- Planning clinical teaching with defined clinical tasks
- Clinical teaching with clinical practice
- Mastering clinical skills in the clinical situation

**TR21****LEPROSY AND TROPICAL SKIN DISEASES: DEVELOPMENT OF THE CURRICULUM FOR FINAL YEAR MEDICAL STUDENTS IN ETHIOPIA**

S.A.R. Krishnan, Guido Groenen



ALERT, P.O.Box 165, Addis Ababa, Ethiopia

ALERT, the All Africa Leprosy Tuberculosis and Rehabilitation Training Centre, has been providing a 3-week course in leprosy and dermatology for final year Medical Students in Ethiopia for many years.

**Objective:** To identify students needs, and to find out how far the courses at ALERT meet those needs.

**Subject:** 459 final year Medical Students participated in the training program between 1993 and 1997. They were asked to fill in a questionnaire about the course objectives, its contents, teaching methods and duration. They were interviewed in groups.

**Results:** Students expressed a clear desire for less leprosy and more tropical dermatology in the course. They also requested more task-based learning than classroom learning.

**Conclusion:** While the need for continuing training of all health workers in leprosy is recognised, this study shows a worrying decline of interest in leprosy on the part of this group of future doctors.

**TR22****TRAINING AT ALERT IN 1999**

Guido Groenen, S.A.R. Krishnan, Tesfaye Dulto



ALERT, P.O.Box 165, Addis Ababa, Ethiopia

The All-Africa Leprosy, Tuberculosis and Rehabilitation Training Centre will offer the following courses in 1999.

- Prevention and Management of Disabilities (6 weeks)
- Introduction to leprosy (2 weeks)
  - ⇒ for physicians
  - ⇒ for senior field staff
- Management of combined Leprosy and Tuberculosis Control Programmes (4 weeks)
  - ⇒ for physicians
  - ⇒ for senior field staff
- Essentials of Leprosy and Tuberculosis
  - ⇒ for physicians (6 weeks)
  - ⇒ for administrative and programme support staff (2½ weeks)
- In-service training in
  - tropical dermatology (2 to 4 weeks)
  - leprosy surgery (2 to 6 months)
  - tropical eye care (2 to 12 weeks)
  - physiotherapy for leprosy patients (1 to 3 months)

For the exact dates, please consult the 1999 Training Calendar, available from the ALERT delegates, or contact:

ALERT Training Division  
P.O.Box 165  
Addis Ababa, Ethiopia  
Tel.: + (251) 1 711524 or + (251) 1 712792  
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**TR23**OCKIE KRUGER, FRIKKIE NAUDE, ERNEST RAMABOKELA

THE LEPROSY MISSION SOUTHERN AFRICA

In countries with a low prevalence of Leprosy, you need to keep your awareness programmes on a high standard. In South Africa we experimented on several ideas and found that one of the most effective ways of doing it is to produce a poster which can be used for Awareness, diagnosis, Health Education and at the same time provide essential information about Leprosy and where people can get help from.

The different classification of the poster consists of Photos, a slogan and written information.

It is already tested in South Africa and even led to self-diagnoses by patients. It proves to be very effective in clinics, hospitals and other public places, like health centres, schools and shopping centres.

Medical staff find it very useful in keeping them aware of the disease but also for providing the necessary information for treatment.

**TR24**

FIELD TEST OF THE CLARITY OF THE SELF-CARE BOOKLET FOR LEPROSY PATIENTS PRODUCED AT NLTC, INDONESIA

Djohan Kurnia  
National Leprosy Training Centre, Ujung Pandang, Indonesia

The "Self-Care Booklet for Leprosy Patients" produced at the National Leprosy Training Centre, Indonesia, was field tested for its clarity to the patients. Five areas of leprosy control programme prominent in the prevention of disability activities were selected for the study. The test was conducted by the leprosy doctors using a questionnaire accompanied by an instruction of how to fill it out. The questionnaire contains questions and instructions derived from the Booklet. The patients were asked to answer the questions and instructions before and after reading the Booklet in the sections compatible to the disability (ies) they are suffering from. The differences between the mean correct answers before and after reading the Booklet was compared. The result showed that for the messages on insensitive hand, foot, with or without ulcer and on lagophthalmus, the differences were significant ( $p < 0,05$  to  $0,01$ ). For the messages on claw hands, claw toes and drop foot, the differences were insignificant ( $p > 0,05$ ) and these parts of the Booklet need improvement.

