Activity Report of the International Union Against Tuberculosis and Lung Disease

1 January – 31 December 2006
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The International Union Against Tuberculosis and Lung Disease
promotes lung health in low- and middle-income countries through technical assistance, education, and research
As a member of The Union’s Board of Directors, I am sometimes asked what we have achieved during my years of service. Upon reflection, I can say that I take the most satisfaction in two areas:

The first is The Union’s move towards a broader mandate in public health.

Since its foundation, The Union has explored new initiatives in lung health, and, in recent years, we have recognised the importance of expanding our core activities by extending The Union’s TB control model to other areas of lung health: TB-HIV, asthma, child lung health, and tobacco control.

In 2006 we scaled up our activities to provide technical assistance to improve lung health in low- and middle-income countries.

The innovative FIDELIS programme, managed by The Union, is aimed at detecting more than 500,000 new cases of TB in poor and remote areas of the world. To date, close to 50 projects have been launched in 18 low-income countries. In China alone, FIDELIS has produced impressive results: projects cover 415 million people in 700 counties and 130,000 health workers have received TB training.

Recently, The Union and the US-based Campaign for Tobacco-Free Kids have begun managing a new grants programme funded by US philanthropist Michael R Bloomberg. The Bloomberg Global Initiative to Reduce Tobacco Use in low- and middle-income countries includes a competitively awarded grants programme that will support projects to develop and deliver high-impact tobacco control interventions. The grants programme will give priority to projects that lead to substantial, sustainable improvements in tobacco control laws, regulations, policies, and programmes.

Lack of accessible, affordable asthma medicines remains a major public health obstacle, preventing millions of asthmatics in low- and middle-income countries from receiving adequate care. In 2005, The Union, with the support of partner organisations such as the World Health Organization, began to develop the concept of an Asthma Drug Facility whose aim is to ensure that good-quality essential asthma medicines are available at low prices for low- and middle-income countries that are implementing a standardised approach to asthma management. Major asthma-related international organisations – including the Stop
TB Partnership, WHO/Stop TB Department, WHO/Chronic Diseases and Health Promotion, the International Study of Asthma and Allergies in Childhood (ISAAC), and the Global Alliance Against Chronic Respiratory Diseases (GARD) – have confirmed the urgency of this problem and endorsed the ADF concept.

Other 2006 activities that highlight this new mandate include The Union’s child lung health activities in Malawi and Sudan which are having a considerable effect on reducing case fatality rates in children under five admitted with severe and very severe pneumonia; the Comprehensive Approach to improved quality of lung health services; and the Integrated HIV Care for TB Patients Living with HIV/AIDS programme. The Union’s strategy in combating TB and HIV with coordinated and integrated methods includes measures and resources to scale up participating countries’ healthcare systems, capacity building, and drug and equipment procurement.

To strengthen our broader public health focus, we have joined forces with other global entities to address the chronic human resource crisis in health care which extends from basic service providers to top-level management. Thus, the theme of the 2006 Union World Conference on Lung Health was “Strengthening human resources for better lung health”.

Strengthening the capacity of the healthcare workforce at all levels is an important priority for The Union. We offer education programmes designed to reach every level of the healthcare system. Our comprehensive offerings include intensive residential courses, international and regional conferences, consultancies and programme evaluations, hands-on skill-building workshops, free downloadable technical guides and other training materials, a monthly journal of research, and other publications.

By creating an Interregional Council, The Union acknowledged the importance of its membership in providing regional points of view and strengthening capacity building, planning, and development at the local and national levels.

The second achievement in which I take great satisfaction is the strategic planning process that the Board has undertaken to look at who we are and where we are going as an organisation.

In 2005, the Board commissioned an external review of The Union by outside consultants who were asked to focus on three key areas:

- To provide a brief retrospective review of Union activities from 1992 to 2005, specifically detailing innovations and developments and their implementation during this period;
- To undertake a more detailed review of Union activities, with a focus on the period 1999 to 2005, and with specific reference to the value and efficacy of Union activities for users, members, development agencies, and partners;
- To recommend development activities for The Union to consider for its next strategic planning period, 2006 to 2015.

The finalized strategic plan will soon be available and will help guide our planning in the coming years.

These are achievements in which we can take great pride, I believe, because they position The Union to address the important issues in lung health and public health that are so critical if we are to achieve the promise of the United Nations Millennium Development Goals by 2015.

Asma El Sony, MD PhD
President, International Union Against Tuberculosis and Lung Disease
The Union is facing exciting and, at the same time, challenging times. The year 2006 has again been a year of growth in terms of new and expanded activities, documented by an increased total income to US$ 40 million. Union staff and consultants have been extremely busy keeping all projects on track, and I would like to convey my sincere thanks to all of them.

It is not possible to summarise all The Union’s projects in this short message; therefore I would like to highlight one of our major challenges we are facing together with all our partners – the development of human resources. Human resources development (HRD) goes beyond training alone. It is a common misunderstanding that once all healthcare personnel have been trained and retrained, everything is under control. HRD is influenced by many factors, such as the availability of skilled and motivated staff, job satisfaction, the right number of staff at the right place, the availability of support staff, adequate management skills in all categories of healthcare and, last but not least, sufficient and stable financing mechanisms.

In an international organisation like The Union, human resources cannot be concentrated at the HQ level, and that is why, over the last few years, we have started a decentralisation process, opening offices in New Delhi, India and Beijing, China. Other offices are planned in Egypt, Mexico, Myanmar, Uganda, and other locations. Recruiting additional qualified personnel for these new offices is a major challenge.

The India Resource Centre has contributed immensely to The Union’s HRD activities through its support of training courses and technical assistance in South East Asia and China. These activities are aimed at improving skills in management, planning and budgeting, and human resources development, complementing The Union’s already well-known tuberculosis courses held in Benin, El Salvador, Tanzania and Vietnam. The China Centre has been instrumental in supervising all FIDELIS tuberculosis projects in China, ensuring that thousands of healthcare personnel have been trained in case finding and case holding. Many innovative ideas to improve TB control, which developed at local level in FIDELIS projects in
China, have proven very successful and are being taken up in other parts of the country. Dedicated staff in these Union centres are the cornerstone of successful implementation of our work plans.

XDR- and MDR-TB have been in the headlines over the past year, and many countries have solicited The Union to assist with training and technical assistance to tackle this threat. We are realising that our human resources available at The Union are not sufficient to satisfy all the demands, unfortunately. It will be critical for us to carry out an HRD plan to build a cadre of specialists who are able to convey the principles of management of MDR- and XDR-TB in affected countries, taking into account the realities of existing healthcare systems. Laboratory services, neglected for far too long, need urgent support and HRD in order to make sure that these services can contribute and participate more actively in TB control. In 2006 Union laboratory consultants actively contributed to improved laboratory services through technical assistance, training courses, and the clinical trials network.

The Bloomberg Global Initiative to Reduce Tobacco Use, launched in 2006, is giving The Union an opportunity to apply experience gained through its tobacco control work and in FIDELIS to an ambitious granting scheme targeted at the most affected countries. For the first time in history, large amounts of funding have become available for tobacco control, and the development of human resources becomes a crucial point in this area as well. Both the India and China Centres are heavily involved in this new tobacco control project and are contributing in many ways to HRD.

The recent external evaluation of The Union highlighted the publication of the *International Journal of Tuberculosis and Lung Disease* as one of the very relevant contributions of The Union. The Journal reaches thousands of colleagues worldwide and also contributes to HRD. Giving access to the online version of the Journal free of charge, for all back issues older than 12 months, and the very affordable cost for an online membership, have made the Journal one of the most popular downloadable scientific journals of *Ingenta*, an online publishing platform. Print editions of the Journal in Chinese, French, Russian, and Spanish are reaching nearly 10,000 additional colleagues worldwide.

Human resources are the most precious capital of The Union. If we can attract and retain the most skilled personnel to work for The Union, we will be able to achieve many more ground-breaking achievements. We will need not only dedication, but also imagination, innovation, and the ability to adapt to the different situations in the countries we serve, in order to continue to contribute to better public health.

*Nil E Billo, MD, MPH*
Executive Director,
International Union Against Tuberculosis and Lung Disease
Mycobacterium tuberculosis, the microbe responsible for tuberculosis, causes about 8.8 million cases and nearly 2 million deaths each year, most of them in low-income countries.

Tuberculosis is curable, as long as M. tuberculosis is susceptible to antibiotics, but recent years have seen an alarming spread of drug-resistant strains of the bacteria, including the emergence of multidrug-resistant (MDR) tuberculosis and extensively drug-resistant (XDR) tuberculosis.

This growing threat of drug resistance, coupled with the devastating effects of TB-HIV co-infection, threaten to undermine tuberculosis control efforts worldwide and put global tuberculosis control targets at risk.

The Union has been at the centre of efforts to prevent, treat, and control tuberculosis for nearly a century. Union research led to the development of the DOTS strategy for TB control which has been used to treat more than 22 million tuberculosis patients in 183 countries.

Today, The Union works with a broad range of international organisations and government agencies to help low- and middle-income countries throughout the world meet global targets for tuberculosis control.

In 2006, The Union provided technical assistance, education, and training in tuberculosis in 53 low- and middle-income countries. Union consultants advised national tuberculosis programmes on guidelines and policies, provided technical training for healthcare providers and programme personnel, carried out research projects and clinical trials, and conducted educational programmes on topics ranging from MDR-TB to financial management.

The Union-managed FIDELIS programme funded 33 projects in 14 countries in 2006, providing diagnosis and care for tuberculosis patients with little or no access to health services.
Reaching millions of people in remote and underserved communities

The Union-managed FIDELIS programme has been providing access to diagnosis and care for tuberculosis patients with little or no access to health services since 2003.

Funded by nearly C$ 34 million from the Canadian International Development Agency (CIDA), FIDELIS (the Fund for Innovative DOTS Expansion through Local Initiatives to Stop TB) has supported 49 local projects in 18 countries since its beginning.

Approximately 70% of FIDELIS projects are in the world’s 10 highest-burden countries for tuberculosis, reaching millions of people in remote and underserved communities. In China alone, FIDELIS projects cover nearly half a billion people and have helped train tens of thousands of Chinese health workers.

‘The philosophy behind FIDELIS is that the best ideas for solving the problem of TB will come from the local community’, explains Dr I.D. Rusen, Union Coordinator of FIDELIS. ‘They are the ones who understand the conditions, the culture, and the resources that they are dealing with. They design the projects, and we provide them with the funds and technical resources they need to implement them’.

Innovative case-finding strategies that have been successful thus far include teaching school children to identify the symptoms of TB, encouraging religious leaders to carry the message that TB is curable, and painting village walls with slogans about TB and contact information for the nearest dispensary.

Projects have also focused on strengthening laboratories and tightening the links between hospitals and clinics where patients are diagnosed, and the dispensaries where they receive their treatment. From increasing public awareness to training healthcare workers, FIDELIS projects have improved the reach of TB control programmes and consequently their ability to detect additional cases of tuberculosis.

Each FIDELIS project contract is for a 12-month period with budgets ranging from US$ 150,000–250,000. Projects that are successful – able to achieve each additional weighted treatment success (AWTS) for less than $80 per AWTS – become eligible to apply for further funding. To date, 11 Phase I projects have gone on to receive Phase II grants.

‘The strength of FIDELIS has been its ability to bring together the resources required to achieve international standards of treatment with local expertise and understanding’, says Dr Rusen. ‘To fight TB successfully in all areas of the world where it exists, you have to have both’.

Funding agency: Canadian International Development Agency (CIDA)
FIDELIS: Innovation and inroads in difficult settings

FIDELIS funds projects in many difficult settings. In 2006, FIDELIS funded projects in two particularly challenging environments – Afghanistan and Sierra Leone.

Afghanistan has endured almost continuous conflict since 1979, and many of the country's hospitals and clinics have been destroyed. In rural Afghanistan, people need to travel for hours or even days to reach a health clinic, and many of these lack basic services such as laboratory facilities. These ongoing wars, coupled with a punishing geography and climate, make Afghanistan one of the most difficult working environments of any FIDELIS project.

In 2006, the Afghanistan branch of the Bangladesh Rural Advancement Committee (BRAC) was awarded a Round V FIDELIS project grant to assist the National Tuberculosis Programme with its TB control efforts in underserved areas of rural Afghanistan. The project covers a population of 3.15 million.

The BRAC project is focusing on three areas: strengthening existing diagnostic and treatment services by training technicians and doctors and establishing new diagnostic and treatment centres; developing a community-based DOTS providers network made up of local health workers, teachers, imams, and community leaders; and improving linkages with existing medical networks in the public and private sectors. The goal is to increase case detection from the existing 18.6% to 75% at the end of one year.

During the 12-month project period just completed, the project has detected 2,768 new smear-positive cases, compared to just 879 cases reported the previous year from the same project sites.

The West African Republic of Sierra Leone – ranked as the least developed country in the world by the 2004 UNDP Human Development Report – has suffered from political unrest and civil war since the early 1990s. These ongoing conflicts have resulted in large numbers of displaced persons living in overcrowded slum settlements with poor ventilation and poor nutrition. Health care at the village level ranges from poor to non-existent.

FIDELIS is supporting a local non-governmental organisation – The Shepherd’s Hospice – to strengthen existing DOTS services in all 13 districts of Sierra Leone, encompassing the entire population of 5 million people.

The focus of the FIDELIS project is to build the community response capacity to TB prevention and treatment in rural and slum communities in Sierra Leone by training community health volunteers to help identify suspected cases of tuberculosis and to support those diagnosed with TB throughout their treatment. The project is also working to increase community awareness of the disease and purchased additional microscopes to support existing microscopy centres. These efforts have strengthened case finding activities in 53 health centres in the country.

During the 12-month project period just completed, the project has detected 5,104 new smear-positive cases, compared to 4,061 for the previous year.

Union consultants: Drs I.D. Rusen, Sven Gudmund Hinderaker, Nevin Wilson
Funding agency: Canadian International Development Agency (CIDA)
Local partners: BRAC (Afghanistan), The Shepherd’s Hospice (Sierra Leone)
Fighting TB in a cradle of Chinese civilization

With nearly 17% of the world’s burden of tuberculosis, it is not surprising that China has developed the largest number and some of the most successful FIDELIS projects. As of December 2006, fourteen Phase I and eight Phase II projects have been funded in China. Focusing primarily on poor and remote areas, these projects have trained 130,000 healthcare workers and reached more than 415 million people in 700 counties.

Located in the very heart of China, Shaanxi Province is one of the most important centres of ancient Chinese civilisation. Some of China’s earliest inhabitants lived in Shaanxi as far back as one million years ago and spread their culture along the Yellow River. Today Shaanxi boasts a population of more than 36 million people, ranging from sprawling cities such as the capital Xian to remote mountain and desert villages.

A 2006 FIDELIS project introduced a comprehensive set of interventions to 65 counties in Shaanxi Province, covering a population of more than 19 million people. Implemented by the Shaanxi Provincial Institute for TB Control and Prevention, the project focuses on urban and rural poor and includes expansion and improvement of sputum microscopy services and strengthening participation of village doctors in the TB control by providing intensive training on case finding and case management. The project also uses innovative health promotion, education, and awareness efforts in poor and remote areas, including utilisation of an Internet-based surveillance system to trace defaulters who have registered in county and township hospitals.

During the 12-month period recently completed, the project has detected 6,968 new smear positive cases compared with 4,032 the previous year.

Union consultants: Prof Li-Xing Zhang (FIDELIS Country Coordinator), Prof Donald A Enarson, Dr Chiang Chen-Yuan, Dr I.D. Rusen
Funding agency: Canadian International Development Agency (CIDA)
Local partner: Shaanxi Provincial Institute for TB Control and Prevention
Benin: ‘The best tuberculosis programme in sub-Saharan Africa’

Benin is one of the countries where the DOTS strategy was first tested in the 1980s, and it achieved 100% DOTS coverage by 1986. Today Benin is considered by many experts to have the best tuberculosis programme in sub-Saharan Africa.

The Union has been supporting Benin’s National Programme Against Tuberculosis (NTP) since the early 1980s, and Union consultants visit the country on a regular basis to review progress.

Benin’s NTP is well integrated into the national health structure, with 51 centres for the diagnosis and treatment of tuberculosis throughout the country, an average of one for every 150,000 inhabitants.

Tuberculosis patients in Benin are strictly supervised during the initial phase of treatment, and the rate of multidrug-resistant TB is low. TB detection rates are estimated by the World Health Organization to be more than 80%, with a treatment success rate of 87% for 2005. In April 2006 a new six-month treatment mode was introduced for all new TB cases.

The Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) has been financing many of the Benin’s NTP activities since 2003, and the Global TB Drug Facility has been supplying medications since 2005.

In 2005 Benin was selected as a pilot site for The Union’s Integrated HIV Care for Tuberculosis Patients Living with HIV/AIDS (IHC) programme. The IHC programme provides HIV screening of new TB patients and offers HIV-positive patients simultaneous treatment with antiretroviral drugs (See story on page 21).

There were few instances of multi-drug resistant TB in 2006, and the review team noted that a well-run programme like Benin’s makes emergence of multi-drug resistant TB and extensively drug-resistant TB much less likely.

The review team found excellent coordination between Benin’s National Programme Against Tuberculosis and the country’s National AIDS Programme, with more than 85% of TB patients tested for HIV.

Union consultants: Drs Arnaud Trébuq, Paula I Fujiwara, François Boillot, Riitta Dlodlo, Jean-Pierre Zellweger

Local partners: Benin’s National Programme Against Tuberculosis and National AIDS Programme

Funding agencies: French Ministry of Foreign Affairs, Swiss Pulmonary League

Senegal: Government commitment is strong

Tuberculosis remains a major public health problem in Senegal, the westernmost country in Africa. According to the World Health Organization (WHO) Global TB Report 2006, Senegal had nearly 28,000 TB cases in 2004 – 50% of them in Dakar – with an estimated incidence rate of 245 cases per 100,000 people. Senegal’s National Tuberculosis Programme (NTP) estimates that multidrug resistance (MDR) is as high as 2% among new cases.

There are limited data available on the prevalence of HIV among TB patients, although 2003 data from hospitalised TB patients in Dakar and Kaolack recorded HIV rates of 15% and 16%, respectively.

The Union has supported Senegal’s anti-tuberculosis efforts since 1984. In 1986, The Union began partnering with the Norwegian Association of Heart and Lung Patients (LHL), which has provided financial aid since then. Senegal also receives technical assistance through the US Agency for International Development (USAID).
Senegal has a national system of 53 district health centres that provide free, medically supervised treatment for persons with TB. A network of local medical outposts is affiliated with the district centres. Senegal’s tuberculosis plan for 2005–2009 calls for further decentralisation of TB diagnostic and treatment services, with direct observation of treatment during the first two months of therapy (intensive phase) in the eight-month treatment regimen.

In September 2006, consultants from The Union and LHL visited Senegal to evaluate the performance of the NTP and to discuss future directions. The review team noted a number of positive developments:

- Government commitment to the tuberculosis programme remains strong, demonstrated in part by development of a new five-year TB programme plan and an increase of 30% in the government budget for TB drugs and laboratory supplies. The programme has been strengthened, treatment success rates have increased, and there has been an improvement in the quality and reliability of statistical data. Programme managers recognise the threat posed by MDR-TB and have made that an important element of recent funding requests.
- One area which the programme needs to improve is its supervision of laboratory activities and drug management. The team suggested that, to ensure quality, the government purchase its anti-tuberculosis drugs through the Global TB Drug Facility or other suppliers prequalified by WHO. The team also recommended better integration and tracking of patients who are co-infected with TB and HIV, and improvement in the system of referral and tracking for patients who are diagnosed in hospitals.

Union consultant: Dr Bertrand Cauchoix
Local partner: National Tuberculosis Programme, Senegal
Funding agencies: US Agency for International Development–Dakar office via the Tuberculosis Coalition for Technical Assistance (TBCTA), Norwegian Association of Heart and Lung Patients (LHL), The Union via the Tuberculosis Coalition for Technical Assistance–Dakar office

Mozambique: Challenged by resource shortage and HIV

Mozambique was one of the countries where the DOTS strategy was pilot tested during the 1980s, and The Union supported its TB control efforts with intensive technical assistance until 1995. Since then, Mozambique’s National Tuberculosis Programme has managed the programme on its own, but The Union continues to provide technical assistance through regular programme reviews.

In 2006, a team of experts led by Union Scientific Director Prof Donald Enarson reviewed the status of Mozambique’s National Tuberculosis Programme (NTP) and found that standard case management of tuberculosis patients was of high quality in those locations where it is offered – records were precise, and treatment outcomes good.

However, because 60% of the country’s health services currently do not provide tuberculosis treatment, overall case detection and treatment success rates in the country remain low. In 1997, Mozambique was 23rd on the list of countries with the highest burden of TB. Today it ranks 18th.

The rapid rise of HIV in Mozambique has also had a significant impact on efforts to control tuberculosis. An estimated 12% of the population lives with HIV/AIDS, and adult TB patients have high rates of HIV infection. Management of TB-HIV in the country has improved only slowly. The review team found that Mozambique had limited human resources to deal with this growing crisis, which threatens to cripple an effective response to both diseases.

