

News and Notes

Leprosy beyond the year 2000

The following editorial is reprinted from *The Lancet*, Volume 350, No. 9093:

The World Health Organization has as one of its goals the 'Elimination of leprosy as a public health problem by the year 2000'. The 'problem' in this context is defined by WHO as a prevalence of 1 case per 10,000 population. We are not talking about the total eradication of *Mycobacterium leprae*. The wisdom of a timed objective for a disease that has an 8–10 year incubation period may be questioned but there is no harm in having targets of this sort, provided success is not claimed misleadingly. Over the past year, in *Leprosy Review* and elsewhere, there have been rumblings of doubt about the wisdom of focusing on prevalence, especially when the calculation counts those on anti-leprosy therapy to the neglect statistically of then long-term disability. Multidrug therapy with dapsone, rifampicin, and clofazimine achieves good microbiological 'cure' but the immunological and neurological toll of leprosy still affects some 4 million people.

Leprosy remains an endemic disease in 28 countries but it still strays across borders—a Los Angeles clinic has 500 cases on its books and sees 30 new ones a year. There is no specific vaccine and surprisingly little is known about how *M. leprae* is transmitted. The control strategy has, in the era of dapsone resistance, focused on case finding and multidrug therapy. This approach has been very successful. Argument over whether prevalence rather than incidence is the right measure of success must not be allowed to detract from the fact that the toll of leprosy has fallen impressively over the past decade. Back in 1985 the WHO estimate of period prevalence was 10–12 million cases worldwide. In 1996 it was 1.4 million, but that includes 560,000 new cases.

On Dec 14–16, at WHO in Geneva, there are meetings of SAPEL, the Special Programme to Eliminate Leprosy, which is aimed at treating previously unreached leprosy patients. SAPEL may not be the right forum for the admission that this particular WHO target is likely to be missed but it is the opportunity to discuss once more the fact that while the prevalence has been falling, incidence has not. Childhood cases, a reflection of transmission now, may even be increasing, and evidence is emerging for nasal carriage rates of *M. leprae* DNA that points to there being new cases well into the 21st century.

The incidence-versus-prevalence argument is not a mere academic one. A presumption that the year 2000 target will be achieved is already flavouring the whole leprosy scene. Scientific research has almost been squeezed off the agenda for the international leprosy conference in Beijing next September. The Japanese Sasakawa Foundation has been giving \$10 million a year for leprosy control; that source will surely dry up once 'elimination' has been declared. In India, the main focus of leprosy, there is enormous political pressure to push for elimination and that it is taking precedence over the long-term needs of patients. In one Indian state the vertical leprosy programme has already been cancelled, patients being referred on to local health services that seem ill-prepared to handle them; and non-governmental organisations have been told to stop their rural leprosy programmes.

One public-health doctor was recently sent to some Indian islands with a mission to declare them leprosy-free in the year of India's 50th anniversary. That district must have been thought a promising candidate. sadly, the prevalence there in 1997 was 7 per 10,000 not 1. And, sadly, leprosy will be a 'public health problem' beyond the year 2000.

Gender issues in the elimination of leprosy in India

The following is reprinted from *TDR News*, No. 52, 1997:

A meeting of leprosy control personnel and social science researchers was held at the Agharkar Research Institute, Pune, India, 26–28 November, 1996 to discuss gender issues in the elimination of leprosy in India. Participants, including members of the Gender and Tropical Diseases Task Force, heard and discussed the results of a study of gender differences in the impact of leprosy. The study was conducted between 1993 and 1996 by Dr Shobha Rao and colleagues from the Agharkar Research Institute in four districts of Maharashtra State, in which four urban and four rural or tribal sectors were selected. Research questions included whether gender issues affected timing and mode of detection, treatment-seeking behaviour and compliance, the impact of the disease on social, family and personal life, and the role of the family in mediating this impact. Only registered cases were included in the study.

Several interesting differences were observed between the sexes:

- a sharp decline in the female age group during the adolescent period (ages 11–19), a period coinciding with the arrangement of marriage in India
- a sharp increase in female cases between age 20 and 25, compared to males
- significantly fewer females were detected through voluntary reporting, compared to active case detection in the community
- in urban areas, sex differences in registered cases were minimal, but in rural and tribal areas, significantly more males were registered than females
- many women reported that pregnancy and child-bearing exacerbated the disease but they were not informed about these risks when going for treatment
- nonleprosy health personnel were poorly trained to recognize early symptoms of the disease
- family support was of key importance in determining the course of disease, coping and treatment
- much superstition existed concerning leprosy in the larger community, and it was often associated with sins in a past existence.