**TR25**

DEVELOPMENT OF A CHECK-LIST BY TASK ANALYSIS TO ASSESS THE COMPETENCE OF THE DISTRICT LEPROSY WORKERS IN SUPERVISING THE HEALTH CENTRE JUNIOR LEPROSY WORKERS

Djohan Kurnia  
National Leprosy Training Centre, Ujung Pandang, Indonesia

A check list for assessing the competence of the district leprosy workers in supervision skill, who will supervise the health centre leprosy workers, the spearheads of the elimination programme, has been developed by Task Analysis technique. The Check List can be very useful for the programme managers, particularly those at the provincial level to identify the need for improving the district leprosy workers.

**TR26**

HAND AND FOOT SENSORY STATUS OF OVER 250 HEALTH CARE WORKERS PARTICIPATING IN PREVENTION OF DISABILITY TRAINING COURSES IN BRAZIL FROM 1993 TO 1998

Linda Faye Lehman

National and state POD training courses, Brazil  
American Leprosy Missions, Greenville, S.C., USA

The practice of sensory testing during training courses is important to enable participants to develop both manual and interpretive skills. Participants have hands on experience testing each other as well as seeing what it is like to have their own hands and feet tested. Participants learn to understand what hands and feet of persons without pathology can feel. This enables them to suspect and/or identify mild sensory changes in early nerve impairment and identify severe sensory loss which would put a person at risk of injury during clinical practices with patients.

This poster demonstrates the response of over 250 health care workers hand and foot sensory status using the Semmes-Weinstein monofilaments. The monofilaments used were 0.05g, 0.2g, 2g, 4g, 10g, and 300g. All participants without pathology could feel the light touch of a pencil. Participants practiced imitating the pressure felt with the 2g monofilament with the pencil. All health care workers with known pathology were excluded from the analysis.

The importance of this poster is to demonstrate health care workers without known pathology were able to feel with their hands and feet. It raises the question if there are regional differences accounting for differences noted in sensation world wide.

**TR27**

IS THERE STILL A NEED FOR TRAINING IN LEPROSY SURGERY?

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As the number of leprosy patients decrease due to successful leprosy control, the need for specialised surgeons working full time on leprosy patients will also decrease. The motivation for financing and recruiting leprosy surgeons will diminish. Patients at risk of acquiring disabilities will still remain for some considerable time, and it would be unfair to withhold the potential benefits of surgery from those who could be helped by it. Preventative and Rehabilitative Surgery (PRS) is an essential part of any Prevention and Management of Disability programme. Even in an integrated setting, where leprosy control is part of the general public health activities, PRS should be available at the district or sub-regional level.

Leprosy surgery uses techniques from many specialities, especially from hand-, plastic-, and orthopaedic surgery. Any general surgeon with access to a standard operating theatre could perform basic PRS after a reasonable time of training in the principles of PRS.

The most efficient way to preserve the necessary skills and expertise seems to be to make sure that the representatives of the relevant surgical subspecialties are able to take care of specialised surgery on leprosy patients as part of their work. It is thus up to the specialised leprosy institutions that still have expert leprosy surgeons to start training those specialists. Once trained, they will be the resource people who will train the peripheral general surgeons in PRS in an integrated setting.

**TR28**

INVOLVEMENT OF NONALLOPATHY MEDICAL COLLEGES IN CASE DETECTION

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Hind Kusht Nivaran Sangh-Maharashtra Branch,  
ALHUR, Madala, Mumbai-400 031, India.

Leprosy teaching in non-allopathy medical colleges is practically negligible or not up to the mark in India. Medical graduates passing out from these medical colleges generally set up their private medical practice at the grass root level catering to the low socio economic group among which the possibility of detection of leprosy cases is comparatively more.

In Maharashtra State of India there are 37 Ayurvedic, 37 Homeopathic and 5 Unani Medical Colleges where approximately 4000 new admissions are taken every year. In 1992 an inter-

action with these medical colleges by organizing teaching sessions on leprosy to medical students was initiated. In order to ensure continuity in leprosy teaching, training of leprosy to teachers of the medical colleges was also undertaken. As such 39 medical colleges have been covered during the last 5 years and practically 1200 students received the benefit of leprosy teaching every year.

The follow up was maintained with these students by correspondence. It was found that graduated students who succeeded to obtain job as well as those who started their private practice detected 351 new leprosy cases during the last five years. This experiment indicates that involvement of non-allopathy medical colleges is fruitful method for case detection in leprosy.

## TR29

### SPECIAL ACTION PROGRAM TO INVOLVE DERMATOLOGISTS IN URBAN LEPROSY PROGRAMME

VV Pai, CR Revankar, RG Chavan and R Ganapati

Bombay Leprosy Project, Sion-Chunabhathi, Bombay-400 022, India

It is estimated that 15-20% of leprosy patients prefer to take chemotherapy from practising dermatologists in Greater Bombay. Approximately 200 dermatologists are playing a significant role in the form of private health sector. It is observed that the criteria for identification, diagnosis, classification and treatment are arbitrary and deviant from WHO/NLEP strategies. Hence a project under SAPEL was undertaken with an objective to involve and orient dermatologists to improve the quality of the above aspects relating to leprosy elimination.