On the positive side, the team found that substantial financial resources were available from a variety of sources to strengthen and extend Mozambique’s tuberculosis services, and good initial efforts have been made to collaborate with HIV services in tuberculosis care.

Full funding for the NTP in the 2006 budget, including a larger allocation for collaborative TB-HIV activities, should strengthen DOTS and broaden its scope. Plans to expand the laboratory network, improve the quality of laboratory services, and introduce a six-month four-drug treatment regimen throughout the country should also help to improve both diagnosis and treatment.

Among its findings, the review team recommended that the Minister of Health ensure that TB diagnosis and treatment services are provided in the remaining health institutions where there are personnel; ensure coordination of activities designed to assist those with tuberculosis and HIV; adopt a plan for developing and expanding human resources for tuberculosis; strengthen and extend access to diagnostic services; and call on the resources of the Stop TB Partnership and other partners and technical experts for technical assistance to address the emergency of tuberculosis.

Union consultant: Prof Donald A Enarson
Local partner: National Tuberculosis Programme, Mozambique
Funding agency: French Ministry of Foreign Affairs
Improving Case Detection and diagnosis through strengthened laboratory services and operational research

In most low-income countries, microscopic examination of sputum is still the only widely available diagnostic tool for identifying tuberculosis. With the growing threat of HIV, multi-drug resistant (MDR) tuberculosis, and extensively drug-resistant (XDR) tuberculosis, it is critical that the laboratories in these countries are properly equipped; staffed by motivated, well-trained technicians; and provided with clear standards for measuring the quality of their work.

Working in collaboration with the World Health Organization, US Centers for Disease Control and Prevention, US Agency for International Development, and other partners, The Union has been conducting a programme in high-burden countries in Africa and Asia to strengthen laboratory services and enhance quality assurance. The primary objective is to improve detection of infectious cases of tuberculosis in low-income countries through improved AFB-microscopy techniques, increased capacity for culture and testing for drug susceptibility, implementation of External Quality Assurance (EQA) standards, and research into unresolved technical issues and strategies involving AFB-microscopy.

To enable coverage of the largest number of countries and to help build local capacity, The Union’s lab strengthening project has established two regional ‘expert’ laboratories – in Bangkok, Thailand and Cotonou, Benin – to function as expert resources that can assist TB programmes in the region through field support, technical assistance, and training. The regional laboratories are guided from a supranational reference laboratory in Antwerp, Belgium, and new international laboratory experts are continually being identified and recruited.

At the request of a national tuberculosis programme, consultants from a regional lab will review the country’s AFB-microscopy network and quality-assessment system and make suggestions for improving it. Consultants can also assist with training and will monitor progress, help with interpretation, and suggest corrective measures. Regional labs also assist countries by building capacity for culture and testing for drug susceptibility and by manufacturing sets of slides with known bacillary content for use in comparison testing.

In 2006, regional experts provided technical assistance to 12 countries, in addition to participating in conferences, workshops, courses, and on-site training sessions in Africa, Asia, and Latin America.

The Union also has an agreement with India’s Revised National Tuberculosis Control Programme and the Tuberculosis Research Centre (TRC) in Chennai, Tamil Nadu, to help improve microscopy services throughout India by supporting their national consultant.

As part of its mission to improve TB diagnosis and control, the lab strengthening project also promotes operational research to look into unresolved technical issues and to help identify strategies that are most appropriate for local conditions. In 2006, this research included evaluation of new light-emitting-diode fluorescence microscopy equipment, which may be more appropriate in low-income countries; investigation into staining solutions as the origin of false negative errors; and investigation into the optimal method for dissolution of basic fuchsin.

Union consultants:
Dr Armand Van Deun, Dr Sang Jae Kim
Funding agency: US Agency for International Development (USAID)
Best practice guide completed

After years of work involving Union members in the Nursing and Allied Professionals (NAP) Scientific Section’s Case Management Working Group and The Union’s Nursing Division, a new Union guide detailing best practices in tuberculosis nursing was completed in 2006.

Available in early 2007, Best Practice for the Care of Patients with Tuberculosis: A guide for low-income countries is aimed at healthcare workers who are involved in detecting and caring for TB patients in primary, community, and acute care settings. The guide is based on evidence gathered from experts in the field and was developed in partnership with nurses and healthcare providers working in a wide variety of settings.

‘This new guide is an excellent example of how The Union works together with its members to improve TB control on the ground’, says Gini Williams, one of the authors. ‘It gives detailed guidance on practical aspects of patient care, from the onset of symptoms to the completion of treatment’.

Best practices are presented in a series of standards that are adaptable to local circumstances in low-income countries and which encourage evaluation through the use of measurable outcomes. Each standard corresponds to a significant point in a TB patient’s diagnosis or treatment cycle, based on the TB management strategy recommended by The Union and treatment regimens recommended by WHO.

‘The guide uses a system of standard setting and clinical audit to encourage people to look at their practice to see what improvements can be made and how these can be achieved’, says Williams. ‘Practical steps to improve the quality of care for people with suspected or active TB will in turn improve case finding and treatment outcomes’.

The next step for the project is implementation. The Case Management Working Group will be running a postgraduate course on the implementation of the guide in practice at the Union World Conference on Lung Health in November 2007. Members of the working group will also be carrying out research projects designed to test the standards in practice.

Print copies of the English-language version of the guide can be ordered from The Union’s website. The guide can also be downloaded at no charge from the site in PDF format. Funds are being sought for translation into French, Spanish, and Russian.
Clinical trials to improve lung health

The Union’s Clinical Trials Division was established within the Department of Scientific Activities to assess needs and develop a capacity for clinical trials that address questions regarding diagnosis and treatment for lung disease in low-income countries.

The division established an international network of clinical trial centres and carried out one of the largest international multicentre Phase III clinical trials conducted to date on the treatment of tuberculosis, Study A. The results of Study A were published in *The Lancet* in 2004.

The division is currently conducting an even larger multicentre, randomised Phase IV clinical trial – Study C – to compare the acceptability, efficacy, and toxicity of a fixed-dose combination tablet for the treatment of newly diagnosed smear-positive tuberculosis versus the current standard of care which involves separate, individual medications. The Study C regimen consists of two months of isoniazid, rifampicin, ethambutol, and pyrazinamide in a fixed-combination tablet, followed by four months of isoniazid and rifampicin in a combined tablet. The control regimen consists of the same drugs given as separate tablets during the first two months of treatment, followed by four months of combined tablets of isoniazid and rifampicin.

### STUDY C TRIAL CENTRES

Study C involves more than 1,700 patients recruited from 11 trial centres. In order to contribute to the study, each centre was required to fulfill a series of conditions, including meeting WHO criteria for high-quality routine TB care, a demonstrated ability to recruit a sufficient number of patients, and capacity to conduct a trial complying with Good Clinical Practice requirements.

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<td>Prof Noureddine Zidouni, Professor, Algiers Faculty of Medicine Head, Pneumo-phtisiologie Department, Béni-Messous Teaching Hospital Prof Djilali Larbaoui, President, National Medical Committee against Tuberculosis and Lung Diseases Prof Pierre Chaulet, Advisor, National Medical Committee against Tuberculosis and Lung Diseases</td>
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<td>Centro Broncopulmonar I Cruz Roja</td>
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<td>Mozambique</td>
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<td>Tanzania</td>
<td>National Institute for Medical Research</td>
<td>Dr John Changalucha, Director NIMR</td>
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<td>Vietnam</td>
<td>National Hospital of Tuberculosis and Respiratory Diseases NHTRD</td>
<td>Prof Dinh Ngoc Sy, Director of National Hospital of TB and Respiratory Disease, Manager of National Tuberculosis Control Programme Dr Nguyen Thi Thuy Ha</td>
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<td>Vietnam</td>
<td>Pham Ngoc Thach Hospital</td>
<td>Prof Dinh Ngoc Sy, Director of National Hospital of TB and Respiratory Disease, Manager of National Tuberculosis Control Programme Dr Nguyen Thi Thuy Ha</td>
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The primary outcomes the investigators hope to determine are the failure rate at the end of treatment, the relapse rate at the end of 30 months, and the occurrence of any severe adverse events during treatment.

Patient enrolment in Study C was completed in September 2006, with 1,732 patients enrolled in 11 centres worldwide – Algiers (Algeria), Cali (Colombia), Conakry (Guinea), Hanoi (Vietnam), Ho Chi Minh City (Vietnam), Kathmandu (Nepal), Lima (Peru), Manhica (Mozambique), Mwanza (Tanzania), Nepalgunj (Nepal), and Santa Cruz (Bolivia).

By the end of 2006, more than 1,200 participants had completed their six-month course of treatment and began to enter the post-treatment follow-up phase.

Study C participants will be followed for two years after the end of treatment. During the 24-month follow-up period, patients are required to return to the study centre for a medical evaluation and the collection of a sputum specimen on seven separate occasions.

To promote patient retention, Study C investigators have devised a number of strategies tailored to their local situations. These include reminder telephone calls prior to each appointment; home visits when an appointment is missed; providing transportation to and from the study centre; and providing incentives, such as food baskets and t-shirts. These methods have proved to be effective in earlier trials, helping to ensure proper follow-up of patients after treatment.

Final results of the study are expected in early 2009.

**Union consultants:** Dr Christian Lienhardt, Dr Sang Jae Kim, Sharlette Cook

**Funding agencies:** Global Alliance for TB Drug Development, US Agency for International Development (USAID)

**Local partners:** Study C Trial centres (see sidebar page 15)

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**Addressing the challenges of MDR- and XDR-TB**

In 1959, Sir John Crofton, a pioneer in the treatment and control of tuberculosis, wrote that ‘the greatest disaster that can happen to a patient with tuberculosis is that his organisms become resistant to two or more of the standard drugs.’

Tuberculosis is curable, as long as the bacteria that cause it – *M. tuberculosis* – are susceptible to the antibiotics that patients need to take as part of their treatment regimen. If patients don’t take all of their medicines on a regular basis, or if treatment is inadequate, interrupted, or incorrect, the TB bacteria can develop an ability to withstand the antibiotics, and the medications no longer work. The patient now has drug-resistant tuberculosis.

Drug-resistant bacteria pass this resistance on to their progeny, and drug resistance can then spread from one person to another. The average patient with multidrug-resistant tuberculosis can infect an additional 15 to 20 people.

Today, multidrug-resistant (MDR) tuberculosis – bacteria that show resistance to at least isoniazid and rifampicin, the most effective first-line drugs for treatment of TB – has become a global public health menace.

According to recent estimates, 10% of all new TB infections are resistant to at least one anti-TB drug, and this alarming rise of drug-resistant strains threatens to undermine tuberculosis control efforts worldwide. The World Health Organization (WHO) estimates it costs 100 times more to cure drug-resistant TB than drug-susceptible TB, and that US$ 650 million will be needed annually to diagnose and treat more than 1.5 million patients with drug-resistant TB by 2015.

In the past two years, an even more dangerous strain of TB has emerged in several areas of the world – extensively drug-resistant (XDR) TB, or tuberculosis caused by TB bacteria resistant to at least isoniazid and rifampicin, among the first-line drugs; resistant to any fluoroquinolone, and to at least one of three injectable second-line drugs (capreomycin, kanamycin, and amikacin). Although the XDR strain was described in 2006, it has existed in many countries of the world for the last two to three decades, according to some experts.

Today, XDR-TB – which is often incurable and fatal – has been identified in all regions of the world, including the most developed and industrialised nations. There is a real danger that, fueled by the HIV pandemic, XDR-TB is poised to become a global epidemic.

These growing problems of MDR- and XDR-TB are of great concern to The Union.

To help address these problems, The Union has joined with WHO and other partners in DOTS-Plus to develop a global policy on the management of MDR-TB and to foster rational access to second-line drugs.

Working with WHO through a unique multi-institutional partnership called the Green Light Committee, The Union is participating in a network that helps treat drug-resistant TB in close to 100 countries worldwide and has established a worldwide TB Reference Laboratory Network to improve surveillance and control of MDR-TB.

The Green Light Committee promotes the proper treatment of MDR-TB through access to life-saving high-quality second-line drugs at reduced prices and under rigorous monitoring conditions. The committee has developed guidelines on MDR-TB surveillance and management and conducted regional and country training workshops on the management of MDR-TB. Technical assistance for sound implementation of MDR-TB control practices has been provided to a number of countries.

By November 2006, 51 projects in 40 countries had been approved by the GLC for the treatment of 24,994 MDR-
TB patients. The Global Plan to Stop TB 2006–2015 calls for treating 800,000 MDR-TB cases in the next 10 years.

Union consultant Dr José A Caminero, a member of the Green Light Committee, devoted more than three months to MDR-TB projects in 2006 – visiting countries throughout Central and South America and the Middle East to conduct monitoring missions of MDR-TB projects; reviewing DOTS-Plus applications from countries throughout the world; and conducting workshops, international and national intensive courses, and other training sessions.

As the growing threat of XDR-TB became apparent in 2006, The Union quickly moved to help publicise this threat and devoted important segments of the 2006 Union World Conference on Lung Health to sessions on MDR-TB and XDR-TB.


A special session entitled ‘Extensively drug-resistant tuberculosis (XDR-TB): how did we get here and what are we doing about it?’ featured WHO representatives Paul Nunn and Mario Raviglione. Dr Raviglione, Director of the Stop TB Department at WHO, summarised the problems that must be addressed: ‘As a result of poor control practices, some countries are now facing one of the worst possible scenarios in TB control: the lethal combination of HIV infection and extensively drug-resistant TB. The common denominator is always poor control practices, “careless care”, and weak health systems. The Stop TB community worldwide needs now to rapidly and vigorously set in place what is required to curb the epidemic and offer a chance of cure to those already affected. It is our collective responsibility, as public health workers, clinicians, nurses, academicians, financiers, and community representatives, to do all that is necessary to save the lives of those affected today by XDR-TB and to prevent further epidemics from occurring. Above all, it is the responsibility of all governments to make this happen through strong, definitive commitment to the health of the peoples they represent’.

The theme of the 38th Union World Conference on Lung Health to be held in Cape Town, South Africa in 2007 is ‘Confronting the challenges of HIV and MDR in TB care and prevention’.
Tuberculosis and HIV

One-third of the 40 million HIV-positive people worldwide are also infected with tuberculosis, and, in sub-Saharan Africa, the proportion of co-infected persons with tuberculosis reaches 75%. Tuberculosis is a leading cause of death among people infected with HIV.

The Union established a Department of HIV to address the growing threat from the TB-HIV co-epidemic by helping TB and HIV/AIDS programmes develop coordinated treatment strategies for patients with both diseases. Working together is essential because TB is often the first opportunistic infection that brings HIV-infected individuals in contact with health services, and HIV-positive patients receiving antiretroviral drug therapy (ART) have a lower risk of developing active tuberculosis. Consequently TB-HIV care is an important element of the Stop TB Partnership’s global strategy to fight tuberculosis.

In 2005 the Department of HIV began testing the feasibility of providing Integrated HIV Care for Tuberculosis Patients Living with HIV/AIDS (IHC) by using national tuberculosis programmes (NTPs) as an entry point for early detection and treatment of HIV. The goal is a reduction in the burden of tuberculosis and HIV among individuals and communities in resource-limited settings.

Under the IHC programme, TB patients who register for anti-tuberculosis treatment, as well as their partners, are routinely offered HIV testing and counselling. If found to be HIV-positive, they are offered enrolment in integrated HIV care, including ART.

In 2006, the IHC programme progressed in its first three partner countries – Myanmar, Benin, and the Democratic Republic of Congo – and a fourth partner, Uganda, joined the programme.
Myanmar IHC programme now in 2nd year

In 2005 The Union launched a pilot programme in Myanmar to deliver Integrated HIV Care for Tuberculosis Patients Living with HIV/AIDS (IHC). The aim of the programme was to deliver care in five out of seven townships in Mandalay district, serving a population of nearly 900,000. Patient recruitment started in May 2005, and the programme is scheduled to expand to all seven townships in the Mandalay district, with additional expansion to the neighbouring district of Pakokku, by 2007.

Under the IHC programme, individuals who are diagnosed with tuberculosis at the TB Centre of Mandalay General Hospital are offered HIV testing. Those who accept receive pre-test counselling followed by a rapid HIV test. Patients who test negative are immediately provided with their results and given post-test counselling.

Patients who test positive for HIV on the first test are given another rapid test so that they know their results immediately. Those TB patients who are found to be HIV positive, along with their relatives (spouse/partner/children), are referred to a specialised HIV clinic for HIV counselling and further treatment as required. The cost of the antiretroviral and other medications for opportunistic infections is underwritten by the Yadana project, operated by the multinational energy company TOTAL.

HIV testing is now routinely offered to patients registered for TB treatment in the programme area, and TB patients co-infected with HIV and their HIV-infected relatives are systematically enrolled into the IHC programme as per programme guidelines.

Since the programme began, 4,807 adult TB patients have been registered, of whom 3,297 (69%) were offered and accepted testing for HIV. Of these, 1,107 (34%) were diagnosed as HIV positive.

One-hundred and eighty-six relatives of the HIV-positive patients were also tested, with 109 of them found to be HIV positive. In all, 1,216 HIV-infected patients have been diagnosed, and 683 (56%) have been enrolled in the IHC programme.

Union consultants have been making regular visits to Myanmar to monitor the programme and consult with managers of the National AIDS Programme (NAP) and the National Tuberculosis Programme (NTP). While programme managers and advisers are very pleased with the progress of the project, several constraints have been identified, including the heavy workload at all levels of the healthcare system; human resource shortages in the HIV clinic; and problems with long-term follow-up of HIV-infected patients at the community level. As yet, township health centres do not participate in the follow-up of HIV patients.

Union consultants: Drs Philippe Clevenbergh and Nevin Wilson
Funding agency: Yadana project, operated by TOTAL/MGTC
Local partners: Myanmar National Tuberculosis and AIDS Programmes

[Medical record image]
IHC programme well accepted by TB patients in Benin

The Union launched its Integrated HIV Care for Tuberculosis Patients Living with HIV/AIDS (IHC) programme in Benin in 2005 in collaboration with the country’s National Tuberculosis Control and AIDS Control Programmes.

Twenty of Benin’s tuberculosis treatment centres now serve as the entry points for the IHC programme, which includes HIV diagnosis, standardised HIV treatment and patient follow-up, recording and reporting, and logistical support. More than 2,000 TB patients are expected to benefit from HIV diagnosis and treatment over the next two years.

Patients who register for treatment with the National Tuberculosis Programme are offered HIV testing and counselling. If they are found to be HIV positive, they are then enrolled for integrated HIV care, including antiretroviral treatment. When they complete their TB treatment, they continue to receive HIV care.

By the end of 2006, 20 tuberculosis treatment centres in northern, southern and central Benin had been identified and supplied with rapid HIV test kits, cotrimoxazole, and antiretroviral drugs. One hundred pilot site staff have been trained in diagnosis and management of co-infected TB patients, and they now routinely offer provider-initiated HIV counselling and testing to all TB patients.

Since the beginning of patient enrolment, 3,299 patients have been diagnosed with tuberculosis at the pilot sites. All of the patients were offered HIV counselling and testing, and 2,867 (87%) accepted. Among the tested TB patients managed at the IHC sites, HIV prevalence was 15%. Cotrimoxazole preventive therapy was initiated for 69% of co-infected patients.

In 2006, 35% of patients were enrolled in antiretroviral therapy (ART) without an initial CD4 count to guide the clinicians about when to start ART. Without laboratory services to confirm a patient’s initial CD4 cell count, clinicians in Benin were forced to assess patients’ eligibility by clinical symptoms they present. During the last quarter of 2006, the IHC programme introduced a manual CD4 cell count method called Dynabeads® at 10 sites chosen by the National Steering Committee. The Union expects that the introduction of Dynabeads® will help reduce the delay in enrolling eligible co-infected patients in ART and increase the overall uptake of ART.

A Union review team that visited Benin in 2006 found that, while the programme is going well, it faces several challenges. These include the need for more space to ensure privacy during counselling sessions at the TB centres; a need to strengthen recording and reporting and coordination between TB centres and NACP service sites to facilitate a smooth flow of information on the clinical outcomes of co-infected patients; and the need to examine how treatment adherence and HIV prevention can be strengthened within the joint TB and HIV services.

Union consultants: Drs François Boillot, Riitta Dlodlo, and Paula Fujiwara
Funding agencies: European Commission; Ligue Pulmonaire Suisse, utilising funding from the Swiss Agency for Development and Cooperation
Local partner: Benin National Tuberculosis Control and AIDS Control Programmes
Addressing TB–HIV in the Democratic Republic of Congo

In April 2005 The Union and the Democratic Republic of Congo (DRC) National Tuberculosis Control Programme initiated an action research programme to develop Integrated HIV Care (IHC) for Tuberculosis Patients Living with HIV/AIDS in selected sites in the Bas Congo and North Kivu provinces of the DRC.

An unstable political situation since then has hindered full implementation of the programme, but, despite that, 1,519 patients have been diagnosed with tuberculosis at the pilot sites between the time patient enrolment began and the end of 2006. Many of the patients were systematically offered HIV pre-test counselling and testing, and almost all accepted the offer.