A draft manual entitled, *Gender Approach in the Elimination of Leprosy*, was presented and discussed at the meeting. The suggestions of participants concerning its content and design are now being incorporated for final publication.

Gender differentials in tuberculosis: the role of socioeconomic and cultural factors. P. Hudelson

The following summary of the above review article is reprinted from *Tubercle and Lung Disease*, 77, 391–400:

Summary This paper reviews current knowledge about the role that socio-economic and cultural factors play in determining gender differentials in tuberculosis (TB) and tuberculosis control. The studies reviewed suggest that socio-economic and cultural factors may be important in two ways: first, they may play a role in determining overall gender differences in rates of infection and progression to disease, and second, they may lead to gender differentials in barriers to detection and successful treatment of TB. Both have implications for successful TB control programmes. The literature reviewed in this paper suggests the following:

- Gender differentials in social and economic roles and activities may lead to differential exposure to tuberculosis bacilli:
- The general health/nutritional status of TB-infected persons affects their rate of progression to disease. In areas where women's health is worse than men's (especially in terms of nutrition and human immunodeficiency virus state), women's risk of disease may be increased;

- A number of studies suggest that responses to illness differ in women and men, and that barriers to early detection and treatment of TB vary (and are probably greater) for women than for men. Gender differences also exist in rates of compliance with treatment;
- The fear and stigma associated with TB seems to have a greater impact on women than on men, often placing them in an economically or socially precarious position. Because the health and welfare of children is closely linked to that of their mothers, TB in women can have serious repercussions for families and households.

The review points to the many gaps that exist in our knowledge and understanding of gender differentials in TB and TB control, and argues for increased efforts to identify and address gender differentials in the control of TB.

Illustrated History of Tropical Diseases

The Wellcome Trust, London has published a 454-page book on the above subject and their descriptive brochure reads as follows:

The discovery and investigation of tropical diseases has long fascinated scientists and non-scientists alike. This meticulously researched and richly illustrated book traces the history of humankind's understanding of these diseases from the earlier written records to the most sophisticated findings of today.

Tropical disease was first recognized as a separate branch of medicine at the turn of the century and this book emphasizes the spirit and personality of those individuals who devoted their lives to understanding these diseases and working out how to treat them.

The *Illustrated History of Tropical Diseases* has been published to mark the sixtieth anniversary of the founding of the Wellcome Trust, one of the world's major supporters of research into tropical disease and in the history of medicine.

Each of the book's 41 chapters is written by a scientific expert in the field, presenting a unique historical perspective and a real understanding of the conditions described. Written for a general scientific audience, each chapter includes a brief introduction into the aetiology of the disease and includes information on its current status and treatment. This unique work will appeal to everyone with an interest in tropical diseases and their treatment.

The *Illustrated History of Tropical Diseases* (hbk; 454pp; 488 colour and b/w images). ISBN: 1869835 86 7 Price: £35.00 plus post and packaging of £5.00 (UK); £11.50 (EU); £15.00 (elsewhere).

Changing the course of infection: the LACK antigen in leishmaniasis

The following appeared in *TDR News*, No 52, March 1997:

New evidence from the world of mice and leishmaniasis indicates that a lone antigen might be responsible for orchestrating the entire response of a host to a parasite. Making mice tolerant to a single leishmanial antigen can completely change the course of infection—from one of susceptibility to one of resistance.

SUB-SETS AND SECRETIONS

Each year, more subsets of T cells seem to be described. Th1 (T helper 1) and Th2 cells are subsets of T cells which were first described nearly ten years ago. Each of these subsets secretes a different repertoire of cytokines; for instance, Th1 cells produce interferon- γ (IFN- γ), amongst others, while Th2 cells produce interleukin-4 (IL-4). The outcome of an infection can be determined by the balance between these different cells and their cytokine secretions.

After infection, a boost in Th1 cells and IFN- γ occurs in mice that are resistant to *Leishmania major*, whereas a boost in Th2 cells and IL-4 occurs in mice that are susceptible to *L. major*. If the activity of IFN- γ is suppressed in a resistant mouse, the mouse is no longer able to resist the progression of the disease. Conversely, if the activity of IL-4 in a susceptible mouse is suppressed in the first week of infection, the Th2 response is prevented and a healing Th1 response emerges.