Workshops were held for 31 dermatologists in six batches on subjects such as current concepts in chemotherapy, skin smear taking, staining and laboratory aspects of leprosy. Simple reporting format was designed to collect information on the number of patients treated. Field workers visited the identified dermatologists to provide smear facilities, collect slides and provide reports. A questionnaire feedback after this effort showed the following impact.

1	No. of dermatologists participating	31
2	No. of dermatologists trained in skin smear examination	8
3	No. of patients registered for MDT	463
4	No. of patients completed treatment*	
	• PB-MDT - 6 doses	55
	• PB-MDT -> 6 doses	27
	• MB-MDT - 24 doses	52
	• MB-MDT -> 24 doses	50
5	Patients with reaction managed scientifically	597

\*It is felt that many more sessions will be needed to orient them on the principles of fixed duration treatment.

The success of this Bombay experiment calls for coverage of several groups of dermatologists on the SAPEL model all over the country.

## TR30

### THE INTERNATIONAL FOUNDATION FOR DERMATOLOGY

Terence J Ryan, Department of Dermatology, Churchill Hospital, Oxford, UK

Conceived in 1987, this Foundation seeks solutions to care of the skin in the developing world.

Its principle mission is 'training' and for this purpose a Regional Dermatology Training Center was built in Tanzania for the countries of the Commonwealth Regional Health Secretariat of Central Eastern and Southern Africa. This center provides an integrated training programme over a period of two years ending in a University Diploma. It has been designated to become a Collaborating Center for dermatology, sexually transmitted diseases and leprosy. A second Center trained 250 nurses from Health Centers in Guatemala and there are new plans for the eight countries of Francophone West Africa.

Management of leprosy and its consequences has always been a significant part of the programmes of the IFD.

This poster illustrates the buildings, the graduates, the subject matter of their dissertations and their influence on the health provision of rural communities, especially in Africa.

## TR31

### EDUCATION IN HEALTH - MAKING THEORY OUT OF PRACTICE

Maria Aparecida Pinheiro Sanches, Otilia Simões J. Gonçalves, Zenaide L. Lessa, Elza Berro, Maria de Lourdes B. Diniz

The project of creating a didactic instrument with the theme "Education in Health, Diagnosis and Educational Planning" derived from the experience in forming human resources for the Hansen's Disease control program. This elaboration was subsidised by the practice offered to professionals in developing educating actions in the "Health Education Courses and Hansen's Disease Program", since 1991. The creation of such an instrument resulted from a process of collective construction and reconstruction derived from the practices developed in the Pedagogical Workshops of Health Education and Local Planning. Participants have assessed, in step-by-step practice, its practical use, with a 95% approbation. The final product "Education in Health a Guide for Planning Educative Actions: Practice and Theory" resulted in a theoretical, methodological and practical reference for Education in Health, with focus on the concepts of Education, Communication, Participation, Diagnosis and Participative Planning of actions and has been offered to the regional and local branches for the planning of educative actions.

## TR32

### HEALTH EDUCATION AND COUNSELLING: A KEY TO MULTIDRUG THERAPY COMPLIANCE IN LEPROSY.

M.M. SIDDIQUI

Urban Leprosy Centre, Lok Nayak Hospital, New Delhi (India).

The Urban Leprosy Centre of Lok Nayak Hospital, New Delhi was established in 1981 and every year about 350 to 400 new Leprosy cases are registered in the centre. 70% of the patients attending leprosy clinic are illiterate.

Counselling on 1500 Leprosy patient of both sexes attending the Urban Leprosy Centre of Lok Nayak Hospital and associated Maulana Azad Medical College New Delhi were inducted for counselling as per stipulated proforma each patient was administered 600 mg of Rifampicin once a month supervised, Dapsone 100 mg daily Clofazimine 50 mg daily along with Clofazimine in the doses of 300 mg once monthly in multibacillary (MB) Leprosy and Rifampicin 600 mg once a month and 100 mg of Dapsone in Paucibacillary (PB) Leprosy (W.H.O.).

Health education material used for educating and counselling were flash card, and posters on Leprosy.

These patients were advised to report for follow-up every month accordingly details of counselling and Health Education were formed in each patient, and were recorded on a proforma devised for the purpose.