All of the co-infected patients who were diagnosed received post-test counselling and, preventive cotrimoxazole therapy was initiated for 100% of co-infected patients in Bas Congo, and 87% in North Kivu.

Beginning in the last quarter of 2006, when a manual method of CD4 count measurement was introduced, the CD4 cell counts of co-infected patients were measured to assess their eligibility for antiretroviral treatment (ART).

Measurement of CD4 cell counts is a helpful diagnostic tool in providing quality HIV care and treatment, but automated CD4 cell count laboratory equipment is expensive and often not available in health clinics in developing countries. This has created a potentially formidable barrier to integrated TB–HIV services.

To address this, The Union’s IHC programme is testing the feasibility of using a new method to measure CD4 cell counts. The system – called Dynabeads® – can be used in sites that have only a light microscope, thus enabling healthcare providers to offer CD4 testing to co-infected TB patients at the same site where they receive their treatment. This provides quicker, affordable results and prevents patients from getting lost in the referral system. The testing system has now been introduced to all sites in DRC, and two laboratory technicians have been trained at each site.

The HIV prevalence among TB patients in DRC was found to be only 21% in Bas Congo and 11% in North Kivu, which is significantly lower than original estimates of 30%. This has led to a slower than anticipated patient enrolment rate in the DRC.

By the end of 2006, 100 HIV-positive TB patients were enrolled in the IHC in Bas Congo and 115 in North Kivu. In Bas Congo, 86% patients had been started on ART and; in North Kivu, 33%.

Union consultants: Drs François Boillot, Riitta Dlodlo, and Paula I Fujiwara
Funding agencies: Tuberculosis Coalition for Technical Assistance (TBCTA), United States Agency for International Development (USAID), European Commission
Local partners: Democratic Republic of the Congo National Tuberculosis Control and AIDS Control Programmes
Uganda – with a population of approximately 27 million – is one of the few African countries in which rates of HIV infection have actually declined. Far-sighted government policies are credited with helping to bring HIV prevalence down from about 15% in the early 1990s to around 6.7% at the end of 2005.

Today, Uganda’s Ministry of Health (MOH) estimates that there are more than 1 million Ugandans who are HIV positive and that 49% of all TB patients are co-infected with HIV. However, TB patients are not routinely offered HIV counselling and testing.

In March 2006, the Ugandan government implemented a policy on integrated TB-HIV care in order to improve access to HIV care and treatment for TB patients. To accelerate the implementation of that policy, Uganda’s National Tuberculosis and Leprosy Programme (NTLP) and the National STD/AIDS Control Programme (ACP) have partnered with The Union’s Integrated HIV Care (IHC) Programme to identify the barriers to delivering integrated TB-HIV care in Uganda and to develop strategies to overcome those barriers.

In 2006, The Union began Phase I of the operational research by carrying out a knowledge, attitudes, practices, and behaviours study in five rural districts in Uganda. Using patient and community focus groups and in-depth interviews with health providers, the study will help identify barriers to integrated care at four levels: health systems, local communities, patients, and healthcare service providers.

Preliminary results from the study indicate that there is a lack of awareness and knowledge among patients about the relation between TB and HIV and about available services; there is still a strong stigma about TB and HIV in the community; there is concern about lack of privacy for patients; there needs to be more training and collaboration for TB and HIV care providers; and that the health system is not completely prepared to provide integrated care to patients.

Phase II of the IHC programme will involve a Protocol Development Workshop to be held in Kampala in 2007 which will include participants from the NTLP, ACP, and selected research sites. The workshop will help build participants’ skills in research protocol development and in the use of EpiData, an epidemiological data management tool. Participants will also help develop strategies and interventions that will assist the health system to overcome barriers identified by earlier research.

In Phase III of the programme, The Union will provide support and technical assistance to the participants to help them implement and monitor the interventions developed at the workshop. The Union will also continue to provide technical assistance to the NTLP and NACP to strengthen the effective implementation of the national policy for integrated care.

Union consultants: Drs Panganai Dhliwayo, Riitta Dlodlo, and Paula I Fujiwara
Funding agency: United States Agency for International Development (USAID)
Local partners: National Tuberculosis and Leprosy Programme (NTLP) and the National STD/AIDS Control Programme (NACP)
Lung Health

Each year, more than 10 million people die from lung diseases, including pneumonia, tuberculosis (TB), HIV-related TB, and lung cancer. Many more live with debilitating chronic lung conditions, including some 300 million who suffer from asthma. The annual cost to the global economy of these diseases is well in excess of US$ 200 billion.

With its research and clinical expertise, broad experience in technical assistance and education in the developing world, and worldwide network of members, The Union is in a unique position to make major contributions to global lung health.

Building on its experience and success with its model for tuberculosis, The Union has developed innovative approaches to the prevention, treatment, and control of other lung diseases, such as childhood pneumonia and asthma, and to the prevention and control of tobacco use. It has also begun to explore applications to diseases that frequently present together, such as TB and HIV and pneumonia and malaria in children.

Currently active in close to 80 countries, The Union is well known as an innovative and reliable partner to governments, nongovernmental organisations, and donors from around the world.

In 2006, The Union’s lung health programmes ranged from an innovative child lung health programme in Malawi that has yielded impressive results, to a comprehensive lung health services programme in Sudan that employs an integrated, rather than disease-specific, approach to lung health management; from a large, multicentre international study of asthma and allergies, to creation of an Asthma Drug Facility that will make essential asthma medicines available and affordable in low- and middle-income countries.
Improving the quality of lung health services in Sudan

Working in collaboration with The Union, Sudan is participating in a unique international, multicentre study funded by the World Bank to evaluate the advantages of a comprehensive – rather than disease-specific – approach to improve the quality of lung health services at the first referral care level.

Sudan’s Epidemiological Laboratory (EpiLab) signed a Memorandum of Understanding for the project in April 2006. Since then, EpiLab’s staff and consultants have been adapting internationally recommended case management strategies and information systems in the areas of child lung health, asthma, and tobacco prevention for use in Sudan.

Working in collaboration with the Khartoum State Ministry of Health, EpiLab has selected five institutions in Khartoum as pilot centres for the initiative, and recruitment, training, and infrastructure strengthening are now underway. By the end of 2006, 132 asthma patients, 89 smokers, and 112 children with pneumonia had already been recruited into the study.

The objectives of the programme are to 1) extend the lessons learned from Sudan’s tuberculosis programme to other public health services, 2) build competence that will lead to quality improvement in Sudan’s public health services, 3) develop critical thinking skills necessary to establish evidence-based public health policies and practice, and 4) promote economies of scale and collaboration throughout the public health sector.

In one project, EpiLab is working with Union consultants to develop a pilot asthma management programme in five hospitals in Sudan.

Another project focuses on patterns of tobacco use among tuberculosis patients in Sudan. Patients are asked about their use of tobacco and those who smoke are provided with brief advice to stop. At each of their subsequent visits to the TB clinic, the patients’ smoking status and motivation to stop smoking are recorded.

The feasibility of such an intervention was previously studied by investigators from The Union, EpiLab, and the Sudan National Tuberculosis Programme. In a report to be published in the *International Journal of Tuberculosis and Lung Disease*, the investigators found that tobacco cessation interventions can be successful in convincing a large proportion of tuberculosis patients to stop tobacco use. TB treatment results showed higher cure/completion rates and lower default rates among those enrolled in the intervention than among unenrolled patients.

Staff at project hospitals selected for the intervention have been trained in the completion of patient record cards and are now recruiting smokers to the programme. The next phase will involve developing training materials, training staff in delivering the intervention, and developing patient education material.

‘This type of collaborative, comprehensive lung health programme is a relatively new area for us, and I think it will prove to be quite exciting,’ said Union Consultant Prof Donald Enarson.

Union consultant: Prof Donald A Enarson, Karen Slama, PhD
Funding agency: The World Bank
Local partner: EpiLab

Sudan developing pilot asthma centres

Sudan’s Epidemiological Laboratory (EpiLab) in Khartoum is working with Union consultants to develop a pilot asthma management programme in two rural district hospitals and three large urban district hospitals in Sudan. Funded by the World Bank, the pilot project is part of the Comprehensive Approach to Improved Quality of Lung Health Services project.

A Sudan study conducted from 2003 to 2005 found that too many asthma patients depend upon emergency rooms for treatment and that standard asthma case management and an affordable, reliable supply of quality asthma drugs would result in more successful management of the disease.

The Union has assisted EpiLab with the development of training materials and programmes for healthcare professionals and patient education, and implementation of systems to record and analyse data. Training in standard case management for asthma will begin in the five pilot hospitals in 2007.

EpiLab is also conducting a study with Ribat University to determine the prevalence of asthma among adult workers. Results of the study will become available in 2007.

Union consultant: Prof Nadia Aït-Khaled
Funding agency: Norwegian Association of Heart and Lung Patients, The World Bank
Local partner: EpiLab
Asthma Drug Facility: affordable medicines and quality of care

The use of low-cost inhaled high-dose corticosteroids and bronchodilators has been clearly demonstrated to be cost-effective in a standardised asthma management programme, yet the availability and affordability of these drugs is still one of the biggest impediments to the successful care and treatment of asthma patients in low-income countries. The result is an increase in poverty and suffering for the individuals and families affected by asthma, and a huge resource cost for the governments and healthcare systems that bear the burden of their care.

In an editorial in the *International Journal of Tuberculosis and Lung Disease* in 2004, The Union proposed the idea of an Asthma Drug Facility (ADF), modelled after the successful Global Tuberculosis Drug Facility (GDF). The ADF would make good-quality, essential asthma medicines available, affordable, and sustainable in low- and middle-income countries.

According to The Union proposal, the ADF would use pooled procurement and other purchasing strategies to obtain low prices for asthma medication and provide it to participating asthma management programmes. The ADF would also provide technical assistance and promote the standardised management of asthma and the evaluation of treatment results. The net result should be an improvement in the quality of care provided to patients and a significant reduction in the total cost per patient of medications, thus allowing many more patients to afford effective treatment.

In 2006, the ADF started to prepare a direct procurement service for interested countries, donors, and nongovernmental organisations.

‘The availability of affordable asthma medicines through ADF, and the introduction of standard case management following international recommendations, will allow governments to save millions in costs for medicines and unnecessary emergency room visits and hospitalisations’, says Dr Nils E Billo, Executive Director of The Union. ‘Availability of affordable asthma medicines will also lead to health system strengthening through improved credibility of the public health sector. Most importantly, affordable asthma drugs will contribute to poverty alleviation by reducing the burden on governments, hospitals, persons, and families affected by asthma.’

For further information, visit the Asthma Drug Facility website at www.GlobalADF.org

Union consultants:
Prof Nadia Aït-Khaled,
Karen Bissell, DrPH, Jamshed Chhor

Funding agency: The Union
ISAAC Phase III results published

Phase III results of the largest international study ever done on the prevalence of asthma and allergic symptoms in children were published in August 2006 in the international medical journal *The Lancet* (368: 733–743).

The International Study of Asthma and Allergies in Childhood (ISAAC) was begun in 1991 to measure the worldwide prevalence and severity of asthma and allergies. Until then, most studies had been confined to the United Kingdom, Australia, and New Zealand. There was little information available from other countries or the developing world.

The Union has been an active participant in ISAAC since its beginning, and Prof Nadia Aït-Khaled, head of The Union’s Asthma Division, is a member of the ISAAC steering committee and the regional coordinator for francophone Africa.

Phase I of ISAAC surveyed 700,000 children from 156 centres in 56 countries and found significant differences in global patterns of asthma prevalence, as well as variations in symptoms that could not be explained by current understanding of asthma. Phase II was a more detailed investigation in 30 study centres in 22 countries that examined the risks and protective factors that might be contributing to the differences observed in Phase I.

ISAAC Phase III was conducted between 2002 and 2003 to examine changes in the directions and prevalence of symptoms of asthma, allergic rhinoconjunctivitis, and eczema since Phase I. Like Phase I, Phase III was a multi-country, cross-sectional survey, this time involving 1.2 million children and adolescents from 106 centres in 56 countries.

‘ISAAC is the first international epidemiological study that surveys symptom prevalence among the largest possible number of children from a worldwide cross-section of social groups, regions, and countries’, says Prof Aït-Khaled, one of the co-authors of *The Lancet* paper.

According to the results reported in *The Lancet*, most centres showed a change of prevalence of one or more standard errors for at least one disorder, with increases being twice as common as decreases, and increases being more common in the 6- to 7-year age group than the 7- to 14-year age group.

An exception was asthma symptoms in the older age group in which decreases were more common at the high prevalence. For both age groups, more centres found increases in all three disorders more often than they did decreases, but most centres had mixed results. The only regions where increases in prevalence of all three disorders occurred more often in both age groups than decreases were in the Asia Pacific and India.

According to the authors, ‘the variations in symptom prevalence in most regions suggest that the factors that affect these conditions vary in different locations.'
For example, in Latin America, several centres had high prevalence rates, similar to those in centres in some developed countries, despite large differences between socioeconomic status and living conditions in these countries, and showed little change over seven years. Factors that affect asthma and allergies might act in different ways in developed countries than in developing countries, or their interaction with socioeconomic status might be important.

‘If a single factor accounts for the changes in prevalence, it would need to have a strong effect and be prevalent worldwide, but to date, such a factor has not been identified’, they stated. ‘The factors that cause variation in prevalence might differ from one location to another and from one age group to another, and could be related to aspects of lifestyle, dietary habits, microbial exposure, economic status, indoor or outdoor environment, climatic variation, awareness of disease, or management of symptoms’.

The authors concluded that, ‘Although changes in mean annual prevalence to the order of 0.5% might sound small, such changes could have substantial public health implications, especially since the increases took place most commonly in heavily populated countries. Urban centres in developing countries might have few resources to implement management programmes for these diseases in the face of overwhelming infectious diseases. However, interest from centres in developing countries in collaborating in this study shows that they are concerned that asthma and allergies in children are emerging as important public health problems’.

Further research based on the results of Phase III is already being discussed for Phase IV and Phase V.

Union consultant: Prof Nadia Aït-Khaled
Funding agency: ISAAC

Implementing treatment guidelines for asthma in developing countries

Standardised management of asthma patients – particularly in low-income countries – has been an international public health goal for many years.

In 1996, The Union’s Asthma Division adapted the guidelines of the Global Initiative for Asthma (GINA) and The Union’s successful system of delivering tuberculosis services and combined them into Management of Asthma in Adults: a guide for low-income countries. The publication outlined an asthma management package that could be integrated into the existing national health services of low- and middle-income countries.

To provide ongoing evaluation of the measures proposed in the guide – as well as evaluate new and innovative forms of treatment and care – the Asthma Division participates in operational research programmes that investigate the feasibility, efficiency, and effectiveness of lung health practices in many low- and middle-income countries.

The results of two such studies were published in 2006 in the International Journal of Tuberculosis and Lung Disease. In the first study, ‘Implementation of asthma guidelines in health centres of several developing countries’ (Int J Tuberc Lung Dis 2006; 10: 104–109), the treatment of asthma patients in nine outpatient clinics in Algeria, Côte d’Ivoire, Guinea, Kenya, Mali, Morocco, Syria, Turkey, and Vietnam was evaluated. Researchers reviewed how well the practitioners adhered to recommended standard case management practices, including the proportion of patients correctly confirmed to have asthma, the proportion in whom asthma severity was correctly graded, and the proportion for whom treatment with inhaled corticosteroids correctly corresponded to the severity of their asthma.

Of the 456 patients enrolled in the study, correct diagnosis was confirmed in 263 (58%). Adherence to the guidelines for assigning the correct grade of severity was moderate overall among the practitioners. Practitioners did reasonably well assigning a severity grade using symptoms, but did poorly when assigning a grade using peak expiratory flow – they tended to underestimate severity.

The relationship between the practition-
Physicians in the study made more use of symptoms in evaluating the severity grade of their patients, while their use of peak expiratory flow measurements was much less systematic, says Prof Nadia Aït-Khaled, head of The Union’s Asthma Division and coordinator of the study. ‘Moreover, although they were participating in a study specifically looking at the quality of care, their prescription of treatment did not correlate well with their diagnosis because they underutilised inhaled corticosteroids. This may be explained in part by the patients’ ability to pay for inhaled steroids and in part by the limited availability of such medications in some locations. However, these observations – underestimation of asthma severity and underuse of inhaled steroids – have also been reported in other studies, and it helps point out that merely establishing guidelines is not sufficient. They must also be utilised.’

In the second study, ‘Treatment outcome of asthma after one year follow-up in health centres of several developing countries,’ (Int J Tuberc Lung Dis 2006; 10: 911–916), some of the same asthma patients from clinics in Algeria, Guinea, Morocco, Syria, Turkey, and Vietnam were followed for one year to evaluate the impact of their care on treatment outcomes.

Among the 310 asthma patients evaluated after one year, 95 (31%) had a successful outcome, 61 (20%) had their asthma under control, 35 (11%) failed treatment, 116 (37%) defaulted, and 3 (1%) transferred.

Among the 167 (54%) patients still on treatment after one year, there was a substantial increase in the proportion of patients who were classified as intermittent at the end of treatment (from 11% to 53%), with a decrease in all categories of persistent asthma (from 34% to 12% for mild, 45% to 28% for moderate, and 10% to 8% for severe asthma).

‘This study has identified the main challenge in improving quality of life for asthma patients’, says Prof Aït-Khaled, ‘which is adherence to treatment. Among those who adhered to treatment, there was substantial improvement in the severity of their disease after one year of follow-up. Not surprisingly, the patients with the most severe disease were more likely to adhere to treatment.

‘The main factors affecting adherence undoubtedly include the low affordability of asthma drugs in these settings; lack of knowledge among health personnel, particularly in developing countries; the need for better patient education; and the lack of organisation of the health services for long-term treatment of asthma.

‘From a public health point of view, we must investigate what determines adherence to treatment and introduce means to enhance that adherence. We know that patients’ quality of life can be improved if they follow regular treatment. The key challenge is ensuring that patients adhere to that treatment’. 
Child Lung Health: Malawi adopts Union programme

Of the almost 11 million children under five who die each year throughout the world from preventable causes, pneumonia accounts for 19% of those deaths. And it is children less than one year of age living in the world’s poorest communities who are most at risk.

Since its inception in 1996, The Union’s Child Lung Health Division has focused on improving healthcare services in low-income countries for children with pneumonia, acute respiratory infections, tuberculosis, HIV-related lung disease, and childhood asthma.

In 2000, the Child Lung Health Division partnered with the Government of Malawi to develop a model for delivery of services to children under five with pneumonia, based on The Union’s successful standard case management strategy to treat tuberculosis.

‘The Child Lung Health Programme was built on three pillars’, says Penny Enarson, Union consultant for the project. ‘The World Health Organization’s technical guidelines on inpatient management of the child with a serious infection, The Union’s standard case management model for delivery of health services, and financial support from the Bill and Melinda Gates Foundation’.

In its first three years of operation, the Child Lung Health Programme was implemented throughout Malawi in all district hospitals and two of the three central hospitals. Case fatality rates for severe and very severe pneumonia in children under five dropped dramatically under the programme.

In 2000, the estimated national case fatality rate for inpatient children less than 59 months of age with pneumonia was 18.6%. By December 2005 – 63 months after project implementation the overall case fatality rate was 8.4%, a reduction of 54.8%.

In 2005, the Scottish Executive made a three-year grant to expand the Child Lung Health Programme to health facilities operated by the Christian Health Association of Malawi, which serve close to 37% of population.

Now widely recognised as an innovative and effective approach to child lung health, the Malawi Child Lung Health Programme is seen as a model for other countries in sub-Saharan Africa – demonstrating that a reproducible system for the surveillance, diagnosis, and management of respiratory diseases in children can be sustained beyond the life of the funding.

‘The Child Lung Health Programme has been successful because it was incorporated into Malawi’s existing health services structure from its beginning’, says Enarson. ‘It was implemented by hospital personnel who were already treating acute respiratory infections and who were practising integrated management of childhood illnesses. The policies that we introduced were coordinated with the major players already in place in the health services and government systems’.

The success of this effort at sustainability was clearly demonstrated when the Malawi Ministry of Health included the Child Lung Health Programme in its Essential Health Package (EHP), which is funded through the National Planning Sector Wide Approach (SWAp). The Child Lung Health Programme is one of 11 interventions included in the EHP under ‘Management of Acute Respiratory Infections and related complications’.

‘This programme demonstrates that The Union’s TB model can be successfully applied to another critical public health issue in a sustainable way’, says Enarson. ‘Malawi has now continued the Gates-funded initiative with resources of its own, and it is sustaining the excellent results. This is exactly what we should be aiming for in our activities’.

Union consultant: Penny Enarson
Local partner: Acute Respiratory Infection Programme of the Malawi Ministry of Health
Funding agencies: International Tuberculosis Foundation, with a grant from the Bill & Melinda Gates Foundation; the Scottish Executive
Tobacco Control and Prevention

Tobacco use caused an estimated five million deaths worldwide last year, and, if consumption patterns continue, that number will double by 2020, according to the World Health Organization. Half the current smokers alive today – about 650 million people – will die from a tobacco-related disease if they continue to smoke.