IL-4 appears to be the main inducer of the Th2 response and, at the same time, the main inhibitor of the Th1 response. An early burst of IL-4 production occurs in the lymph nodes of infected susceptible mice, and a study by Valérie Julia, Minoou Rassoulzadegan and Nicolas Glaichenhaus (Resistance to *Leishmania major* induced by tolerance to a single antigen. *Science*, 1996, 274:421–423) was directed at identifying which parasite antigens trigger this early burst of IL-4 and at how to lessen the Th2/IL-4 response.

THE LACK ANTIGEN

The authors found evidence that a single leishmania antigen, known as LACK (leishmania homolog of receptors for activated C kinase), triggers the early burst of IL-4 and plays a pivotal role in determining whether or not a mouse is susceptible to infection with *Leishmania major*. When susceptible mice were made tolerant to LACK prior to infection (by transgenic expression of LACK in the thymus), they responded to *L. major* with Th1 cells rather than Th2 cells and were resistant to infection.

Thus there was a reversal of the normal process after mice became tolerant to the single antigen. The authors hypothesize that susceptibility to murine leishmaniasis is determined by the ability of the infected host to mount a strong Th2 response against one or a few antigens (as well as by the loss of ability to generate a Th1 response—an early hypothesis).

IMPLICATIONS FOR VACCINE DEVELOPMENT

The study indicates the importance of choosing which immunogen(s) to include in a vaccine. Whole leishmania parasites will induce a Th2 response if given alone subcutaneously. However, if given with IL-12 (which enhances the Th1 response and IFN- γ), a protective response will emerge. Hence both the immunogen and the secondary stimulus are important.

Source: TDR Communications, WHO, 1211 Geneva 27, Switzerland (UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases).

Action in International Medicine (AIM, London)

The following is extracted from the 'Mission Statement' of AIM:

AIM is an international consortium of health and health-related professional organisations. Its membership now exceeds one hundred institutions and spans thirty-five countries. It is nonpolitical and, through its members, represents the voice of the health care professional worldwide.

Drawing upon its extensive international membership and related organisations, and working through its International Advisory Panel, AIM is able to assemble at short notice multidisciplinary teams of doctors, nurses, other health care professionals, economists, management consultants, development consultants, engineers and educators.

Operating in impoverished regions of the world, these teams are able to identify rapidly those components of health care delivery which are excellent and those which fall short of accepted norms in terms of that region's ability to provide an adequate health service to the indigenous population.

Armed with this information, AIM, working with and through local bodies, is then able to enlist the support of appropriate organisations active and experienced in health development and thereby to

mobilize appropriate project teams necessary to redress the imbalance in a sustainable manner in the region under consideration.

Within the context of its over-riding goal, AIM has set out to champion the cause of the first referral hospital and primary health care, i.e. District Health Systems, throughout the developing countries and the impoverished regions of the north. To this end, it actively supports and encourages its member organisations to involve themselves in:

Lobbying: the active lobbying of governments and other related institutions to accept the concept of basic health care as a human right for all and to recognize the importance of district health systems in making this a reality.

Research and Education: the direct support of health care professionals operating at the front line of health care delivery in impoverished regions, by way of research, information dissemination, education and training.

District Health Project Implementation: the pioneering and support of innovative district health projects through direct involvement and by catalysing others with appropriate experience.

Further information: Action in International Medicine, 125 High Holborn, London WC1V 6QA, UK. Tel: 44 (0) 171 405 3090. Fax 44 (0) 171 405 3093.

Why India will not be able to eradicate Hansen's Disease (leprosy) by 2000 AD. Kunal Saha, India

The following is the summary of a remarkable publication in the *Star* Carville, Louisiana, USA, April–June 1997:

Summary The National Leprosy Eradication Program (NLEP) of the Government of India has undertaken the gigantic task of eliminating Hansen's disease (leprosy), as a public health problem from India within 2000 AD. To fulfil this pledge they have established an extensive field network consisting of a vast army of paramedical and medical workers for early detection and treatment of patients, with MDT, an operationally convenient mode of mass treatment. However, in the present conditions existing in India, this method has its own limitations. Wrong statistics, rural eco-system, poverty, unhygienic over-crowded living conditions, poor sanitation, undernutrition, illiteracy and above all, stigma are the obstacles for the implementation of the NLEP. Unless this socioeconomic backwardness is corrected, MDT alone will not be able to eliminate leprosy from India in the near future. More attention is to be focussed on epidemiological surveillance, timely finding of cases (including new patients and relapsed cases), improving the quality of MDT implementation and drug delivery, overcoming fear, shame and discrimination associated with the disease in the Indian society. More importance has to be paid to preventing disabilities by teaching the patients self eye-and-foot-care. Rehabilitation programs to ex-patient with or without deformities, is to be geared up. Reconstructive surgery, which is an ancillary for rehabilitation, is in its infancy. Proper training of the paramedical workers who are the backbone of NLEP is far from expectations. They will need more expertise, compassion, trust and dedication. The apathetic attitude of the medical community, governmental indifference and corruption in the administrative apparatus have undermined the proper execution of the NLEP.

The author believes that unless the present socioeconomic disparity, existing in India, is removed which needs strong political will, MDT alone will not be able to eradicate leprosy from the subcontinent in the 21st century. Perhaps MDT plus an effective vaccine is the answer for the Indian semifeudal and semi-industrial heterogeneous and unequal society.

The author is Professor Kunal Saha, previously Professor of Immunology in Delhi University and his views on the current leprosy control situation in India are of considerable importance and interest. Few Indian nationals have felt able to record their views in print in such forthright terms, but his opinions will strike a familiar note with those who have taken part in successive Independent Evaluations of the

National Leprosy Eradication Programme, which invariably revealed defects, many of which remained uncorrected from one evaluation to another. This 5-page article should be studied in the original by those who have responsibility for the control/elimination/eradication of leprosy in India and serious attention given to points of weakness identified so clearly by Professor Kunal Saha.

Part II of his paper appeared in the July–September 1997 issue of the *Star*, page 12.

Myanmar (Burma): Third Independent Evaluation of the Leprosy Elimination Programme, 4–18 November, 1997

The Third Joint WHO and Union of Myanmar *Independent Evaluation of the Leprosy Elimination Programme in Myanmar* took place between 4th and 18th November, 1997 in order to assess progress and to identify measures to accelerate the elimination of leprosy as a public health problem. The terms of reference were—1) assess progress in the leprosy programme since 1990, with special focus on the year 1993, and to identify critical components in need of strengthening, 2) validate reported data, including patient diagnosis, classification and multiple drug therapy (MDT) services, 3) assess the level of awareness in the community and in leprosy patients, 3) ascertain the level of competence, contribution and commitment of health staff involved in planning, management and delivery of leprosy elimination services at different levels and 5) to identify priority areas/activities needed to accelerate the attainment of the goal of elimination of leprosy at national and sub-national levels by the year 2000.

Six out of 7 divisions and 2 out of 7 states were selected for field visits, to include 25 districts and 46 townships, to be examined by 5 teams each composed of two national experts and one external expert. The latter were—S. Barua (Japan), R. Day (Indonesia), A. C. McDougall (United Kingdom), J. O. Simon and L. R. Talukder (Bangladesh), all invited by the South East Asia Regional Organisation (SEARO) of WHO in New Delhi as temporary advisers.

Teams were despatched to cover both moderate and (previously) high endemic areas in various parts of the country in order to obtain information at state/division, township and rural health centre levels. This was recorded in detail on prepared questionnaires from which data were pooled and analysed on return to the Department of Health in Yangon (Rangoon). The areas under examination included well-established programmes in which MDT had been started in 1989, together with those of lower prevalence in which it has been introduced as recently as 1995/6.

All participants reported good progress in leprosy control generally, with strong political commitment and high levels of motivation in both vertical and basic health care staff. The decision to fully integrate leprosy services into the primary health care programme in mid-1991 has proved successful, including considerable input from midwives in the delivery of MDT to patients in or near their homes. In order to ensure maximum coverage to cases so far undetected, in the time available before the year 2000, participants agreed that there is a need to—1) expand information, education and communication (IEC) activities, including the development of posters in adequate numbers and other material in Myanmar (Burmese) for the general population (which has a literacy level of 83%) and 2) develop innovative approaches for ethnic and border populations, who, in contrast, are illiterate in both Myanmar and their own languages. Leprosy Elimination Campaigns (LEC), already established in 16 areas of the country, may be extended to cover the whole of Myanmar in 1998.