The data was ultimately analysed and it was found M.D.T. Counselling forms the important prerequisite for good compliance. This procedure should, therefore form a part component of Multidrug therapy at all Leprosy Centres.

## TR33

### AN ANALYSIS OF 291 NEWLY DIAGNOSED PATIENTS WITH LEPROSY

Fu-yuan Song, Ai-ten Qu and Gang Zhang  
Shangluo Sanatorium, Shangluo County, Shaanxi Province, China

Based on an analysis of 219 newly detected leprosy patients, the authors found that due to many very well-known reasons these cases have been diagnosed on an average of 4 years after the onset of

the clinical signs. During their first visit to the clinic, only 116 (39.87%) of them were timely diagnosed as leprosy, 64 (21.99%) as suspects and 111 (38.14%) missed to be made a correct diagnosis. Amongst the latter 111 cases, 73 were misdiagnosed as other diseases, such as allergic dermatitis, neurofibromatosis, acne, pityriasis versicolor, pityriasis rosea, polynecrosis, rheumatism, nephritis etc. Skin diseases and nervous diseases were common conditions mimicking early leprosy. The correct diagnosis rate during first visit to general hospital was 22.22% and that to leprosy professional clinic was 59.42%. The above mentioned data clearly indicated that health education about leprosy should be intensified for the community, medical students should be given more lessons in leprosy and practice teaching in leprosy clinic, and leprosy professionals working in county stations for skin diseases control should be given intensive/refreshed training because they frequently to have confirm diagnosis themselves for suspected cases.

### TR34

#### "LUIZ MARINO BECHELLI" LEAGUE FOR THE COMBAT OF LEPROSY: AN EDUCATIONAL PROJECT

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The objective of this presentation is to describe the creation, structuration and execution of an educational project directed at medical students for the teaching of leprosy through extracurricular activities.

The League for the Combat of Leprosy has been active for 6 years at the Faculty of Medicine of Ribeirão Preto, USP. Supervised volunteer work is carried out in order to provide the students with a general overview, with activities in the Program of Leprosy Control in the municipality of Ribeirão Preto, São Paulo, Brazil.

The activities involve care for leprosy patients and their relatives as well as educational actions directed at the students, health professionals and the population in general. As an educational project linked to the University structure, the League has three basic objectives: patient care, teaching, and promotion of research, thus integrating the University with the other levels of health and community services. The members of the League are stimulated to learn about leprosy both as a biological disease and as a social disease and public health problem within the community context at the socioeconomic level. Learning involves practical work such as supervised assistance, activities aiming at the prevention of morbidity and disability, and educational and health-promoting actions executed at a District Unit for primary health care. This type of work may contribute to medical training, helping the dissemination of knowledge, and expanding the services provided by the University to the academic-scientific medium and to the community. A first evaluation indicates that this project is feasible and stimulates education in the area of leprosy, having become a reference model for the execution of the Program of Leprosy Control in the Ribeirão Preto region.

### TR35

FONTELLES CENTRO DE FORMACIÓN  
José Terencio, Vicente Gimeno, José R. Gómez,  
María Quintana y Pedro Torres.  
Sanatorio de Fontilles. Alicante. España.

Fundado en 1907 por el jesuita P. Ferris en Alicante una de las zonas más endémicas de España ha desarrollado en sus 85 años una triple labor Asistencial (tratando más de 3.000 enfermos) de Investigación y Formación.

En este aspecto ha realizado 74 Cursos de Leprología, 34 para Médicos y 40 para Auxiliares Sanitarios, Misioneros y Trabajadores Sociales, habiendo formado 2.300 personas.

Los Cursos son anuales teóricos y prácticas de Bacteriología y Anatomía Patológica, Fisioterapia y Cirugía.

El Profesorado, a parte del personal del Hospital colaboran Profesores de Dermatología de España y prestigiosos Leprólogos mundiales.

Entre los asistentes hay una importante participación internacional de países Latinoamericanos.

En los últimos años también se han impartido Cursos en Costa Rica, Nicaragua y Argentina.

### TR36

THE DIFFERENCES BETWEEN HEALTH WORKERS' AND PATIENTS' INTERPRETATIONS OF SOME TERMS USED IN LEPROSY CONTROL: IMPLICATIONS FOR HEALTH EDUCATION

The purpose of this study was to determine the differences between health workers' and Leprosy patients' interpretations of some terms frequently used in patients' education. Forty one health workers and Eighty six leprosy patients selected from two leprosy referral hospitals were interviewed. Majority of the health workers were unanimous in their interpretations of the terms. Chi-square tests revealed significant differences between the health workers' and patients' interpretations of all terms, except one (P < 0.05). As a result health workers need to take into consideration patients' own interpretations of terms used during health education.