Once a problem of the industrialised world, the burden of death and disease caused by tobacco consumption is now shifting to developing countries. By 2020, more than three-quarters of deaths from tobacco use will be in the developing world.

The Union has been working towards global tobacco control since 1996 through education, technical assistance, and research. In 1998 The Union published a widely used guide to tobacco control and prevention that was the first to target low-income countries. Working closely with the International Non Governmental Coalition Against Tobacco (INGCAT), The Union has been one of the key supporters of the international Framework Convention on Tobacco Control (FCTC).

In addition, The Union’s Tobacco Control and Prevention Division supports legislative strategies, tax and clean air policies, market regulations, and health protection policies for tobacco control, and, in 2006, provided technical expertise to groups such as the International Union for Health Promotion and Education and the International Union Against Cancer. Operational research projects in Morocco and Sudan have been in place since 2002, and the division’s educational programmes and publications have reached audiences in settings ranging from public meetings, university courses, and specialist seminars to international conferences and the Internet. A key area of interest has been the impact of tobacco use on the incidence of tuberculosis and the outcome of treatment.

In 2006, as part of The Bloomberg Global Initiative to Reduce Tobacco Use, The Union received a major grant from the World Lung Foundation in New York to fund tobacco control activities in a number of low-income, high-burden countries where tobacco use is a growing public health problem.
The Union to co-manage Bloomberg grant programme and develop new tobacco control projects

2006 became a landmark year in the history of tobacco control when Michael R Bloomberg, American financier and mayor of New York City, announced his commitment to donate US $125 million towards ending the global tobacco epidemic.

The Bloomberg Global Initiative to Reduce Tobacco Use will be coordinated by five partner organisations and will fund activities that promote freedom from smoking, with special emphasis on 15 low-income countries where more than two-thirds of the world’s smokers live. The partners are the World Lung Foundation, the World Health Organization’s Tobacco Free Initiative, The Johns Hopkins University’s Bloomberg School of Public Health, the Centers for Disease Control and Prevention Foundation, and the Campaign for Tobacco-Free Kids.

The two-year initiative will focus on refining and optimising tobacco control programmes; supporting efforts to pass and enforce new laws and policies; advocacy and education; and the development of a rigorous system to monitor the status of global tobacco use.

In November The Union was chosen by the World Lung Foundation to supervise the creation and operation of resource centres in China, India, the Middle East, and South America; develop a series of tobacco control management courses; collate and distribute educational materials; build a mass-media campaign; and co-manage, with the Campaign for Tobacco-Free Kids, a competitively awarded grants programme that will support projects to develop and deliver high-impact tobacco control interventions.

The Bloomberg grants programme was launched on 1 December 2006, and four rounds of grants will be awarded during the two-year initiative. The grants will be made to governments and organisations that can work at the country level on one or more of the initiative’s strategic components. Emphasis is on projects that lead to substantial, sustainable improvements in tobacco control laws, regulations, policies, and programmes, including (but not restricted to):

- tax and price measures, including anti-smuggling measures;
- establishment of smoke-free workplaces and public places;
- direct and indirect advertising bans;
- other evidence-based regulatory/legislative initiatives;
- effective long-term mass media campaigns and programmes.

All major partners in the initiative will encourage and give technical support for grant applications and projects from all countries, but particularly from the 15 high-burden countries – Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Pakistan, the Philippines, Poland, Russian Federation, Thailand, Turkey, Ukraine, and Vietnam.

‘The Union is honoured to be involved in the Bloomberg Initiative’, says Dr Nils E Billo, Executive Director of The Union. ‘Michael Bloomberg’s gift is a defining moment in the history of tobacco control. It affirms that the epidemic of disease caused by tobacco use will no longer be condoned or tolerated anywhere in the world’.

Union consultants: Dr Nils E Billo, Dr Judith Mackay, Dr Judith Watt, José Luis Castro
Union partners: World Lung Foundation, Campaign for Tobacco-Free Kids, WHO Tobacco Free Initiative
Funding agency: World Lung Foundation

Two-thirds of the world’s smokers live in 15 countries:

Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Pakistan, the Philippines, Poland, the Russian Federation, Thailand, Turkey, Ukraine, Vietnam.
Union helps lay groundwork for Sudan’s tobacco control strategic plan

In 2005 Sudan ratified the Framework Convention on Tobacco Control (FCTC) and passed a variety of new laws, including bans on advertising, sale of tobacco to minors, and smoking on public transportation and in health and educational facilities. Smoking is also restricted in restaurants, nightclubs, bars, and other public places. Now the challenge is to build on this progress by putting into place the mechanisms required to implement the legislation at the state level and monitor its impact.

The World Bank is funding a Union-managed Comprehensive Approach to Improved Quality of Lung Health Services project, part of which will establish a comprehensive strategic tobacco control plan in Sudan that meets the requirements of the FCTC. The Epidemiological Laboratory (EpiLab) in Khartoum is working with The Union and the Federal Ministry of Health’s Director of Tobacco Control on this project.

EpiLab and The Union have worked together on numerous projects, including tuberculosis and tobacco control research, and Union experts serve on the Technical Advisory Committee that visits the facility regularly to review progress, provide feedback, and make recommendations on lung health projects. In 2006 the Technical Advisory Committee helped lay the groundwork for a tobacco control planning process.

To build a successful inclusive plan, the TAC recommended that Sudan:

- hold a forum of interested parties, including NGOs and professional bodies, to establish an inclusive planning environment;
- collaborate with the International Non Governmental Coalition Against Tobacco (INGCAT), taking advantage of their extensive experience with the FCTC and ability to create consensus among stakeholders;
- conduct a systematic situation analysis to map the range of agencies currently directly involved in tobacco control as well as agencies that could be engaged;
- survey the economic aspects of tobacco control in Sudan; and
- participate in the International Tobacco Control Policy Evaluation Survey (ITC).

The Tobacco Section of EpiLab will also investigate treatment referral options and develop treatment guidelines, as required by the FCTC.

The TAC further recommended that Sudan’s tobacco control experts work together to build more visibility for their programme by becoming involved in international collaborations, such as the Global Treatment Partnership, and by making presentations at Union region and world conferences. They should also explore funding opportunities through grants programmes for low-income countries.

Union consultants: Profs Donald A Enarson and Nadia Aït-Khaled, Karen Slama PhD
Partners: Epidemiological Laboratory (EpiLab), International Non Governmental Coalition Against Tobacco (INGCAT)
Funding agency: World Bank
New Union guide outlines tobacco cessation interventions for TB patients

A new Union guide has been developed that provides healthcare workers with strategies for helping their patients with tuberculosis to stop smoking. Based on Union research and other resources, Tobacco cessation interventions for tuberculosis patients was completed in 2006 and will appear in 2007, both as an educational series in the International Journal of Tuberculosis and Lung Disease and in book form. The authors are Karen Slama PhD, Dr Chiang Chen-Yuan, and Prof Donald A Enarson.

The need for the guide arises from nearly a century of evidence linking smoking and tuberculosis. The association was first investigated in 1918, and numerous studies have since explored the relationship between passive and active exposure to tobacco smoke with tuberculosis infection and with the transition from being infected to developing TB disease.

Studies have shown that smoking also affects the clinical manifestations of TB: smokers are more likely to have cough, dyspnoea, chest radiograph appearances of upper zone involvement, cavity and miliary appearance, and positive sputum cultures. Smoking has also been found to be associated with both relapse of TB and TB mortality.

There is enough evidence to conclude that smoking is causally associated with tuberculosis, and patients with TB need and should receive counselling and assistance in stopping smoking. Through the guide, The Union is offering practical and simple strategies for introducing cessation counselling as part of TB treatment. Health professionals working in TB care can use these interventions without elaborate or costly training, and they can do it systematically within a DOTS-based programme.

The Union hopes that Tobacco cessation interventions for tuberculosis patients will help healthcare providers make smoking cessation as much a part of the routine as any of the other standard practices of treatment.

Union consultants: Karen Slama PhD, Dr Chiang Chen-Yuan, Prof Donald A Enarson
Funding agency: The Union

Brief advice helps TB patients in Sudan

A project funded by the World Bank will train healthcare workers to provide brief advice to TB patients at five hospitals in Sudan. The Union helped develop the training materials for the project, and Dr Karen Slama of The Union’s Tobacco Control and Prevention Division worked at several pilot sites in Sudan to help develop the project.

Tobacco use in Sudan includes both cigarette smoking and snuff dipping, using a traditional and highly addictive form of moist oral snuff called toombak. It is estimated that around 20% of males in Sudan use tobacco.

The feasibility and efficacy of incorporating brief advice about the risks of tobacco use and the benefits of cessation into tuberculosis treatment was tested in a study conducted by The Union, EpiLab, and the Sudan National Tuberculosis Programme.

The intervention, conducted in 24 healthcare centres in Sudan, consisted of open questions about quitting asked at the beginning of TB treatment; during the course of treatment at two, five, and eight months; and with a follow-up survey at 12 months. Of the 1,177 newly diagnosed male patients with TB who started treatment during a four-month period, 513 (44%) were recruited into the study, 356 (69%) of whom were currently using tobacco.

The researchers found that brief advice was successful in convincing a large proportion of the patients enrolled in the study to stop tobacco use. Of 218 smokers at baseline, cessation was reported by 102 patients (47%) by the second visit; 168 (77%) by the third visit; and 187 (86%) by the final visit. The corresponding duration of abstinence among these patients was: more than six months 47%; more than three months 30%; and less than three months 9%.

Of the 147 toombak users at baseline, cessation was reported by 58 patients (40%) by the second visit; 75 (51%) by the third visit; and 95 (65%) by the final visit. The corresponding duration of abstinence among these patients was: more than six months 40%; more than three months 12%; and less than three months 14%.

When including both types of tobacco use, of 252 tobacco users in the intervention sample, 165 (66%) of those who completed treatment reported no longer using any form of tobacco at the end of the trial.

In addition, significant differences were observed between patients enrolled and those not enrolled for a number of outcomes, with enrolled patients having higher cure/completion rates, lower default rates, and lower rates of transfer.

The results of the study are scheduled for publication in the International Journal of Tuberculosis and Lung Disease in 2007.

Union consultant: Karen Slama PhD
Partners: Epidemiological Laboratory (EpiLab), and the Sudan National Tuberculosis Programme
Funding agency: The World Bank, The Union

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Tobacco awareness activities target smokers in New Delhi

India is one of the 15 low-income countries where tobacco use is having an especially devastating effect on public health. A 2004 World Health Organization report found that India had 250 million tobacco users. More than 5,000 adolescents start using tobacco every day, joining the four million people under 15 years old who already use tobacco regularly. Most smoke hand-rolled beedis or chew tobacco, rather than smoke cigarettes, but some 700,000 Indians die each year from tobacco-related diseases.

India has taken steps towards controlling tobacco use, becoming a signatory of the Framework Convention on Tobacco Control (FCTC) in September 2003 and a Party to the treaty in February 2004. The Government of India has passed an anti-tobacco legislation, which prohibits tobacco advertising, smoking in public places, selling tobacco products to minors, and sponsorship of sporting/cultural events, among other provisions. Many states, including Delhi, Maharashtra, West Bengal, and Kerala, have gone further – banning smoking in offices. Smoking has now also been banned on Air India, Indian Airlines, and all domestic air carriers; and railways across the country.

Beyond passing and implementing laws, effective tobacco control necessitates widespread changes in behaviour and attitudes. In 2006 The Union spearheaded activities designed to contribute to these changes through the collaboration of its India Resource Centre (IRC) in New Delhi and the World Lung Foundation–South Asia (WLF–SA).

For the month leading up to World No Tobacco Day on 31 May, 200 billboards were mounted at strategic crossroads throughout Delhi. With anti-smoking messages in English and Hindi, the billboards supported the theme of ‘Tobacco: Deadly in any form or disguise’. The IRC and WLF–SA also collaborated with the Patel Chest Institute (VPCI), one of the premier TB and lung health institutes in India. Dr GR Khatri of WLF–SA led a seminar on the harmful effects of tobacco consumption and the health benefits of quitting smoking. At the event, former smokers shared their experiences, and people who had quit were celebrated.

In December, the WLF–SA and the IRC organised a very well-attended tobacco awareness day that generated media coverage on All-India Radio and New Delhi TV (NDTV) and in 14 leading newspapers of India.

The organisers first visited 16 colleges and institutions in Delhi, where they talked with more than 1,200 students and teachers about the harmful effects of tobacco and the means available to control it. They also laid the groundwork for the forthcoming events: a speech competition, exhibit, street show, and anti-tobacco march.

Students from 25 colleges entered the competition, giving anti-tobacco speeches. There was an anti-tobacco exhibition where the march started, as well as a street show about the dangers of tobacco use that attracted thousands of people. The march was flagged off by the Health Minister of Delhi. More than 2,500 people joined in the march, and the participation of Kapil Dev, former star Indian cricket captain, as well as numerous dignitaries, added to the high profile of the day’s events. The march concluded with the Vice Chancellor of Delhi University awarding the prizes in the speech competition.

Dr Nils E Billo, Executive Director of The Union, and Dr Judith Mackay, Project Coordinator of the Bloomberg Global Initiative to Reduce Tobacco Use for the World Lung Foundation, met with the organisers in the evening to discuss ways to advance India’s tobacco control efforts.

One ongoing activity, designed to build capacity among doctors and paramedical staff activity, is sensitisation courses on lung health. Tobacco control is a key component of these courses, which have been undertaken in collaboration with the Government of India and the Indian Medical Association in several Indian states.

IRC Director: Dr Nevin Wilson
WLF–SA Director: Dr GR Khatri
Union partner: World Lung Foundation–South Asia
Funding agency: World Lung Foundation–South Asia
Course on Budget Management, Financial Reporting and Project Management for TB Control

结核病控制预算管理，财务报告及项目管理课程
The Union as an educational resource

To help address the crippling shortage of healthcare professionals around the world, The Union took steps in 2006 to support the development of a well-trained, stable workforce by making its education and training resources more widely accessible than ever before.

**World Conference online**
For the first time in 2006, many of the sessions of the 37th Union World Conference on Lung Health in Paris were available over the Internet in both video and text formats, thanks to a partnership with the Kaiser Network. The Kaiser team provided a daily broadcast of the Stop TB meetings, plenary sessions, and many symposia. These broadcasts, archived on the Kaiser Network website, can be viewed by anyone, anywhere, at any time.

**New, low-cost membership/subscription category**
A new €20 category of Union membership is now available to persons from low-income countries, which includes an online subscription to the monthly *International Journal of Tuberculosis and Lung Disease* and other membership benefits. This membership category is also available to persons from middle- and high-income countries for €65. In the past year, 500 members have taken advantage of this offer.

**Free access to Journal archive**
Access to the online archive of *International Journal of Tuberculosis and Lung Disease* issues more than one year old is now free – a move that has resulted in a dramatic increase in the use of the Journal’s articles and information.

**Technical guides in more languages**
The Union has long made its technical guides available in PDF format at no charge. These publications provide detailed guidance on topics from the epidemiology of tuberculosis and best practices for TB nursing to asthma management and tobacco control. Most guides are translated into The Union’s three official languages (English, French, Spanish), but this year saw guides released in Mongolian, Russian, and Chinese in an effort to extend the reach of this series.

**New courses**
The Union has added a course in human resources development to its management series to help national tuberculosis programmes develop the specific skills needed to recruit, train, manage, and retain a strong, stable workforce. Nearly 650 people attended 21 courses offered by The Union in 2006.
Union Courses

Union courses provide the theoretical and practical knowledge required for both the clinical and management aspects of tuberculosis control. Designed to be offered in various formats and for audiences ranging from laboratory technicians and nurses to physicians and administrators, the curricula are developed by Union experts and consulting faculty. Each presentation is customised to meet the needs of the host country or region, in collaboration with the national tuberculosis programme (NTP) or other local partners.

The objectives of Union courses are to:
- advance the clinical knowledge and expertise of healthcare workers and managers
- increase the management capacity and human resource development of NTPs
- create local capacity to conduct health systems and services research that is designed to meet local needs
- strengthen relationships and understanding between NTPs and other sectors of the healthcare system
- identify individuals who may pursue careers in public health

Funding for Union courses and sponsorship of individual participants is provided by a variety of international agencies, sponsors, and local partners.
International TB courses cover both theory and practice

When The Union’s International Tuberculosis Course was first offered in Arusha, Tanzania in 1991, many countries were attempting to follow Tanzania’s lead and establish a national tuberculosis programme (NTP) to carry out the newly defined DOTS strategy. Both The Union’s international courses and its technical assistance programme grew quickly during this period because of the need to help countries build and staff their NTPs and begin implementing DOTS.

The International Tuberculosis Courses offer an intensive curriculum that covers both the practical and theoretical aspects of tuberculosis prevention, treatment, and control. The three-week course is divided into five modules examining the bacteriologic basis of tuberculosis control, clinical presentation and diagnosis, the epidemiologic basis of tuberculosis control, interventions for tuberculosis control and the elimination of TB, and principles of tuberculosis control in a national programme. Teaching methods include lectures, discussion, group work, laboratory bench work and field visits. Practical exercises train participants in programme assessment and planning, and both case studies and visits to the NTP of the host country add to their experience.

In 2006, the course was held for the 17th time in Arusha, and the Tanzania NTLP continues to collaborate with The Union, offering their programme as a model and learning laboratory for participants. To meet the needs of other regions, the course is also offered in French in Benin; in English in Vietnam; and, in a condensed eight-day format, in Spanish in El Salvador.

Benin is often cited as a good example of how to implement an NTP. One of the first African countries to test the DOTS strategy, Benin was also one of the first to achieve 100% DOTS coverage. This makes it an ideal setting for a course targeted at francophone Africa. The Benin Ministry of Health has been actively involved in the course since 1993, and the faculty includes both Union and local experts.

The course in Vietnam has been held in both Ho Chi Minh City and Hanoi. Participants come from all over South East Asia and benefit from exposure to Vietnam’s NTP, which has consistently exceeded WHO targets for the past nine years.

The course in Spanish – Curso Internacional de Epidemiología y Control de la Tuberculosis – covers the same major topics and includes training in the use of information systems and laboratory practice. Offered this year for the 15th time, the programme is coordinated by The Union in collaboration with the El Salvador Ministry of Health and the Pan American Health Organization (PAHO). Enrolment in the courses is limited to approximately 25 participants, who are nominated by their home country and The Union. Preference is given to those who have responsibility within a national programme at the central or intermediate level.

More than 1,000 people have completed the International Tuberculosis Courses, and many others take advantage of the training resources provided on the TB Division website www.tbrieder.org. The site provides the course presentations in English, as well as “classics” in TB research, current research, Union technical guides in multiple languages, the EpiData software programme, and free instruction in how to use it.

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Coordinators: Dr Hans L Rieder (Tanzania and Vietnam); Dr Arnaud Trébuq (Benin); Dr José A Caminero (El Salvador)
Funding agencies: The Union (Tanzania); French Ministry of Foreign Affairs (Benin); Tuberculosis Coalition for Technical Assistance (TBCTA) with funds from USAID (Vietnam and El Salvador); Norwegian Agency for Development Cooperation (NORAD); Swiss Agency for Development and Cooperation (SDC); and fees from different donors who sponsor the participants.
Training to meet the challenge of multi-drug resistance

Drug resistance is one of the major threats to tuberculosis control, and the increase in cases of multi-drug resistant tuberculosis (MDR-TB) and the emergence of extensively drug resistant tuberculosis (XDR-TB) in 2006 underlined the importance of understanding the causes of drug resistance, how to prevent it, and how to treat it.

The Union offers courses on managing multi-drug resistance in both a five-day international and a two-day national format. In 2006, Dr José A Caminero presented these courses in Mexico, Ecuador, and Bolivia.

The five-day course held in Mexico City was organised in collaboration with the National Institute of Respiratory Diseases, the National Tuberculosis Programme of Mexico, the Pan American Health Organization and the World Health Organization. In addition to Dr Caminero, the faculty included experts from Mexico, Peru, and Brazil.

The curriculum was designed to cover the theoretical basis for drug resistance and the measures that must be taken to treat and control MDR-TB, according to the most recent evidence and recommendations of the WHO. The target audience for the course was specialist physicians, national tuberculosis programme managers, laboratory managers, and other professionals working with the clinical management and programmatic implications of multi-drug resistant TB.

The intensive course was held over five consecutive days, with the mornings devoted to panel discussions, lectures, and discussion of topics ranging from causes of drug resistance and methods used to detect it, to the value of social...
New course focuses on human resources management

Managing a national tuberculosis programme (NTP) today requires skills that range from clinical expertise and political acumen to strategic planning and fundraising. Perhaps none is more important than human resource development.

The World Health Organization has estimated that a shortage of more than four million workers worldwide has health systems struggling to operate. Personnel deficits exist at every level – from aides to physicians – and the worst shortages are in low-income countries.

Human resource management was once viewed as primarily an administrative function, but it is now understood to be essential to any organisation’s strategic planning. This is particularly evident in the field of tuberculosis control where national tuberculosis programmes cannot hope to meet international targets if problems such as lack of staff, inadequate training, poor supervision, vague performance standards, low morale, and staff turnover are not addressed.