Myanmar is one of the countries which contribute to 91% of the world problem of leprosy. At the beginning of 1997, WHO reported 18,758 cases registered, with 100% MDT coverage; a cumulative total of 148,982 cases cured by MDT; 6,935 cases detected in 1996. The estimated number (1996) of individuals presenting disabilities due to past or present leprosy is 41,000 emphasising the continuing need to strengthen activities in disability prevention and management on a considerable scale, including self-care and community-based rehabilitation (CBR).

In the early years of the history of leprosy in Myanmar, the country was confronted with an

enormous problem, one of the worst in South-East Asia. In 1973, no fewer than 245,000 cases were registered and when the main project started prevalences of 40 per thousand, or even higher were not exceptional in school surveys in Central Myanmar. Today, the registered figure is below 20,000 for the first time since records began and school surveys yield extremely few cases. The elimination of leprosy will be achieved at national and many sub-national levels in the near future, but there is a need to maintain the existing contribution of the basic health services, together with a vertical element down to township level, at least until the year 2000, and possibly longer.

A. Colin McDougall

WHO Action Programme on Essential Drugs: Worldwide-Web Service on Internet

The Action Programme on Essential Drugs' homepage on the World-Wide-Web service on the internet offers the user a range of information on the functions and activities of the Programme. This information, which is frequently updated, introduces users to the essential drugs concept, national drug policies, and the work of WHO and the Action Programme in developing countries.

The titles of selected WHO, DAP and other pharmaceutical publications are available on the homepage, to increase awareness of available resources.

The actual content of carefully selected publications can be viewed. For example, feature articles from the English version of the *Monitor* are available from issue 19 onwards and users can also obtain and print out the Guidelines for Drugs Donations (see p. 6).

You can find DAP's homepage on the WWW:http://www.who.ch/programmes/dap/DAP_Homepage.html

Further information: Essential Drugs Monitor, WHO, CH-1211 Geneva 27, Switzerland.

'DOTS' treatment for tuberculosis hailed as milestone advance

Kraig Klaudt Public Affairs and Advocacy Officer, Global TB Programme has recently written as follows:

Thank you for your interest in World TB Day. The 1997 campaign was a monumental success, as the DOTS strategy was acclaimed around the world as being *the biggest health breakthrough of this decade*, in terms of the number of lives to will be able to save. Increasingly, governments, health officials and NGOs are picking up the challenging to use DOTS more widely.

To sustain this momentum, the World Health Organization is already preparing for World TB Day 1998. On 24 March of next year, we are planning to highlight '*DOTS Success Stories*' and '*TB Disaster Stories*' throughout the world.

I would like to invite you to contribute to our preparation of these stories. You are encouraged to send us examples of successes and innovations you have discovered in your country using the DOTS strategy to control TB. For example:

Creative ways to assure that TB treatment is always observed;
 Effective strategies to extend DOTS to reach neglected groups;
 Useful ways to increase the morale of DOTS health workers;
 Innovative methods to overcome resistance to DOTS by health authorities; and
 Successful strategies to increase political and financial commitment for DOTS

Also, send us examples of TB control disasters or lost opportunities which you may be aware of in your country or community. For example;

Local outbreaks of multidrug-resistant TB;

Careless treatment practices which may be encouraging MDR TB;
 Descriptions of TB control or TB research projects which are wasting resources; and
 Blatant examples where TB has been neglected by politicians or health authorities.

We will present some of the most compelling descriptions of DOTS successes and TB disasters in our *1998 Report on the TB Epidemic* and in our World TB Day publicity efforts next year. For the information to be most useful, please try to send it to my attention before October 1997.

I am convinced that our collaborative advocacy efforts can help make it possible to provide DOTS coverage to at least 70 per cent of tuberculosis cases within the next decade.

This circular letter is accompanied by a package of press notices describing the impact of DOTS (directly observed, short course) treatment worldwide. *Further information:* Global TB Programme, WHO, 1211 Geneva 27, Switzerland.

Malabsorption of rifampicin and other antituberculosis drugs

Under the heading of 'Persistent fever in pulmonary tuberculosis', the *British Medical Journal* of 14 December 1996, pages 1543–45, describes the case of a 47-year-old male patient, admitted to hospital in the United Kingdom with active pulmonary tuberculosis and treated with a standard regimen of rifampicin, isoniazid and pyrazinamide. After an initial satisfactory response, the patient failed to improve and sputum was found to be positive two months after starting treatment. Other aspects of the case, including detailed investigations in a London teaching hospital, are described and the discussion centres on the possibility that persistent fever and lack of response were related to malabsorption of antituberculosis drugs. At one point a very low serum rifampicin level was recorded and the Comment section includes the following:

Drug malabsorption as a cause of persistent fever applies to this case. Rifampicin, a derivative of rifamycin (from *Streptomyces mediterranei*) is 60% protein bound, 60% excreted in bile, and 10–15% excreted in urine (hence the orange urine). Its half life is four hours but can be up to 14 hours in biliary obstruction.

In a small study from Hyderabad, India, there was a 50% fall in the plasma concentration time curve of rifampicin in undernourished patients. This was attributed to both malabsorption and increased renal clearance. This effect was in part offset by reduced plasma protein binding. As there is increased renal clearance, the urine is still orange despite low plasma concentrations.

It was initially recommended that rifampicin should be taken when fasting, but having breakfast was shown to have no significant effect on absorption. Later, however, when the dietary constituents of breakfast were analysed separately, 50 g of fat reduced rifampicin levels by 20–50%, whereas 100 g of glucose and two egg whites had no effect.

Several cases of rifampicin malabsorption have been reported. In 1978, a 28 year old diabetic patient with pulmonary *M. tuberculosis* resistant to isoniazid and malabsorption of rifampicin was successfully treated with intravenous rifampicin. In France a diabetic child with coeliac disease had selective malabsorption of rifampicin and not isoniazid.

More recently, there has been evidence of drug malabsorption in HIV positive patients, even in the absence of malabsorptive symptoms. In one of the reports two patients with HIV infection and tuberculosis became resistant to rifampicin, of whom one became resistant also to isoniazid after initially being sensitive. Serum concentrations of all antituberculous drugs except pyrazinamides were low in both patients. Therapeutic drug monitoring is therefore essential in such patients as persistently low drug concentrations select for multiple drug resistance.

In the case that we have presented, the persistent fever seemed to be related to malabsorption of antituberculous drugs. Such malabsorption may be due to cytokine destruction of villi, undiagnosed gastrointestinal tuberculosis, chronic pancreatitis (due to high alcohol intake), bacterial overgrowth, pre-existing coeliac disease, or small bowel lymphoma. The malabsorption is mild (normal serum B₁₂

and serum and red cell folate concentrations and a plasma albumin concentration that corrected with nasogastric feeding) and may be selective for rifampicin.

PATH: Programme for Appropriate Technology in Health, USA

This Organization in the USA previously produced a series of publications dealing with the most important tropical diseases and technologies needed for their better control. Amongst these was an issue on leprosy, produced nearly 10 years ago, which achieved the widest circulation of any in the series and had to be reprinted to cover a nationwide distribution in the Philippines. Limited funding has led to the withdrawal of '*Directions*', but PATH is still active in the field of tropical diseases, notably in the area of diagnostic test development. A general description of the current aims and activities reads as follows:

Path (Programme for Appropriate Technology in Health), a nonprofit, nongovernmental, international organization, has emerged a leader in state-of-the-art health programming since its beginning in 1977. With headquarters in Seattle, Washington, and programme and project sites in Seattle; Washington, D.C.; Jakarta and Lombok, Indonesia; Nairobi, Kenya; Manila, Philippines; Bangkok, Thailand; and Kiev, Ukraine; PATH is well suited to develop and deliver culturally-sensitive programmes to people throughout the world.

PATH's mission is to improve health, especially the health of women and children. An emphasis is placed on improving the quality of reproductive health services and on preventing and reducing the impact of widespread communicable diseases. PATH identifies, develops, and applies appropriate and innovative solutions to public health problems. This is accomplished by exchanging knowledge, skills, and technologies with governmental and nongovernmental partners in developing countries and with groups in need elsewhere.

In all activities, PATH works in partnership with organizations and companies closely tied to the end users of health services. Staff work cooperatively with health clinics, community-based groups, ministries of health, nongovernmental organizations (NGOs), private-sector companies, and funding agencies—bridging gaps that prevent efficient and effective delivery of health services and fostering partnerships that lead to improved health in the developing world.