To support NTP managers who need to develop expertise in human resource management, The Union has added a new course to its management series — the International Course on Human Resources Development and Management for TB Control. The course was offered first in Bangkok, Thailand in November 2006 and attended by 18 participants.

The overarching objective of the course is to help managers anticipate long-term human resource needs relative to the changing conditions inside and outside of their organisations. The two-week course provides participants with an overview of the human resource system from HR planning to the NTP manager’s role, with special focus on how to:

- conduct a human resource audit to identify the weak areas of their organisation and develop an action plan to strengthen them;
- forecast human resource needs and develop a plan and budget;
- write job descriptions, recruit candidates, and interview prospective employees;
- match people and their career needs and capabilities with jobs and career paths;
- apply principles of performance and compensation management and conduct effective performance appraisals;
- assess training needs, lead or facilitate training programmes, and evaluate their effectiveness; and
- build harmonious employee relations, appreciate cultural diversity, and learn to deal with harassment in the workplace.

Instructional methods include self-assessments, lectures and presentations, readings and case studies, group process labs, role playing, use of testing instruments, and group exercises. Participants are assessed both before and after the course and receive ongoing feedback and evaluation for six months to follow up on the action plans they develop during the course.

The Human Resources Development and Management course is one of four core management courses offered each year by The Union. The other courses are Management, Finance, and Logistics; Budget Planning and Project Management; and Management of Managers. More than 300 TB managers have attended the courses since they were first offered in 2004. Complete outlines and schedules, as well as application forms and other details, can be found on The Union website.

Union consultant: José Luis Castro MBA, PhD
Funding agency: The Union and the US Centers for Disease Control and Prevention (CDC)
COURSES IN ENGLISH

- **Applied Epidemiology for Operations Research in TB Control**
  - FRANCE: Paris
  - 16–25 January
  - Participants: 10
  - Coordinator: Dr Hans L Rieder
  - Union partner: EpiData Association
  - Donor: Tuberculosis Coalition for Technical Assistance (TBCTA) with funding from USAID

- **International Course in Management, Finance, and Logistics for TB Control**
  - INDIA: Jaipur
  - 6–18 February
  - Participants: 29
  - Coordinator: José Luis Castro
  - Union partners: Indian Institute of Health Management Research, India Resource Centre
  - Donors: The Union and the US Centers for Disease Control and Prevention (CDC)

- **International Course in Human Resources Development and Management for TB Control**
  - THAILAND: Bangkok
  - 13–26 November
  - Participants: 18
  - Coordinator: José Luis Castro
  - Union partner: India Resource Centre
  - Donors: The Union and CDC

- **International Course in Management of Managers for TB Control**
  - THAILAND: Bangkok
  - 18–28 July
  - Participants: 11
  - Coordinator: José Luis Castro
  - Union partner: India Resource Centre
  - Donors: The Union and CDC

- **From Paper to Computer Records: Data Quality Assurance with EpiData**
  - CHINA: Changsha
  - 31 July–4 August
  - Participants: 13
  - Coordinator: Dr Hans L Rieder
  - China Union/FIDELIS Centre, Beijing
  - Donor: FIDELIS/Canadian International Development Agency (CIDA)

- **International Course in English**
  - **EpiData Software for Operations Research in TB Control**
    - CHINA: Beijing
    - 4–8 December
    - Participants: 12
    - Coordinator: Dr Hans L Rieder
    - Union partner: National Centre for Tuberculosis Control and Prevention, CDC China
    - Donor: Norwegian Agency for Development Cooperation (NORAD)

- **COURSES IN SPANISH**

  - **Curso Internacional de Epidemiología y Control de la Tuberculosis**
    - EL SALVADOR: San Salvador
    - 13–21 March
    - Participants: 28
    - Coordinator: Dr José Caminero
    - Union partners: El Salvador Ministry of Health; Pan American Health Organization (PAHO)
    - Donor: TBCTA/USAID

  - **Curso Intensivo de Actualización en Diagnostico y Tratamiento de la Tuberculosis**
    - VENEZUELA: Caracas
    - 22 March
    - Participants: 83
    - Coordinator: Dr José Caminero
    - Union partner: National Tuberculosis Programme of Venezuela
    - Donor: The Union

  - **Curso de Capacitación para la Formación de Facilitadores DOT S**
    - **Subreceptores y Equipos Provinciales**
    - ECUADOR: Guayaquil
    - 20–21 September
    - Participants: 50
    - Coordinator: Dr José Caminero
    - Union partners: Ecuador National Tuberculosis Control Programme, PAHO, WHO, CARE
    - Donor: GFATM – CARE

- **COURSING IN FRENCH**

  - **Cours Sur la Lutte Contre la Tuberculose**
    - HAITI: Port-au-Prince
    - 15–25 May
    - Participants: 27
    - Coordinator: Dr Arnaud Trébuq
    - Donor: Edith Alarcón, RN
    - Union partner: Ecuador National Tuberculosis Control Programme
    - Donors: Global Fund to Fight AIDS, Tuberculosis & Malaria (GFATM) – CARE

  - **Cours International Sur la Lutte Contre la Tuberculose**
    - BENIN: Cotonou
    - 28 August–15 September
    - Participants: 21
    - Coordinator: Dr Arnaud Trébuq
    - Union partner: Benin Ministry of Health
    - Donor: French Ministry of Foreign Affairs

- **COURSES IN SPANISH**

  - **XV Curso Internacional de Epidemiología y Control de la Tuberculosis**
    - ECUADOR: Quito
    - 18–19 September
    - Participants: 42
    - Coordinator: Dr José Caminero
    - Union partners: National Tuberculosis Control Programme of Ecuador, PAHO, WHO, CARE
    - Donor: GFATM – CARE

  - **Curso Intensivo de Actualización en Diagnóstico y Tratamiento de la Tuberculosis**
    - ECUADOR: Guayaquil
    - 20–21 September
    - Participants: 50
    - Coordinator: Dr José Caminero
    - Union partners: Ecuador National Tuberculosis Control Programme, PAHO, WHO, CARE
    - Donor: GFATM – CARE

- **Curso Internacional de Manejo Clínico de la Tuberculosis con Resistencia a Fármacos**
  - ARGENTINA: Buenos Aires
  - 17–18 October
  - Participants: 37
  - Coordinator: Dr José Caminero
  - Union partners: National Tuberculosis Control Programme of Argentina
  - Donor: NTP Argentina
In addition to participating in Union-sponsored conferences and courses, Union staff and consultants teach courses, lead workshops, give lectures, and make presentations for other institutions and organisations. In 2006, they participated in more than 75 such activities in 32 countries.

**Integrated HIV care for TB patients living with HIV (DR CONGO)**

**Case detection: Community DOTS workshop (ECUADOR)**

**Information-Education-Communication workshop (ECUADOR)**

**Treatment adherence in operational conditions (ECUADOR)**

**Nursing care in TB control (ECUADOR)**

**Finnish Lung Health Association (FINLAND)**

**international tuberculosis course (ESTONIA)**

**FILHA workshops on asthma (FINLAND)**

**Asthma management workshop (FRANCE)**

**European Science Foundation workshop (FRANCE)**

**French National Cancer Institute tobacco control workshop (FRANCE)**

**TB course for NGOs/CORE (INDIA)**

**Japanese Anti-Tuberculosis Association (JAPAN)**

**TB laboratory services lecture at the Korean Institute of Tuberculosis (REPUBLIC OF KOREA)**

**WHO international TB course (LATVIA)**

**TB epidemiology and intervention (NORWAY)**

**FILHA workshop on epidemiology of TB (RUSSIA)**

**Continuing medical education for Singapore Medical Society (SINGAPORE)**

**Chest Radiograph Review System course (SOUTH AFRICA)**

**WHO PPM course (SWITZERLAND)**

**WHO-AFRO workshop on MDR-TB (TANZANIA)**

**TB-HIV lecture (TOGO)**

**TB in children (VIETNAM)**

**Highlights include:**

**UNIVERSITY LECTURES**

- Institute of Tropical Medicine (BELGIUM)
- University of Alberta (CANADA)
- University of Toronto (CANADA)
- Université de Limoges (FRANCE)
- DIU de Santé Internationale (FRANCE)
- University of Bergen (NORWAY)
- University of Stellenbosch (SOUTH AFRICA)
- University of Witwaterstrand (SOUTH AFRICA)
- University of Bern (SWITZERLAND)
- University of Zurich (SWITZERLAND)
- Yale University (USA)

**WORKSHOPS/ NON-UNION COURSES**

- National course on AFB-microscopy quality assurance (BANGLADESH)
- Global TB Drug Facility Workshop (BENIN)
- Integrated HIV care for TB patients living with HIV (BENIN)
- WHO TB laboratory training course for Asia-Pacific (CHINA)
- TB presentations to NTP (DR CONGO)
- WHO TB-HIV training (DR CONGO)

**INTERNATIONAL CONFERENCES AND MEETING PRESENTATIONS**

- Canadian Conference on International Health (CANADA)
- Subgroup for Laboratory Capacity Strengthening (FRANCE)
- Supra-National TB Reference Laboratories (FRANCE)
- 5e Congrès Méditerranéen de Pathologie Thoracique (FRANCE)
- 1er African Conference on Tobacco or Health (MOROCCO)
- 2006 HIV/AIDS Implementers’ meeting (SOUTH AFRICA)
- PEPFAR programme implementers’ meeting (SOUTH AFRICA)
- 13th World Conference on Tobacco OR Health (USA)
- MDR-TB workshop summit meeting (USA)
- UICC World Cancer Conference (USA)
- LAC Congress (VENEZUELA)

**NATIONAL CONFERENCES AND MEETINGS**

- Asociacion Argentina de Medicine Respiratoria (ARGENTINA)
- Beninois IHC Atelier (BENIN)
- MDR-TB meeting (ECUADOR)
- TB-HIV/AIDS meeting (ECUADOR)
- NTP evaluation meeting (ECUADOR)
- El Salvador National Congress on TB (EL SALVADOR)
- Ligues Journées (FRANCE)
- German Society of Pneumology meeting (GERMANY)
- Norwegian Association of Heart and Lung Patients (UL) (NORWAY)
- Singapore Medical Society (SINGAPORE)
- Asociacion Canaria de Neumologia (SPAIN)
- Grupo Tuberculosis e Infecciones Respiratorias (SPAIN)
- Spanish Society of Pneumology (SPAIN)
- Symposium Internacional de Neumologia (SPAIN)
- Epilab meeting on HIV and TB (SUDAN)
- Swiss Lung Association Conference (SWITZERLAND)
- Venezuela Society of Pneumology meeting (VENEZUELA)
Union Conferences

Union conferences are an important forum for the lung health community where colleagues from around the world can share the latest research and technology; discuss challenges and opportunities; participate in education and training sessions; and build support and synergy for the fight against tuberculosis and lung disease.

Attendance at the Union World Conference on Lung Health has continued to grow, setting a record of 2,100 participants in 2006. The number of abstracts submitted also reached a new high – more than 850 – demonstrating the volume of lung health research being conducted and the level of interest in sharing it at this important annual event.

For Union members, the World Conference is the one time in the year when far-flung colleagues have a chance to meet in person to report on Scientific Section activities, brainstorm new projects for Working Groups, and make plans for their Region Conferences.

Region Conferences have also continued to grow in importance. In 2006 only the North America Region held a conference, but six regions were planning conferences and meetings to be held in 2007.
37th World Conference Focused on Need to Strengthen Health Workforce

The global shortage of doctors, nurses, and other healthcare providers is one of the major barriers to meeting today’s public health challenges. The 37th Union World Conference on Lung Health, which convened in Paris from 31 October to 4 November 2006, took this issue as its theme, examining the impact of the shortage and the critical need to strengthen the workforce to improve global lung health.

Attendance record set
The conference drew a record 2,100 delegates from 125 countries, who spent five days immersed in the latest research and information on topics that included how to recruit, train, and retain a stable workforce; the challenges created by the TB-HIV co-epidemic; the consequences of increased tobacco use in low-income countries; the destabilising potential of Avian flu; and the threat posed by extensively drug-resistant tuberculosis (XDR-TB).

For the first time, delegates in Paris were not the only ones able to benefit from the conference, but also anyone with access to the Internet could follow the conference proceedings. The Kaiser Network funded by the Henry J. Kaiser Family Foundation (USA) sent a team to provide daily online coverage that included key meetings, plenary sessions, selected symposia, and interviews with newsmakers.

Messages from world leaders
The conference opened with words of support from two world leaders: Mr Jacques Chirac, President of the Republic of France; and Dr Jorge Sampaio, the former President of Portugal who now serves as the UN Secretary General’s Special Envoy to Stop TB.

President Chirac’s message to the delegates, which was read at the opening ceremony by Prof Michel Kazatchkine, France’s Ambassador on HIV/AIDS and Transmissible Diseases, concluded: ‘I send all my wishes that your Conference can make progress in raising consciousness and contributing information and research that will lead to the decline of this pandemic. In this fight, you can be assured of my constant commitment at your side’.

Dr Sampaio gave the opening lecture on the global responsibility to invest in the healthcare workforce via a live video link from Portugal. He said that addressing the shortage is essential because ‘an adequate workforce is the blood of the entire healthcare system. Our shared aim, our common commitment, and our motto has to be to do more, to do it faster, and to do it better. Emergencies, like TB, cannot wait’.

XDR-TB special session
The consequences of inadequate care are evident in the emergence of XDR-TB, a virtually untreatable form of tuberculosis. While the cluster of cases in South Africa in 2006 has been the most widely publicised, XDR-TB has been found in 28 countries as diverse in their health profiles as the United States and Latvia. A special session of the conference brought together an international panel of experts and former MDR-TB patients to address this new threat to TB control.

Other plenary sessions focused on the ‘Consequences of smoking and tobacco on lung disease in developing countries’, led by UK International Development Minister Gareth R Thomas; ‘Clinical trials: ethical issues in high-burden countries’ with Prof Solly Benatar of South Africa; and ‘Avian influenza: how ready are the health systems to detect and manage the purported epidemic?’ with Dr Enis Baris from the World Bank.

In addition to the plenary sessions, the scientific programme – developed with input from Union members around the world – included 12 postgraduate courses, 10 workshops, and 37 symposia, as well as meet-the-expert sessions, thematic slide presentations, and hundreds of poster discussions and display sessions.

Union awards presented
At the annual awards ceremony, Prof Margaret R Becklake of Canada received the Union Medal for her outstanding career in lung health research and teaching, and Dr Stephen D Lawn of South Africa won the Union Scientific Prize for his research on TB-HIV. The Japan Anti-Tuberculosis Association and the Stop TB Partnership also presented awards. (For details, please see the story Union Awards, pages 67–68).

Meetings of The Union’s Board of Directors, Regions, Scientific Sections, and Working Groups took place during the conference and culminated in the annual meeting of the General Assembly, through which Union members participate in the management of the organisation. (Summaries of these meetings can be found under Union Member Activities, pages 60–66).

A report on the 2006 Union North America Region Conference can be found on page 65–66.

'I send all my wishes that your Conference can make progress in raising consciousness and contributing information and research that will lead to the decline of this pandemic. In this fight, you can be assured of my constant commitment at your side'.

Mr Jacques Chirac
President, Republic of France
(read by Prof Michel Kazatchkine, in photo)

‘Our shared aim, our common commitment, and our motto has to be to do more, to do it faster, and to do it better. Emergencies, like TB, cannot wait’.

Dr Jorge Sampaio
UN Secretary General’s Special Envoy to Stop TB
An old story becomes new again: Press coverage of the World Conference

The link to HIV/AIDS and the increasing incidence of extensively drug-resistant tuberculosis (XDR-TB) have made the age-old problem of TB a fresh news story, and, in 2006, the media turned out for the 37th Union World Conference on Lung Health in greater numbers than ever before.

The day before the conference began the World Health Organization and The Union held a press conference announcing that US$95 million would be needed in 2007 to address the threat of XDR-TB. More than 40 French and international journalists attended – twice the number at a Paris press conference to announce the Global Plan to Stop TB 2006–2015 a few months earlier.

During the World Conference, The Union also held a special symposium on XDR-TB to which the media were invited. This was followed by an opportunity to interview both the speakers and representatives from key organisations, such as UNITAID, the Global Alliance for TB Drug Development, the Foundation for Innovative and New Diagnostics (FIND) and the AERAS Global TB Vaccine Foundation. Journalists speaking in Spanish, English, and French interviewed Dr Mario Raviglione, Director of the WHO Stop TB Department; Dr Kenneth G Castro, Director of the Division of Tuberculosis Elimination for the US Centers for Disease Prevention and Control (CDC); Dr Kevin DeCock, Director of the WHO HIV/AIDS Department; Mr Maxime Lunga Nsumbu, President, Club des Amis Damien, a patient advocacy group in the Democratic Republic of Congo; and others.

More than 130 journalists and press officers from 16 countries received press credentials to attend the World Conference. World news services, including Agence France Presse, Associated Press, BBC News, and Voice of America covered the events, as did the national media in countries from Gambia to China, including German, Russian, and Senegalese television stations. Coverage was strongest in France, where six television stations carried stories and Radio France International (RFI) broadcast interviews with key speakers from the conference in French, English, Spanish, and Portuguese.

In addition to the news media, online daily coverage was provided by the Kaiser Network and the advocacy group Health and Development Network (HDNet) released regular reports. Information about the conference was also disseminated by a variety of e-newsletters, websites, and other online and print publications.
Advocacy, communication, and social mobilisation (ACSM) have become important tools in the fight against tuberculosis and other lung diseases over the past several years. Advocates for TB control are modeling their strategies on the HIV/AIDS movement, which has demonstrated remarkable success in building public awareness, influencing government policy, driving research priorities, and obtaining resources, as well as changing private behaviour.

The TB campaign has been given a boost by the flood of experienced AIDS activists who have become involved because of the TB-HIV co-epidemic, as well as by the commitment of advocacy groups, such as RESULTS, TB Alert, TAG, and the World Care Council. As a consequence, global awareness of tuberculosis has reached a new high.

The Union facilitates the growth of this movement through its membership network and by resources, such as fact sheets, PowerPoint presentations, media backgr ounders, and policy guidelines. It supports advocacy events ranging from last year’s asthma photo contest sponsored by the Asthma Drug Facility to tobacco awareness activities in India.

Union conferences have become both a forum and a focal point for advocates. TB and HIV patient organisations have participated in the last several World Conferences as delegates, exhibitors, and speakers. In 2006 several organisations used the occasion of the conference to make announcements and release reports:

- The Stop TB Partnership announced the winners of the first Kochon Prize, which recognises individuals or organisations who have contributed in an extraordinary way to the effort to eliminate tuberculosis.
- George Soros and Open Society released reports generated by Public Health Watch’s TB Monitoring Project in Bangladesh, Brazil, Nigeria, Tanzania, and Thailand.
- The Dutch government announced that it was awarding US $38 million to the Global Alliance for TB Drug Development, AERAS Global TB Vaccine Foundation, and the Foundation for Innovative and New Diagnostics (FIND). To date, this is the largest donation made by any government to tuberculosis research.

All of these activities added to the energy and interest generated by the World Conference. What 15 years ago was a gathering of 150 scientists has expanded into a vibrant international forum for patients and physicians, nurses and administrators, health ministers and educators, community activists and researchers – in other words, all of the stakeholders committed to the global fight to stop TB.

With the 2007 World Conference scheduled to take place in November 2007 in Cape Town, South Africa, advocacy, communication, and social mobilisation meetings had already begun by December 2006.
Publications and Other Resources

The Union’s publication programme supports the dissemination of the latest research and information about the prevention, treatment, and control of tuberculosis and lung disease, with emphasis on low- and middle-income countries. Over the past two decades, the programme has grown to include not only the monthly peer-reviewed *International Journal of Tuberculosis and Lung Disease*, but also a series of technical guides available in several languages, CD-ROMs, PowerPoint presentations, posters, and electronic publications.

In order to reach the widest possible audience, most of these materials are available free of charge from The Union website at www.iuatld.org
Diagnosing TB in children is difficult. Children with chronic chest diseases are frequently either unnecessarily treated for tuberculosis, or the diagnosis is made so late that they die or suffer severe lung damage. The goal of this illustrated atlas is to assist healthcare workers practising in low-income countries to interpret the chest radiographs of children suspected of having TB.

The second edition of the Management of Asthma: A guide for low-income countries incorporates lessons from in-depth field experience; extends the technical recommendations to the management of asthma in children aged five years and over; takes into account the evaluation of the first edition; and changes the subtitle, since the proposed technical measures may be considered essential for managing asthma patients in any country. The overall strategy is to propose that The Union’s model for managing tuberculosis should be applied to asthma management.

This guide, based on material presented in The Union’s International Tuberculosis Course, deals with the epidemiology of tuberculosis and delineates the determinants of exposure, infection, disease, and death from the disease. A selection of pertinent examples drawn from biomedical literature is included.

The effective use of research is crucial to developing strong lung health and tuberculosis control programmes. This guide builds on the information provided in The Union’s research methods course, which was designed to assist health workers and investigators to develop research protocols relevant to low-income countries. The guide has two parts: course notes and practical exercises that can be expanded and/or adapted for local use. It also includes instructions on how to use the recommended EpilInfo software.