Since 1977, PATH has managed more than 800 health and family planning projects in 85 developing countries. International and national health and family planning agencies, governments, foundations, corporations, and individuals support PATH's efforts.

In recognition of its expertise in specific areas, PATH has been designated by the World Health Organization (WHO) as a Collaborating Center in three technical areas: Research in Human Reproduction; Acquired Immune Deficiency Syndrome (AIDS); and Hepatitis B Vaccination. As a Collaborating Center, PATH provides technical assistance to WHO and to ministries of health.

Policies and broad programme strategies are formulated by the Board of Directors. Members of the Board represent several developing countries and the United States as well as a variety of disciplines.

Further information: PATH, 4 Nickerson Street, Seattle, WA 98109-1699, USA.

Gillis W. Long Hansen's Disease Center, USA stays open

Readers of the latest issue of *The Star* from the Gillis W. Long Hansen's Disease Center, 5445 Point Clair Road, Carville, LA 70721-9607, USA, may have been surprised to see a reference in the letter by Susan Cookson to a newspaper report, suggesting that Carville may be closing. Carville may be changing, but it is not closing—Robert R. Jacobson, Director, Division of National Hansen's Disease Programs/Gillis W. Long Hansen's Disease Center, has kindly written to clarify the situation, as follows:

A Bill passed Congress last Fall authorizing transfer of our facility to the State of Louisiana for use as a Center for Training 'At Risk Youth' (mainly high school dropouts) in various occupations after

helping them to obtain a high school diploma. The Bill authorized moving all of our activities to a new site in nearby Baton Rouge, Louisiana, over a period of several years. If all went according to plan we would move short-term care to Baton Rouge within the next year and would have the same bed capacity and sufficient staff to continue as we do now. This would allow us to admit patients for Hansen's disease related complications and rehabilitation, just as we do now. The permanent patient residents of Carville would be offered an assisted living allowance to live where they wished and would be able to return for Hansen's disease related care to whatever extent necessary. Those who did not wish to leave would continue to be cared for here at Carville for the foreseeable future, though eventually they would probably be moved to a single facility in Baton Rouge where we would continue to oversee their care. Their numbers are, of course, gradually declining since their average age is well over 70 and no new cases have been allowed to remain for long-term care for over a decade now.

Our research facility is, of course, already in Baton Rouge at Louisiana State University under a 20 year lease and will continue there. Our facility at Carville is a beautiful site, but we at present utilize only about one-third of the space to varying degrees and it is very costly to maintain. The changes, if all goes according to plan, will allow us to do everything we're now doing, but at a much lower cost.

Robert R. Jacobson MD, Ph.D

TALMILEP—new videos required for catalogue

We are currently updating our existing video catalogue on Leprosy & Related Subjects to be published next year. TALMILEP is an action group working within ILEP (International Federation of Anti-Leprosy Association). The function of TALMILEP is to make teaching and learning materials in leprosy available to those who need them.

Apart from leprosy, we are particularly interested in videos on joint leprosy/tuberculosis programmes and rehabilitation.

If you have produced a video for the purpose of staff training or public education and you would like others to know about it, please send a sample copy to:

ILEP Co-ordinating Bureau, 234 Blythe Road, London W14 0HJ, UK. Att: Marilyn Holderness.

It can then be assessed and information about your video advertised in this forthcoming catalogue, together with an assessment and a rating made by TALMILEP, stating the address where it may be bought or hired and the cost.

Errata

Leprosy and the Internet, J. S. Gilbody, Volume 68, page 367: The email address should read as follows: alltra@globalnet.co.uk. Postal address: One Rookwood Close, Hook, Hampshire RG27 9EU, UK.

Teaching Materials and Services, Volume 86, page 396: Leprosy Control in Myanmar, 1948–1973. The address to obtain this booklet should read as follows: Dr B. Zuiderhoek, Fideliolaan 102, 1183 PP Amstelveen, Netherlands.

***Leprosy Review* poster: Eye examination**

The A3 poster enclosed with this issue of *Leprosy Review* is the fourth in a series of four covering important areas of management and research in leprosy and is distributed free to subscribers to the Journal. Additional copies are available from Lepra, Colchester, UK. Further posters are also being planned. 'A questionnaire on the posters is to be published in the September issue so that the choice of topic and other aspects can be guided by you the reader. So please do let us know what you think.'