The original French-language version of this manual, published by WHO/The Union in 1999, has now been produced on CD-ROM with support from the French Ministry of Foreign Affairs. Its purpose is to inform medical students and medical practitioners about the best practices for managing tuberculosis patients, taking into account the community interventions defined by the national tuberculosis programme. It contains basic information that can be used in training medical students; in supervised group work, presentations, and discussions; in refresher courses for practicing physicians; and for personal study.

This CD-ROM of the 36th Union World Conference, held in Paris in 2005, includes sound recordings and PowerPoint presentations for the symposia, plenary sessions, and thematic slide presentations. Copies were distributed to all conference delegates at no charge.
Open access dramatically increases use of IJTLD

In July 2005, access to archives of the online version of the International Journal of Tuberculosis and Lung Disease (IJTLD) was opened to all. With all issues up to 12 months back available at no charge, use of the Journal increased dramatically from an average of 1,300 downloads per month in 2004 to a remarkable 6,300 per month in 2006. As a result, the Journal consistently ranked among the top 100 of the 10,000 journals hosted by Ingenta, and frequently in the top 10. These positive results show that the Journal is achieving its goal: to provide authors in all countries with access to knowledge on tuberculosis and lung health.

In a parallel move – and with the same goal – in 2006 The Union created a new membership category through which colleagues in low-income countries can become Union members, with an online subscription to the Journal, for only €20. For colleagues from middle- and high-income countries, this same category of membership is available for €65. By the end of 2006, more than 500 colleagues had become online members, with more than 200 from low-income countries.

Access to information is important, but so is ownership of the science published, and the Journal is committed to ensuring representation of authors from the countries where studies are conducted – particularly low-income countries. A review of 2006 Journal articles showed that for the 82% of original articles based on research conducted in a low-income country, either the first or the last author, or both, was from the country of study – a significantly better result than for other journals analysed by the editors. However, this can be improved upon, and the editors began an ongoing prospective analysis of author representation in original articles submitted from June 2006.

Submissions to the Journal continued to increase, with an average 55 articles per month in 2006 compared to 47 in 2005. Increasing the rejection rate to at least 60% has ensured a total turnaround time from submission to publication of nine months on average.

With more submissions, it has become important to be even more rigorous in the evaluation of articles accepted for publication. To further improve the scientific quality of the Journal, a panel of experts has been created to provide statistical advice when required.

Asthma was the key educational topic in 2006, with a series of six State of the Art reviews on asthma, published simultaneously with the six-part serialisation of the Union guide on the management of asthma.

Outstanding help from members and colleagues continued to play a key role in disseminating the Journal to all parts of the world, in different languages and formats: English (1,400 paper copies, 3,000 online members), French (500 CDs annually, free online access), Spanish (1,500 copies per issue, free online access), Russian (1,500 copies per issue, free online access) and Chinese (4,000 copies distributed three times per year). This collaboration is what makes the Journal truly international.
Journal articles


Addo KK, Dan-Dzide M, Yeboah-Manu D, Owusu-Darko K, Caulfield P, Minamikawa M, Bonsu F, Lienhardt C, Akpedonu P, Ofori-Adjei D. Improving the


Books / Chapters


Union Member Activities

The Union membership in 2006 included 102 Constituent and Organisational Members from 91 countries and 1,700 Individual Members from 145 countries. Together they contributed vital support to The Union through their membership fees, their experience and expertise, and their commitment to lung health.

Membership fees provide unrestricted funds that The Union uses as seed money to launch new innovative projects, underwrite new courses and publications, and contribute to operating costs. Many projects that later attracted grant funding began as pilot projects funded by The Union, for example, the Malawi Child Lung Health Programme.

The expertise of members plays a central role in the success of Union conferences. Through their participation in the Regions, Scientific Sections, and Working Groups, members shape the scientific programme for both Region and World Conferences. At these events, they share their knowledge, their experience, and the results of their research. Throughout the year they also contribute articles to the *International Journal of Tuberculosis and Lung Disease*, test guidelines and policies for technical guides, serve on the Board of Directors, and expand the reach of The Union through their tireless efforts to prevent, treat, and control lung disease.

Sharing the same goals and commitment, Union members around the world are part of a united front of public health experts and activists determined to reduce needless suffering and meet the international targets for global lung health.
Union website at www.iuatld.org

When you join The Union, you gain access to:

- Outstanding resources
  - Subscription to the monthly peer-reviewed International Journal of Tuberculosis and Lung Disease (print or online)
  - Technical guides, advocacy materials, and other resources (print or online)
  - Subscription to The Union’s monthly e-news and other publications
  - Access to a members-only website at www.globallunghealth.org which includes the online reference library, ARDOC

- Professional growth
  - Networking with colleagues from other countries
  - Participating in research projects with other members
  - Presenting results at conferences
  - Attending the World Conference on Lung Health at a discounted rate

- Opportunities to make a difference in the global fight for lung health
  - Experts in the field working for lung health around the world
  - Research on prevention, treatment, and control of TB, HIV, asthma, child pneumonia, tobacco-related conditions, and other lung diseases in low- and middle-income settings
  - Education and training in clinical practice and patient care, research methods, programme management, and other key areas
  - Advocacy efforts to keep TB and lung diseases high on the public health agenda
  - Development and management of The Union through the General Assembly

Online membership is a popular option

To increase access to its member benefits and services, in 2006 The Union created a new membership category for low-income countries. For €20 per year, these members receive the monthly online edition of the International Journal of Tuberculosis and Lung Disease (IJTLD), online technical guides and other resource materials, and access to the ARDOC online lung health archive.

‘Online’ members also have access to the other non-electronic membership benefits, such as participation in the activities of Regions, Scientific Sections, and Working Groups, and a discount on registration for the Union World Conference on Lung Health.

Eligibility for the €20 is based on the World Bank Statistics for Gross National Incomes list, which defines low- and low/middle-income countries.

Members from middle- and high-income countries can also choose to become online members. At €65 per year, this efficient and environmentally friendly option is a significant savings over the cost of a membership that includes a print subscription. The fee includes both a one-year Union membership and the online IJTLD.

Response to the new categories has been very enthusiastic. In the first year, more than 500 members signed up for the reduced-cost online memberships.

Other Union membership categories are Constituent Member and Organisational Member (both for lung health organisations, government agencies, etc.) and Benefactor Members (for individuals who wish to make a contribution to The Union beyond the standard membership fee). Details about all Union membership categories can be found on The Union website at www.iuatld.org.

Constituent Member profile

Comité Nacional de Lucha Contra la Tuberculosis

In 1934, the Government of Mexico advanced efforts to control tuberculosis by establishing the Campaign Against Tuberculosis and organising Anti-Tuberculosis Dispensaries for patient treatment. In that same year, Dr Alberto P Leon conceived the idea of creating an advocacy committee to support the campaign when he visited the headquarters of the National Tuberculosis Association (now the American Lung Association) in the United States. There he learned that, by selling Christmas seals, the association was able to raise money to construct and maintain sanatoria, acquire equipment and materials, and fund tuberculosis research. A similar organisation would be of great benefit to Mexico.

More than five years passed, however, before the Comité Nacional de Lucha Contra la Tuberculosis (CNLT) was created. The President of Mexico signed the decree approving its establishment under the jurisdiction of the Department of Public Health in March 1940. This legal status made it possible for the CNLT to sign contracts, collect donations, and administer and invest funds to meet its goals.

Given the lack of hospital beds for TB patients, one of the first goals of the CNLT was to collect donations to build hospitals, sanatoria, and rehabilitation centres, including a hospital in Mexico City and sanatoria on both the Pacific
and Gulf coasts. In 1943 the Committee issued its first TB seal with a sketch inspired by the painting *The Adoration of the Shepherds* or *The Night* by the Italian painter Correggio. The funds collected from the sale, plus other donations, were used to construct more dispensaries and modify hospital wards for tuberculosis patients.

Over the past 60 years, CNLT has continued to raise funds for tuberculosis that have allowed them to make significant contributions to Mexico’s TB control programme. For example, CNLT supports training programmes for the TB managers from the 32 states of Mexico. They have also established a 40-bed paediatric unit for TB and purchased two very well-equipped ambulances.

CNLT increased its international participation in the fight against tuberculosis by becoming Mexico’s Constituent Member of The Union in 2003.

Well known for its TB seals, CNLT maintains a website where people from all over the world can purchase them online at www.tbsealsmexico.org/. CNLT won prizes in the 1997, 2003 and 2005 Christmas Seal contests held each year at the Union World Conference on Lung Health.

Organisational Member profile

**SAARC Tuberculosis and HIV/AIDS Centre, Nepal**

The South Asian Association for Regional Cooperation (SAARC) was established in 1985 to accelerate the economic and social development of its member states – Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. To support its mission, SAARC created regional centres focused on specific issues of concern to members, including the SAARC Tuberculosis Centre, established in Nepal in 1992.

The purpose of the SAARC TB Centre (STC) is to coordinate the efforts of the region’s national TB control programmes (NTPs). By 1996 all member states had adopted the DOTS strategy and were making progress in TB control. India still has the highest TB burden in the world, but its Revised National TB Control Programme has achieved 100% DOTS coverage, and both Bangladesh and Pakistan have shown dramatic improvement over the past decade. With the spread of the TB-HIV co-epidemic, in 2005 the STC was renamed the SAARC TB and HIV/AIDS Centre and now also coordinates with the region’s national HIV/AIDS control programmes.

The activities of the STC include organising workshops and seminars, conducting research, holding meetings, disseminating information, and sharing experiences in the effective management of TB and HIV/AIDS control programmes.

The STC’s facilities in Bhaktapur include a library, which serves as a resource centre for TB and HIV/AIDS information with an extensive collection of international and national medical journals, books, reports, and other resources, such as Internet access.

The SAARC Regional Tuberculosis Reference Laboratory is also located at the STC. This laboratory works closely with national TB reference laboratories in the region, providing guidelines, quality assurance, and standardisation. The STC maintains a database of TB and HIV/AIDS statistics and has developed software to strengthen SAARC’s epidemiological networking.

In 2006 the STC organised advocacy and awareness-building programmes to commemorate World TB Day, World AIDS Day, and SAARC Charter Day. These activities involved partnerships with groups such as schools and medical colleges, the media, employment agencies, and the healthcare private sector.

The STC works closely with UNAIDS and WHO to develop strategies for the control of HIV/AIDS and TB-HIV co-infection in the region. Since 1996, the SAARC TB and HIV/AIDS Centre has also been an Organisational Member of The Union.
The Union’s six Scientific Sections offer members an opportunity to affiliate with other members who share the same interests and collaborate on research, publications, and other projects. Their principal responsibilities are to plan the scientific programme for Union conferences and to participate in the governance of The Union through the General Assembly. Working Groups (WG) are sub-committees of the Scientific Sections that take on specific projects. The officers of the Scientific Sections report to the Coordinating Committee of Scientific Activities (CCSA). Both Scientific Sections and Working Groups hold annual meetings at the Union World Conference on Lung Health.

The following are summaries of the 2006 Scientific Section and Working Group reports. The full reports are posted on The Union website.

**Bacteriology and Immunology**

Chair: Chinnambedu N Paramasivan (India)  
Vice chair: Kai Man Kam (Hong Kong)  
Secretary: Catherine Mundy (USA)  
Programme secretary: Knut Feldman (Germany)

The Bacteriology and Immunology Scientific Section organised three symposia for the 2006 World Conference. They addressed the human resource crisis in the TB laboratory, the role of the laboratory in achieving the Millennium Development Goals, and susceptibility testing against second-line anti-tuberculosis drugs for surveillance and MDR-TB treatment. They also held their annual meeting at the conference.

**Working Group**  
INTERNATIONAL LABORATORY TRAINING OPPORTUNITIES  
Leader: Salman Siddiqi (USA)

**Nursing and Allied Professionals**

Chair: Sirinapha Jittimanee (Thailand)  
Vice chair: Mariam Walusimbi (Uganda)  
Secretary: Tereza Cristina Scatena Villa (Brazil)  
Programme secretary: Rajita Bhavaraju (USA)

The annual Nursing and Allied Professionals (NAP) Scientific Section meeting on 3 November was attended by 20 delegates. Members conducted Union-related business, voting on resolutions and candidates for the Board of Directors. They discussed the value of NAP, which has made significant contributions to Union conferences in the areas of nursing, education, and behavioural sciences, and considered ways to strengthen the Section, particularly from a communication standpoint.

Activities proposed for 2007 included six post-graduate courses, one workshop, and five symposia. Members expressed concern about the abstract submission deadline, the need for scholarships for NAP speakers, and the tendency to have the same NAP speakers each year. The programme secretary forwarded these concerns to the CCSA. Each of the Working Groups then made a report:

**Working Group**  
CASE MANAGEMENT  
Leaders: Gert Doornenbal (Netherlands) and Inge Schreurs (Netherlands)

In 2006 this WG completed the guide they developed with The Union’s Nursing Division, *Best practice for the care of patients with tuberculosis: a guide for low-income countries*. It will be published in early 2007.

The WG now plans to develop tools for testing the guide. Funding may influence the decision about where to do pre-testing. Members agreed that, if no funding becomes available, they will test the document themselves in their respective countries.

To support implementation of the best practices, they will propose a post-graduate course for the World Conference in 2007.

**Working Group**  
HEALTH EDUCATION AND TRAINING  
Leaders: Nick DeLuca (USA) and Nisha Ahamed (USA)

At the 2006 World Conference, this WG sponsored two post-graduate courses and five symposia with topics ranging from human resource development plans to working with the media. They also organised a display of education and training materials and a discussion about them. About 20 people attended the WG meeting, where they discussed the abstract submission process and plans for next year.

**Working Group**  
REGIONAL MOBILISATION  
Leader: Maruschka Sebek (Netherlands)

Founded in 2001, this WG’s goals for the end of 2008 are: 1) each region will have
a NAP network that organises activities for Union region conferences; 2) one representative from each network will attend World Conferences; and 3) the NAP network will be represented at the policy-making level in its region.

Networks now exist in the Africa, Europe, Eastern, and Latin America Regions. Representatives from all four attended the 2006 World Conference in Paris.

Funding remains a concern, particularly with regard to attending the World Conference, and some networks are still very vulnerable. All would benefit from the support of the national tuberculosis programmes in their regions. The WG hopes that all Union regions will follow the Europe Region, which includes the NAP network on its scientific committee.

AFRICA REGION

Leaders: Mariam Walusimbi (Uganda), Mariama Sarr Diop (Senegal)

This network had expected to plan activities for the Union Africa Region Conference in 2006, but the conference was postponed. Members feel better strategies are needed to realise their objectives; NAPs from francophone countries still struggle to obtain training. Communication between anglophone and francophone countries is very difficult.

Members attended the ESACON conference in Kampala, Uganda in August 2006 and talked to nurses from East Central and South Africa (ECSA) about the NAP network.

EASTERN REGION

Leader: Sirinapha Jittimanee (Thailand)

EUROPE REGION

Leaders: Evita Berga (Latvia) until June 2006, Virginija Gajauskiene (Lithuania) since June 2006, and Maruschka Sebek (Netherlands)

Members of this network serve on the scientific committee of the Union Europe Region and are therefore closely involved in region activities. Two symposia, a post-graduate course, and a poster session will address NAP issues at the 2007 Union Europe Region Conference in Riga, Latvia. The network will also hold a business meeting there. Members continue to play a key role in training nurses across Eastern Europe.

LATIN AMERICA REGION

Leaders: Teresa Vila (Brazil), Edith Alarcón (Peru)

The Latin America Region NAP network was very active in 2006. Members from Brazil published a book about DOTS implementation, and 3,000 copies were distributed to the TB Coordinators Programme. The book is now being translated into English with funding from the Pan American Health Organisation and the World Health Organization.

A WG member also leads a TB operational research network in Brazil and has been successful in obtaining grants. Nurses are now included in the Brazilian Stop TB Partnership’s meetings with the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM). Members also organised World TB Day activities.

The NAP network in Mexico is very strong and has provided excellent opportunities for ongoing and sustainable professional development. They developed a poster that was first presented at the World Conference in 2005 and again at a symposium in 2006.

Respiratory Disease

Chair: Stephen Graham (Malawi)
Vice chair: Christer Janson (Sweden)
Secretary: Simon Schaaf (South Africa)
Programme secretary: Gregory Erhabor (Nigeria)

The Respiratory Disease Scientific Section organised symposia for the 2006 World Conference on asthma, TB, child lung health, and Chronic Obstructive Pulmonary Disease (COPD). At the annual meeting on 3 November, ideas for five symposia and three workshops were proposed for the 2007 World Conference.

Members of the Section participate in the Childhood TB Subgroup of the WHO DOTS Expansion Working Group. Their guidelines for national tuberculosis programmes on the management of tuberculosis in children were published...

**Working group**

**BCG**

Leader: Anneke Hesseling (South Africa)

The annual meeting of this WG was attended by 34 people. The objective of the WG is to develop guidelines for managing children with BCG disease. A progress report was presented at the meeting. Participants from 11 different countries reached consensus on key collaborative research areas. The WG’s activities will continue in 2007.

**Working group**

**CHILD TB**

Leader: Ben (BJ) Marais (South Africa)

This WG has accomplished its original mission, which was to develop improved guidelines for national tuberculosis programmes regarding the management of child TB in the resource-limited setting.

This work was done in collaboration with the WHO, and the guidelines were published in 2006. A new child TB working group will focus on the training needed to improve application of guidelines and child TB management. Plans for 2007 include a five-day clinical training course for paediatricians in Cape Town and a one-day workshop at the 2007 World Conference.

**Working group**

**COPD IN MAGHREB**

Leader: Rachid Benali (Algeria)

In its first year, this WG conducted a feasibility and pilot study in Algeria, the results of which were presented during the 2006 World Conference. Members from the three Maghreb countries – Algeria, Morocco, and Tunisia – now plan to conduct a prevalence survey on COPD based on the Burden of Obstructive Lung Disease (BOLD) protocol. A member from Nigeria will conduct a parallel study there.

In 2007 members will prepare the study documents, translate the BOLD questionnaires into French and Arabic, and prepare other BOLD documents in French.

**Working group**

**EMERGENCy ROOM TREATMENT oF ASTHMA IN DEVELOPING COUNTRIES**

Leaders: Nadia Ait-Khaled (France) and Peter Burney (UK)

This WG has completed its original plan of work. The leaders will coordinate plans to expand the WG to include a team that will assess and evaluate the Asthma Drug Facility.

**Tobacco Prevention**

Chair: Javaid Khan (Pakistan)

Vice chair: Chakib Nejjari (Morocco)

Secretary: vacant

Programme secretary: Jacques Prignot (Belgium)

The Tobacco Prevention Scientific Section organised three events for the 2006 World Conference: symposia on health professionals’ activities for tobacco control (coordinated by Karen Slama) and on various types of tobacco use (coordinated by Jacques Prignot); and a half-day workshop on tobacco cessation among HIV-positive and TB patients (led by Chakib Nejjari and Geneviève Chêne).

At the annual business meeting the Section proposed the creation of two new Working Groups:

A Working Group on ‘Evaluation of different forms of tobacco use’ will produce an article with input from experts who spoke at the conference.

A Working Group on ‘Standards for cessation programmes in low-income countries to conform to Article 14 of the FCTC’ will prepare guidelines to supplement the new Union guide on tobacco cessation for tuberculosis patients and a strategy for disseminating and implementing both the guidelines and the guide.
Tuberculosis

Chair: M Amir Khan (Pakistan)
Vice chair: Peter Davies (UK)
Secretary: Edward Nardell (USA)
Programme secretary: Fraser Wares (India)

The TB Scientific Section meeting was attended by 40 members. The meeting began with Union administrative business then the Working Groups gave reports. Three new WGs were proposed for 2007: TB infection control, health systems strengthening, and TB social determinants and ethics. The election of Section officers was deferred and later completed by e-mail.

The members then discussed plans for the next World Conference. Thirty-four proposed topics were forwarded to the CCSA.

Some members thought it might revitalise the TB Section if it were reorganised into subsections, such as MDR-TB or TB-HIV. A committee will be formed to look at this proposal.

Finally members expressed concern about conflicts in the conference scheduling and time spent on administrative matters that might be handled electronically. This would free up time for more substantive planning and discussion.

Working Group
TRANS-BORDER MIGRATION AND TB
Leaders: Fraser Wares (India), Deliana Garcia (USA)

The WG’s 2006 symposium on ‘Mobile staff, mobile patients, and mobile treatment’ focused on low- and middle-income countries; 40–50 delegates attended.

A mixture of 20 old and new members came to the WG meeting. The strongest interest was shown in migration and TB in low-TB-prevalence countries. Members agreed to maintain the WG information network (www.migrantclinician.org) and to try to advertise and revitalise it.

Members also discussed the draft manuscript on ‘TB in people of undocumented residence status’. The paper will be presented at the Union Europe Region Conference in June 2007 then submitted to the International Journal of Tuberculosis and Lung Disease.

Working Group
TB AND HIV
Leader: Renee Ridzon (USA)

This WG completed its work in 2006 and has disbanded. No meeting was held at the 2006 World Conference.

Working Group
TB EDUCATION
Leader: Amir Khan (Pakistan)

This WG organised a post-graduate course on ‘Linking hospitals to TB programmes: policy and practice’ for the 2006 World Conference. They collaborated with the World Health Organization (Geneva), Nuffield Institute for Health – University of Leeds (UK), and University of Bergen (Norway) to put on the course, which was attended by more than 15 conference delegates from various parts of the world.

The WG also held its annual meeting at the conference. More than 20 members participated in this review of the past year and recommended that the WG also put on a post-graduate course at the 2007 World Conference.

Working Group
TB IN PRISONS
Leader: Michael Kimerling (USA)

The WG meeting was attended by 48 people, who heard presentations on XDR-TB, MDR-TB, and infection control measures in Georgian prisons; the Health in Prisons Project (HIPP) meeting in Romania; the revision of TB in Prison guidelines; and the Green Light Committee.

One of the WG members presented a thematic slide presentation on a method of active case finding in Azerbaijan at the 2006 conference.

Working Group
TB IN BIG CITIES
Leader: Arnaud Trebucq (France)

The first meeting of this new WG was attended by 44 delegates. They expressed many different areas of interest under the broad topic of ‘TB in big cities’. As a result, sub-group leaders (SGL) were identified under seven subject headings. The SGLs will identify persons willing to work on their respective subjects, propose a timeframe for activities, develop a work protocol, stimulate the work in different settings, and prepare a communication for the 2008 World Conference. Each SGL will report to the WG leader by the end of 2006.

Zoonotic Tuberculosis (M. bovis and other mycobacteria)

Chair: Claude Turcotte (Canada)
Vice chair: Rudovick Kazwala (Tanzania)
Secretary: Guiliana Moda (Italy)
Programme secretary: John Kaneene (USA)

The Zoonotic Tuberculosis (M. bovis and other mycobacteria) Scientific Section held its annual meeting at the 2006 World Conference in Paris. No elections were held, and present officers will continue through 2007. The Section has decided to hold all World Conference activities related to zoonotic tuberculosis on the same day, so that interested veterinarians and other health workers can take advantage of The Union’s new one-day registration rate, thus encouraging local participation. They also discussed the suggested reorganisation of the Scientific Sections and recruitment of new members from within The Union.

In 2006, the Section sponsored a symposium on ‘Mycobacterium bovis contribution to TB in humans.’ For the 2007 World Conference in Cape Town, the Section will present a symposium on ‘Human, livestock, and wildlife interface and zoonotic tuberculosis’.

In response to a growing desire within The Union to determine the contribution of M. bovis to the total burden of TB in humans, the Section established a new Working Group devoted to this topic. It will begin work in 2007 and present a report at the 2007 World Conference.
Focus on the Union Europe Region

Drug resistance creates emergency situation in Europe

Drug resistance is the defining trait of the tuberculosis epidemic in the European region, where 70,000 people die each year from the disease. Although the prevalence of TB varies greatly between Western Europe, Eastern Europe, and Central Asia, of the 20 countries in the world with the highest rates of multidrug-resistant tuberculosis (MDR-TB), 14 are in the European region.

This problem is a result of poor control practices and high treatment-default rates among patients. In some countries, the misuse of second-line drugs is generating high rates of extensively drug-resistant tuberculosis (XDR-TB). The situation is compounded by the steeply rising prevalence of HIV infection, especially in Russia and the Ukraine, because HIV positive people are far more susceptible to developing active TB if they become infected.

The worst zones of drug-resistant TB are around the periphery of the European region. The World Health Organization has described this as an emergency situation.

The Union Europe Region works closely with the WHO Europe office in Copenhagen and with Euro TB. In September 2006, they participated in a meeting in Lithuania led by KNCV and WHO, which focused on the problems in TB control in both high-prevalence and low-prevalence European countries.

In October 2006, the Stop TB Partnership for Europe was launched in Geneva.

The Union Europe Region is represented on the Executive Committee, since many Union members in the Baltic countries, South-East Europe, Eastern Europe, and Central Asia, continue to face major TB problems. The new Partnership has several objectives, but the immediate priority is to generate the political commitment in Europe to secure the financial, technical, and human resources needed to curb the TB epidemic.

The Union Europe Region, in close cooperation with the European Respiratory Society, has been actively disseminating and promoting best practice models for TB control, as well as organising World TB Day events and engaging the interest of European and national decision makers. In addition, members have been involved in preparing for the European High-Level Ministerial Forum on TB, which will take place in Berlin, Germany on 22 October 2007.

In 2006 the Union Europe Region also prepared for its regional conference, which will take place in Riga, Latvia on 27–30 June 2007. This meeting will bring together respiratory physicians, TB specialists, scientists, and allied health professionals from all parts of Europe and from some non-European countries. The Baltic countries are new members of the European Union, and Riga thus represents an ideal connection between Eastern and Western Europe. The importance of the conference is underlined by the patronage of Latvia’s President, Mrs Vaira Vike-Freiberga.
Africa Region

President: Dr Felix Salaniponi (MALAWI)
Secretary General: Dr Angelica Salomao (MOZAMBIQUE)
Region Representative to the Board: Prof Osséni Tidjani (TOGO)

The Africa Region brings together representatives from national tuberculosis programmes, ministries of health, and professional lung health societies in 19 countries to discuss regional issues and concerns and collaborate on projects. In 2006, the Africa Region developed plans for a one-day region-focused conference to take place immediately before the 38th Union World Conference on Lung Health in Cape Town, South Africa in November 2007.

Asia Pacific Region

President: Dato’ Seri Yeop Jr Bin Hj Yeop Adlan (MALAYSIA)
Secretary General: Mr Sahul Hamid (MALAYSIA)
Treasurer: Ms Babe Chan Ying-Yee (HONG KONG)
Region Representative to the Board: Dr Tao Ping Lin (TAIPEI, CHINA)

In 2006, the former Eastern Region divided into the Asia Pacific and South East Asia Regions. The Asia Pacific Region (APR) comprises members from Australia; Cambodia; China; Hong Kong; Indonesia; Japan; Malaysia; Mongolia; Philippines; South Korea; Singapore; Taipei, China; Thailand; and Vietnam.

The APR got off to a fast start with members planning their first region conference for 2007. Scheduled for 2–5 August in Kuala Lumpur, Malaysia, the theme will be 'Overcoming an old scourge with a new face: HIV/TB infection'.

Thirteen members of the APR Interim Council attended a meeting in Malaysia on 11 February. They discussed their new constitution, admission of new members, funding of activities, and a strategic three-year plan. They also handled changes in the officer positions and established a Scientific Committee.

Both the Interim Council and the Scientific Committee met during the 2006 World Conference. These well-attended meetings focused on their upcoming conference and other planning issues, such as the need for an APR webpage and the priorities of the Scientific Committee. Members also promoted the Union Asia Pacific Region Conference with colorful posters and flyers.

Europe Region

President: Prof Robert Loddenemper (GERMANY)
Vice President: Dr Giovanni Battista Migliori (ITALY)
Secretary General: Dr Maryse Wanlin (BELGIUM)
Region Representative to the Board: Prof Robert Loddenemper (GERMANY)

Middle East Region

President: Dr Abdul Rahman Al-Rajhi (SAUDI ARABIA)
Secretary General: Prof Mohammad Reza Masjedi (IRAN)
Region Representative to the Board: Prof Mohammad Reza Masjedi (IRAN)

The Middle East Region has a long history of participation in the Union. In 2006, principal activities focused on preparations for the 26th Union Middle East Region Conference, which will be held in Riyadh, Saudi Arabia on 20–22 March 2007. Member organisations represented by this Region are based in nine countries and include ministries of health, lung health societies, and anti-tuberculosis associations.

Latin America Region

President: Dr Elizabeth Ferreira (MEXICO)
Vice President: Dr Cesar Bonilla Asalde (PERU)
Secretary General: Ms Edith Alarcón (PERU)
Secretary: Dr Joseney Santos (BRAZIL)
Treasurer: Dr Jacobo Ignacio Arguello (HONDURAS)
Region Representative to the Board: Ms Edith Alarcón (PERU)

North America Region

President: Prof Charles M Nolan (USA)
Vice President: Dr E Jane Carter (USA)
Secretary General/Treasurer: Dr Charles E Wallace (USA)
Region Representative to the Board: Dr Kevin Elwood (CANADA)

On 2–4 March 2006, the 10th Annual Conference of the Union North America Region (NAR) took place in Chicago, Illinois at the Millennium Knickerbocker Hotel. The theme of the meeting was 'TB prevention and control: A past decade of accomplishment, a future decade of ambition'. More than 300 participants attended the conference, including delegates from the Union Latin America Region. The conference gave special recognition to Dr George Comstock, a leading expert on tuberculosis, whose contributions have paved the way for considerable improvement in TB prevention and control activities.

Highlights of the conference included sessions on ‘50 years of TB: Lessons

The conference was supported by the US Centers for Disease Control and Prevention (CDC), Health Canada, International Tuberculosis Foundation, Pittsfield Anti-Tuberculosis Association, and the Friendship Fund. Educational grants were provided by BD Diagnostics and Merck Inc. Exhibitors included the American Respiratory Alliance of Western Pennsylvania, Celltechs Inc, CDC, The Union, and Versapharm Inc.

South East Asia Region

President: Dr MM Singh (INDIA)
Vice President: Dr V Irwin Jayasuriya (SRI LANKA)
Secretary General: Chaudhary Muhammad Nawaz (PAKISTAN)
Treasurer: Mr SC Goyal (INDIA)
Bulletin Editor: Mr Devendra Bahadur Pradham (NEPAL)
Region Representative to the Board: Dr MM Singh (INDIA)

Members of the new Union South East Asia Region (SEAR) met in Delhi in February 2006 to draft a charter for the region, which comprises Afghanistan, Bangladesh, India, Myanmar, Nepal, Pakistan, and Sri Lanka. India was elected as the first president. The group agreed to develop a two-year budget for training, communication, fundraising, social mobilisation, and other costs.

SEAR decided its first conference would be held in Delhi in autumn 2008. Members from the Asia Pacific Region will be invited to participate in this event.

The Region offered its first training programme in 2006 on quality assurance in microscopy. Lab technicians from nine countries participated.

An unofficial meeting of SEAR was held at the 2006 World Conference in Paris. Members decided that the coordinating committee should meet in Sri Lanka in 2007 to approve the budget and expenditures until the SEAR conference in 2008.

Dr Singh represented SEAR at World Conference, where he was elected to serve as the Region’s representative to the Board of Directors. He also received the First Prize in the Christmas Seals contest on behalf of the Tuberculosis Association of India.

REPORT OF THE GENERAL ASSEMBLY

The 2006 Union General Assembly was held on Saturday, 4 November 2006, 4:30–5:30 pm at the Palais des Congrès, Paris, France.

The President of The Union, Prof Asma El Sony of Sudan welcomed Constituent, Organisational, Honorary, and Individual Members as well as the Chairs of each Scientific Section.

RESOLUTIONS PASSED

The following resolutions were passed unanimously by the General Assembly: approval of the Activity Report, Treasurer’s report and audited accounts for 1 January–31 December 2005; and approval of the budget for FY2007. In addition, the General Assembly approved a modification of the bye-laws so that the past president is a member of the Board of Directors for a maximum of six years, rather than a maximum of three years. The Assembly also approved a change in the regional membership of the Thailand and Indonesia Constituent Members. They now belong to the Asia Pacific Region.

The General Assembly, having read the report on the activities of The Union, approved the audited accounts and the activities that have been accomplished and gave full discharge to the President and the Board of Directors for the management of that period. The General Assembly also gave power to the Board of Directors or its President by delegation, to fulfil all the formalities of distribution/diffusion relative to the aforementioned adopted resolutions.

ELECTIONS AND ANNOUNCEMENTS

Prof Anne Fanning, Chair of the Nominating Committee, presented the candidates for the Board of Directors. The General Assembly elected three Individual Members to the Board: Dr S Bertel Squire (UNITED KINGDOM), Dr Nobukatsu Ishikawa (JAPAN), and Ms Maruschka Sebek (THE NETHERLANDS). They also elected three region representatives: Prof Osséni Tidjani (TOGO) for the Africa Region; Dr Kevin Elwood (CANADA) for the North America Region, and Dr MM Singh (INDIA) for the South East Asia Region.

The General Assembly unanimously approved the decision to hold the World Conference in Paris in 2008 and in Mexico (the Latin America Region) in 2009. Results of the 2006 Christmas Seals contest were announced and the winners congratulated.
The Union presents awards to individuals and organisations that have made an outstanding contribution to tuberculosis or non-tuberculous disease at its annual World Conference on Lung Health. A nominating committee from The Union’s Board of Directors studies the proposals and selects candidates.

The Union Medal

The Union Medal is awarded to those members who have made an outstanding contribution to the control of tuberculosis or non-tuberculous lung disease through their scientific work and/or actions in the field.

PROF MARGARET (MARGOT) BECKLAKE (CANADA)

Prof Margaret Becklake grew up in South Africa and studied medicine at the University of the Witwatersrand in Johannesburg. After completing specialty training in London, she took a faculty position at her alma mater and became Pulmonary Physiologist to the Miners’ Medical Bureau.

In 1958 she moved to Canada and began her long association with the Royal Victoria Hospital in Montreal. She was appointed assistant professor at McGill University, rising to full professor by 1972. She held appointments in the departments of Experimental Medicine, Medicine, and in Epidemiology, Biostatistics, and Occupational Health. She became an Emerita Professor in 1996.

Prof Becklake’s research interests include the host, environmental, and occupational determinants of airway disease. In 1967 she was invited to develop a lung function laboratory at McGill in support of Dr JC McDonald’s research programme into the health of Québec asbestos miners and millers. She later branched out into air pollution and began devoting more time to global health, much of it through her 33-year association with The Union. From 1987 to 2003 she directed McGill’s summer programme in epidemiology and biostatistics, from which many African scientists have graduated. She also participated in a number of Union courses.

Prof Becklake’s extensive publications have influenced the practice of medicine and safety in the workplace, but her influence over her students and colleagues, and her contributions to world lung health, are even more remarkable. She is a role model for women in medicine everywhere, not only through her own achievements but also through her dedication to the advancement of women in medical sciences and public health.
Union Scientific Prize

The Scientific Prize of US$ 2,000 is awarded to a researcher under 45 years of age for work on tuberculosis or non-tuberculous lung disease during the past two years.

**DR STEPHEN D LAWN (SOUTH AFRICA)**

The focus of Dr Stephen D Lawn’s research is HIV-associated tuberculosis in the era of antiretroviral treatment. A 40-year-old clinician funded by the UK’s Wellcome Trust, Dr Lawn is based at the University of Cape Town, South Africa, where he is a research associate at the Desmond Tutu HIV Centre and senior lecturer in Infectious and Tropical Diseases.

His research on TB and TB-HIV has led to the publication of 16 articles in journals such as *The Lancet*, *AIDS* and the *British Medical Journal* over the past two years. His findings have offered insights into our understanding of the impact of HIV on the incidence of TB and have contributed to our knowledge of the incidence, risk factors, and impact of TB on antiretroviral programmes.

A native of Britain, Dr Lawn completed his medical training at the University of Nottingham Medical School and conducted his doctoral research at the US Centers for Disease Prevention and Control.

Prior to moving to South Africa in 2005, he held appointments in the UK and spent four years in Ghana, where he taught at the University of Science and Technology and conducted training for the Ghana National TB Control Programme.

Princess Chichibu Global TB Memorial Award

This annual award memorialises Princess Chichibu of Japan, who was active for many years in the Japan Anti-Tuberculosis Association (JATA) and served as its president. The US$ 10,000 award is given in recognition of outstanding achievement in anti-tuberculosis activities. Candidates are recommended by the Awards Committee of The Union, irrespective of their nationality, and the winner is selected by JATA.

**THOMAS R FRIEDEN, MD, MPH (USA)**

Dr Thomas R Frieden began his public health career at the New York City Department of Health in 1990. He became Assistant Commissioner and Director of the Bureau of Tuberculosis Control in 1992, at a time when the city was experiencing an epidemic resurgence of TB. Under his leadership, multidrug-resistant TB rates, which had reached 19 percent in 1991, were reduced by 80 percent.

In 1996, Dr Frieden went to India as a Medical Officer for the World Health Organization on loan from the US Centers for Disease Prevention and Control. Over the next five years, he helped the country with the world’s greatest TB burden to develop one of the world’s most effective TB control programmes – the Revised National TB Control Programme.

Dr Frieden returned to New York as the first Commissioner of the New York City Department of Health and Mental Hygiene in January 2002. There he manages a department with a $1.5 billion budget and 6,000 staff. Lung health remains a high priority in a city where tobacco addiction is the leading cause of preventable illness and death. Stopping HIV is also a critical issue, and Dr Frieden is spearheading the effort to make New York City a model in halting this epidemic.
Dr Philip Montague D’Arcy Hart, who died on 30 July 2006 at the age of 106, played a critical role in the decline of tuberculosis in England and Wales in the 20th century, and his research into the fundamental nature of the tubercle bacillus continued until well after his 100th birthday. As one of the most important figures in the fight against TB, he was made an Honorary Member of The Union in 1995.

Dr Hart read medicine at Cambridge and completed his clinical training at University College Hospital (UCH) Medical School, London, obtaining an MD in 1930. He became a consultant at UCH and spent a year working with René Dubos at the Rockefeller Institute in New York, before joining the Medical Research Council (MRC) in 1937.

Dr Hart’s first assignment for the MRC was in South Wales, where he studied pneumoconiosis. His research group showed for the first time that coal dust could cause the disease, and therefore the affected miners were entitled to industrial injury benefits from the state.

After the pneumoconiosis unit closed, Dr Hart was transferred to the tuberculosis research unit in London. He served as head of this unit from 1948 until he retired in 1965. This unit conducted one of the first controlled clinical trials of the efficacy of streptomycin in treating TB – the first effective chemotherapy for the disease. It also conducted a massive trial of BCG vaccine in UK schoolchildren, which became the basis of public health policy there.

Dr Hart established the MRC’s state-of-the-art TB research facilities at Mill Hill, and, after 1965, he devoted himself to laboratory work. He continued his research for nearly 40 years, conducting experiments fundamental to understanding how the tubercle bacillus survives in its host to cause tuberculosis. In 2002, he retired a second time due to declining health.

Dr Hart is survived by his wife, Ruth, and their son, Oliver.
Finance and Development

The activities of the Department of Finance and Development have a broad reach throughout The Union and indirectly impact the lives of millions of people in the countries where The Union works. This is most obvious in terms of its work in developing and managing service contracts; procuring drugs, laboratory supplies, and equipment; providing technical assistance in finance and management to national health programmes; supporting national programme managers and their staff; and encouraging efficient use of information and communication technologies in the delivery of health services in low-income countries.

The Department of Finance and Development’s technical assistance and training activities help countries strengthen their financial management capacity and assist them in designing financial monitoring and operational policies.

During 2006, staff from the department provided 12,500 hours of technical assistance, reflecting new needs for assistance in budgeting, procurement, monitoring and evaluation, and human resources planning.

The Department of Finance and Development is also responsible for the proper maintenance of The Union’s financial records, which includes ensuring the integrity of data submitted, recorded, and reported to both internal and external users of our accounting information. The Department delivers a wide range of financial management services to The Union, incorporating innovative business practices and compliance with financial regulations at both national and international levels.
I am pleased to submit the annual report of the Treasurer of the International Union Against Tuberculosis and Lung Disease (The Union) for the fiscal year ended 31 December 2006.

FINANCIAL OVERVIEW

Winston Churchill once observed that ‘kites rise highest against the wind – not with it’. Although the past year has presented us with a series of challenges, we have risen higher by facing those challenges, disclosing them, and resolving them consistent with our fundamental commitment to members and donors, good management, and accountability.

Much has changed this past year, most of it good, some of it not. In 2006, The Union’s level of programme funding rose to new heights. The organisation operated within the framework of a balanced budget; donors continued their generous commitment to our programmes; and our balance sheet showed favourable financial results. Through careful fiscal management, our operating budget finished the year with €1,284 surplus.

The Union is fortunate to have different sources of income. As it absorbed a reduction in income resulting from the end of the FIDELIS and TBCTA grants, The Union’s operating income increased from the previous year as a result of modest gains in operating grants and funding in other programme areas. But while grant income has grown substantially during the past five years, contributions from members continue to decline. It is important to recognise that the vast majority of grants come to The Union as restricted funds. Funding from member contributions, along with income from consultant fees, continue to pay for core programmes that are essential to The Union’s ability to maintain excellence in education, research, and technical assistance.

Despite reduced member support, we have kept our commitment to our members and continue to provide member services at the same level as in previous years. The International Journal of Tuberculosis and Lung Disease continued its monthly publication, despite a substantial shortfall in income from subscriptions. The World Conference on Lung Health was held in Paris with a record number of participants and exhibitors. Our consultants provided technical assistance in several of our most needy Constituent Member countries. More than 600 health professionals, including Constituent, Organisational, and Individual Members benefited from The Union’s training courses.

Despite the fiscal challenges of 2006, The Union continued to invest in the facilities and infrastructure essential to accommodate a rapidly growing programme staff and to maintain instructional and research programmes that constitute the core of The Union’s mission. Some of our donors have assisted with support for a portion of The Union’s capital improvements.

The Union continued to seek new opportunities for growth in the fields of tobacco control, education and training, and research. The Union was selected to participate in an historic
US$ 125 million global initiative to reduce tobacco use, which is funded by Michael R Bloomberg. The Union will play a key role in the implementation of this initiative and will receive nearly $40 million for the period of 2006–2008. Grant revenue is expected to increase significantly over the next few years as a result of increased funding for tobacco control programmes, HIV, and XDR-TB.

The Union continued to improve its management and operating procedures aimed at reducing costs and controlling expenditures during Fiscal 2006. The three key elements of The Union’s financial management approach have been growth, efficiency, and stability. In other words, our financial management strategy is founded on continued forward-looking opportunities for growth, efficiency of management and services, and maintenance of a stable financial position. Our finance team continues to ensure that The Union exercises disciplined financial management and has taken steps to align our financial management policies to the changing profile of The Union.

Three additional factors, although not as obvious as the above, play key roles in supporting The Union’s financial position. They are conservative use of unrestricted income, controlled spending of operational resources, and investments in human resources.

We have kept our commitments to implement programmes efficiently, deliver superior training courses, and provide technical assistance to our members and the communities we serve. I am very proud of all that we have accomplished in 2006, and I am very grateful to both The Union’s management team and our employees and consultants for their dedication and tireless efforts on behalf of our members.

I would also like to thank our members and our donors for their trust and continued financial support, without which the excellent work of The Union described in this Activity Report would not have been possible.

LOOKING FORWARD

Despite many challenges, we have confidence in the future. I continue to believe that The Union has the best platform for confronting our uncertain future. We have an exceptionally talented team that is well-positioned to respond to increasing challenges and a demonstrated ability to provide high-quality services. We have a growing technical assistance team in tobacco control, HIV, and TB with strong commitment to our partners and the countries we serve. And we have the support of donors, the balance sheet, and the financial discipline to sustain it. We also have the vision and the talent to guide that platform.

To achieve and sustain the kind of leadership role that the founding members envisioned for The Union, we must strive to create an organisation that can successfully function in a competitive environment; ensure high quality; and have the necessary scope, vision, and financial resources to build new infrastructures. We have the proven judgment and the absolute commitment of a seasoned management team to get us to where we want to go as an organisation.

FINANCIAL STATEMENTS

This report describes the financial position of The Union. The documents on pages 76–79 consist of the financial statements for Fiscal 2006, audited by KPMG. The audited statements present a snapshot of The Union’s entire resources and obligations at the close of the fiscal year. We have presented the accounts in euros and US dollars in order to facilitate comparison of accounts.

The financial statements and the accompanying notes of The Union include all funds and accounts for which the Board of Directors has responsibility. These statements illustrate The Union’s formal financial position presented in accordance with generally accepted accounting principles.

The auditor, KPMG, provides an independent opinion regarding the fair presentation of The Union’s financial position. Their opinion can be found on page 75. Their examination was made in accordance with generally accepted accounting standards and included a review of the system of internal accounting controls to the extent they considered necessary to determine what audit procedures would be required to support their opinion.

A complete Audit Report, including detailed comments and notes to supplement the Balance Sheet and the Income and Expenditure Accounts, is available upon request.

Respectfully submitted,

Louis-James de Viel Castel
Treasurer
Since its inception in 2003, The Union’s India Resource Centre (IRC) has successfully fulfilled its mandate to promote lung health in the South Asian and Western Pacific regions in collaboration with both The Union and other partners. Whether it is procuring tuberculosis drugs, monitoring project finances, coordinating seminars, or raising funds, the versatile IRC has proved to be an excellent resource – and a model for future Union regional centres.

The financial and administrative expertise of the IRC has been evident in its procurement, project management, and financial management activities. In 2006 the IRC supported the procurement of US$ 650,000 of antiretroviral, anti-TB, and other drugs; laboratory equipment; consumables; and vehicles for countries in Africa, Asia, and South America. It also provided support for the start-up of the Asthma Drug Facility’s drug procurement programme.

The IRC works closely with The Union-managed FIDELIS (Fund for Innovative DOTS Expansion through Local Initiatives to Stop TB) programme. In 2006 the IRC facilitated contract negotiations for three FIDELIS projects in China, as well as handling financial monitoring for six projects in Kenya, Uganda, and Indonesia.

The IRC also supported the development of successful funding proposals submitted to the European Commission, the United States Agency for International Development (USAID), the Belgian Cooperation, the United States Centers for Disease Control and Prevention (CDC), the World Lung Foundation, and the Bill & Melinda Gates Foundation.

Technical monitoring and evaluation services are available from the IRC. In 2006 consultants monitored Union-related projects in Ethiopia and Myanmar and carried out technical monitoring missions for the Global TB Drug Facility in Mongolia, the Philippines, and Laos; evaluated the principal recipient of a Global Fund to Fight AIDS, TB, and Malaria (GFATM) grant in the Philippines; and participated in programme evaluations for the Vietnam National Tuberculosis Programme and India’s Revised National Tuberculosis Control Programme (RNTCP). The IRC also represented The Union at the meetings of the WHO Working Groups on TB and Poverty and TB-HIV, as well as at scientific symposia and national conferences in India.

Providing administrative, logistical, and marketing support for The Union’s management courses continued to be an important activity in 2006. The management courses, which were held in India, Thailand, and China, were attended by 119 senior- and intermediate-level TB managers from 16 countries this year. In addition, the IRC collaborated with the Union South East Asia Region and the TB Association of India to facilitate a regional training workshop for laboratory technicians on quality assurance for sputum microscopy.

The IRC also collaborated with the World Lung Foundation–South Asia and other partners on anti-tobacco advocacy and awareness-building events.

The increasing importance of the IRC is reflected in the appointment of Dr Nevin Wilson as its first full-time director in September 2006. A native of Tamil Nadu, Dr Wilson completed his medical training at the University of Madras, Madras Medical College in Chennai. Prior to joining The Union in 2004 as part of a programme to train international TB consultants, Dr Wilson was Project Director and Resident Medical Officer of the Nilgiris-Wynaad Tribal Welfare Society in Tamil Nadu and a WHO medical consultant to the RNTCP.

From 2005–2006, he was assigned to The Union’s HIV Department, where he helped launch the Integrated HIV Care for Tuberculosis Patients Living with HIV/AIDS (IHC) programme in Myanmar.

In 2007, the IRC will begin serving as one of four regional resource centres for tobacco control to be established by The Union as part of the Bloomberg Global Initiative to Reduce Tobacco Use. Its assignments will include the coordination of a series of management courses for tobacco control organisations designed to build capacity among partners implementing this major initiative.
To the Honorary Treasurer of International Union Against Tuberculosis and Lung Disease

Dear Sir,

In compliance with the assignment entrusted to us by the Executive council, we are pleased to submit our report concerning the audit of the accounts of the association International Union Against Tuberculosis and Lung Disease, for the period beginning January 1st 2006 and ended December 31st, 2006 as attached to the present report.

These financial statements have been prepared by the Union. Our responsibility is to express an opinion on these financial statements based on our audit.

Opinion on the annual accounts

We conducted our audit in accordance with the professional standards applicable in France. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made in the preparation of the accounts, as well as evaluating the overall financial statements presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements give a true and fair view of the financial position and its assets and liabilities as of 31st December 2006, and of the results of its operations for the year then ended in accordance with the accounting rules and principles applicable in France.


KPMG Entreprises

[Signature]

Partner
**Balance Sheet**

**Net Amount**

**Assets**

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<thead>
<tr>
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<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
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<td></td>
<td>€</td>
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<td>€</td>
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<td>210 825</td>
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<td>Managed funds receivable</td>
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<td>8 606 850</td>
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<td>Other receivables</td>
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<td>286 949</td>
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<td>Sundry debtors</td>
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<td>625 390</td>
<td>737 773</td>
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<td><strong>Total 2</strong></td>
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<td>9 894 552</td>
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<td>0</td>
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<td>Cash and bank for managed funds</td>
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<td>7 248 099</td>
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<td>Cash and bank of The Union</td>
<td>1 031 546</td>
<td>1 358 546</td>
<td>1 074 019</td>
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<td><strong>Total 3</strong></td>
<td>2 900 043</td>
<td>3 819 356</td>
<td>8 322 117</td>
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<td><strong>Prepaid expenses</strong></td>
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<td><strong>Total 4</strong></td>
<td>149 349</td>
<td>196 693</td>
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<td>281 010</td>
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<td><strong>Realisable exchange losses</strong></td>
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<tr>
<td><strong>Total 5</strong></td>
<td>222 741</td>
<td>293 350</td>
<td>9 457</td>
<td>11 157</td>
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<td><strong>Grand Total</strong></td>
<td>15 867 626</td>
<td>20 897 662</td>
<td>21 867 778</td>
<td>25 797 417</td>
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**NB:** 2005 1 € = US$ 1.1797  
2006 1 € = US$ 1.3170
<table>
<thead>
<tr>
<th></th>
<th>Liabilities</th>
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<td></td>
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<td>566 073</td>
<td>429 820</td>
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<td>Result carried forward</td>
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<td>1 691</td>
<td>46 428</td>
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<td>Restatement reserve on premises</td>
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<td>2 485 700</td>
<td>1 887 396</td>
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<td><strong>Total 1</strong></td>
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<td><strong>1 874 379</strong></td>
<td><strong>1 421 935</strong></td>
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<td>Contingent liability</td>
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<td>293 350</td>
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<tr>
<td></td>
<td>Dedicated funds</td>
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<td><strong>Total 3</strong></td>
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<td>11 858 086</td>
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<td>Debts</td>
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<td>Borrowing from credit institutions</td>
<td>1 485 899</td>
<td>1 956 929</td>
<td>595 470</td>
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<td>Current bank advances (Short-term)</td>
<td>1 472 036</td>
<td>1 938 672</td>
<td>1 906 883</td>
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<td>899 772</td>
<td>1 185 000</td>
<td>540 568</td>
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<td>Tax and social security</td>
<td>416 175</td>
<td>548 102</td>
<td>386 663</td>
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<td>Charges to be paid (Accrued Expenses)</td>
<td>371 931</td>
<td>489 833</td>
<td>527 146</td>
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<td>Other Creditors</td>
<td>291 817</td>
<td>384 324</td>
<td>176 344</td>
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<td><strong>6 502 860</strong></td>
<td><strong>4 133 074</strong></td>
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<td>Deferred income</td>
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<td></td>
<td><strong>Total 5</strong></td>
<td>91 663</td>
<td>120 720</td>
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<td></td>
<td>Realisable exchange profit</td>
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<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total 6</strong></td>
<td>188 510</td>
<td>248 266</td>
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<tr>
<td></td>
<td><strong>Grand Total</strong></td>
<td><strong>15 867 626</strong></td>
<td><strong>20 897 662</strong></td>
</tr>
</tbody>
</table>

NB: 2005 1 € = US$ 1.1797  
2006 1 € = US$ 1.3170
## Income Statement (in €)

### Operating Income

<table>
<thead>
<tr>
<th>Contributions</th>
<th>General Funds</th>
<th>Managed Funds</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating grant</td>
<td>1,813,743</td>
<td>273,839</td>
<td>2,087,581</td>
<td>1,414,804</td>
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<tr>
<td>Grants and gifts</td>
<td>2,828,308</td>
<td>8,867,170</td>
<td>11,695,478</td>
<td>11,700,758</td>
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<tr>
<td>Write back of provisions and transferred charges</td>
<td>237,067</td>
<td>0</td>
<td>237,067</td>
<td>369,010</td>
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<tr>
<td>Write back of dedicated funds</td>
<td>0</td>
<td>13,617,930</td>
<td>13,617,930</td>
<td>12,556,431</td>
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<tr>
<td>Other income</td>
<td>1,565,823</td>
<td>180,627</td>
<td>1,746,450</td>
<td>1,497,923</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7,206,396</strong></td>
<td><strong>22,939,566</strong></td>
<td><strong>30,145,962</strong></td>
<td><strong>28,403,426</strong></td>
</tr>
</tbody>
</table>

### Operating Expenses

| External charges                  | 3,793,077     | 8,341,263     | 12,134,340 | 11,537,857 |
| Taxes                              | 278,919       | 36            | 278,954    | 254,956    |
| Wages and salaries                | 2,062,132     | 0             | 2,062,132  | 1,737,697  |
| Social contributions              | 910,319       | 2,575         | 912,894    | 803,796    |
| Depreciation charges and addition to provisions | 495,618         | 0             | 495,618    | 495,349    |
| Obligations for projects          | 0             | 9,000,824     | 9,000,824  | 9,537,494  |
| Other expenses                    | 570,445       | 5,642,743     | 6,213,188  | 4,426,422  |
| **Total**                         | **8,110,510** | **22,987,442** | **31,097,952** | **28,793,570** |

### Operating result

| Operating result                  | -904,113      | -47,876       | -951,989   | -390,143   |

### Foreign exchange profit or loss

| Foreign exchange profit or loss   | 972,710       | 48,502        | 1,021,212  | 282,732    |

### Interest and financial charges

| Interest and financial charges    | 9,457         | 0             | 9,457      | 96,172     |

### Provision of risk for foreign exchange losses

| Provision of risk for foreign exchange losses | -222,741      | 0             | -222,741   | -9,457     |

### Net financial result

| Net financial result              | 905,397       | 47,876        | 953,273    | 436,572    |

### Net result for financial year

| Net result for financial year     | 1,284         | 0             | 1,284      | 46,428     |

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 NB: 2005 1 € = US$ 1.1797  
 2006 1 € = US$ 1.3170

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1 January – 31 December 2006
### Income Statement (in US$)

#### Operating Income

<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>General Funds</td>
<td>Managed Funds</td>
<td>Total</td>
</tr>
<tr>
<td>Operating Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contributions</td>
<td>1 002 838</td>
<td>0</td>
<td>1 002 838</td>
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<tr>
<td>Operating grant</td>
<td>2 388 699</td>
<td>360 645</td>
<td>2 749 344</td>
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<tr>
<td>Grants and gifts</td>
<td>3 724 881</td>
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<td>15 402 945</td>
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<tr>
<td>Write back of provisions</td>
<td>312 217</td>
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<td>312 217</td>
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<tr>
<td>Write back of dedicated</td>
<td>17 934 813</td>
<td>14 812 821</td>
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<tr>
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<td>237 886</td>
<td>2 299 074</td>
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<tr>
<td>Total</td>
<td>9 490 824</td>
<td>30 211 408</td>
<td>39 702 232</td>
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#### Operating Expenses

<table>
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<tr>
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<tbody>
<tr>
<td></td>
<td>General Funds</td>
<td>Managed Funds</td>
<td>Total</td>
</tr>
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<td>External charges</td>
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<tr>
<td>Taxes</td>
<td>367 336</td>
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<td>367 383</td>
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<tr>
<td>Wages and salaries</td>
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<td>2 715 828</td>
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<tr>
<td>Social contributions</td>
<td>1 198 890</td>
<td>3 392</td>
<td>1 202 282</td>
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<tr>
<td>Depreciation charges and</td>
<td>652 729</td>
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<td>652 729</td>
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<tr>
<td>Obligations for projects</td>
<td>0</td>
<td>11 854 085</td>
<td>11 854 085</td>
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<tr>
<td>Other expenses</td>
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<td>Total</td>
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<td>30 274 461</td>
<td>40 956 002</td>
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#### Operating result

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<td>Operating result</td>
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<td>-1 253 770</td>
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#### Foreign exchange profit or loss

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<tbody>
<tr>
<td>Foreign exchange profit or loss</td>
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<td>63 877</td>
<td>1 344 936</td>
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<td>Write back of financial provisions</td>
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<td>Interest and financial charges</td>
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<td>Provision of risk for foreign exchange losses</td>
<td>-293 350</td>
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<td>-293 350</td>
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#### Net financial result

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</thead>
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<td>Net financial result</td>
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<td>63 052</td>
<td>1 255 461</td>
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</table>

#### Net result for financial year

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</thead>
<tbody>
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<td>Net result for financial year</td>
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<td>1 691</td>
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</tbody>
</table>

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NB: 2005 1 € = US$ 1.1797  
2006 1 € = US$ 1.3170  

Finance and Development – 79
The work summarised in this Activity Report would not have been possible without the assistance and support of all of our donors. We would like to express our sincere thanks to the following organisations, agencies, and foundations:

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<thead>
<tr>
<th>ORGANISATION</th>
<th>PROJECTS FUNDED IN 2006</th>
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<td>Argentina National Tuberculosis Programme</td>
<td>• TB course for medical specialists / Argentina</td>
</tr>
<tr>
<td>Belgian Cooperation</td>
<td>• 37th Union World Conference on Lung Health</td>
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<tr>
<td>Canadian International Development Agency (CIDA)</td>
<td>• FIDELIS</td>
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<tr>
<td></td>
<td>• EpiData course / China</td>
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<tr>
<td>CARE</td>
<td>• DOTS training and MDR-TB courses / Ecuador</td>
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<tr>
<td>European Commission (EC), EuropeAid Cooperation Office</td>
<td>• Integrated HIV Care (IHC) programmes / Benin, DR Congo, and Zimbabwe</td>
</tr>
<tr>
<td></td>
<td>• 37th Union World Conference on Lung Health</td>
</tr>
<tr>
<td>French Ministry of Foreign Affairs</td>
<td>• Technical assistance / Benin and Mozambique</td>
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<tr>
<td></td>
<td>• International TB Course / Benin</td>
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<td></td>
<td>• Translation and production of IJTLD articles (print and electronic versions)</td>
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<tr>
<td></td>
<td>and CD-ROM in French of Tuberculosis: A Manual for Medical Students</td>
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<tr>
<td>Friendship Fund</td>
<td>• North America Region Conference</td>
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<tr>
<td>Bill &amp; Melinda Gates Foundation</td>
<td>• 37th World Conference on Lung Health</td>
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<tr>
<td>Global Alliance for TB Drug Development</td>
<td>• Clinical trials</td>
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<td>Global Fund to Fight AIDS, TB, and Malaria</td>
<td>• DOTS training and MDR-TB courses / Ecuador</td>
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<tr>
<td></td>
<td>• MDR-TB course / Bolivia</td>
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<td>Health Canada</td>
<td>• North America Region Conference</td>
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<td>International Tuberculosis Foundation</td>
<td>• North America Region Conference</td>
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<td>International Tuberculosis Foundation with a grant from the Bill &amp; Melinda</td>
<td>• Child Lung Health Programme / Malawi</td>
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<td>Gates Foundation</td>
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<td>Henry J Kaiser Family Foundation</td>
<td>• 37th Union World Conference on Lung Health online coverage</td>
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<tr>
<td>Norwegian Agency for Development Cooperation (NORAD)</td>
<td>• EpiData Software for Operations Research courses / China</td>
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<td>• 37th Union World Conference on Lung Health</td>
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<td>• Core contribution</td>
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<tr>
<td>Norwegian Association of Heart and Lung Patients (LHL)</td>
<td>• Technical assistance / Senegal</td>
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<td></td>
<td>• Asthma programme / Sudan</td>
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<td>The Scottish Executive</td>
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<td>Swiss Pulmonary League</td>
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<td>Tuberculosis Coalition for Technical Assistance (TBCTA) with funding from USAID</td>
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<td>Technical assistance / Senegal</td>
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<td>Applied Epidemiology for Operations Research / France</td>
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<td>MDR-TB course / Mexico</td>
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<td>US Department of Health and Human Services / Centers for Disease Control and Prevention (CDC)</td>
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<td>World Bank</td>
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<td>Yadana project, operated by TOTAL/MGTC</td>
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We would also like to thank the following Constituent, Organisational, and Benefactor Members for their support:

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<tr>
<th>CONSTITUENT MEMBERS</th>
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<tr>
<td>AFGHANISTAN: Ministry of Public Health</td>
<td>INDONESIA: The Indonesian Association Against Tuberculosis</td>
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<tr>
<td>ALGERIA: Comité Algérien de Lutte contre la Tuberculose</td>
<td>IRAN, ISLAMIC REPUBLIC OF: Iranian Charity Foundation for Tuberculosis and Lung Disease</td>
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<tr>
<td>ANDORRA: Gouvernement d'Andorra</td>
<td>IRAQ: Iraqi Anti-Tuberculosis and Chest Disease Society</td>
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<td>ANGOLA: Programa Nacional de Controlo de Endemias</td>
<td>IRELAND: Research Institute for a Tobacco-Free Society</td>
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<td>ARGENTINA: Asociación Argentina de Medicina Respiratoria</td>
<td>ISRAEL: Israel Lung and Tuberculosis Association</td>
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<tr>
<td>AUSTRALIA: Australian Respiratory Council</td>
<td>JAPAN: Japan Anti-Tuberculosis Association</td>
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<td>AUSTRIA: Verein Heilanstalt Alland</td>
<td>JORDAN: Jordanian Society Against Tuberculosis and Lung Disease</td>
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<td>BANGLADESH: National Anti-tuberculosis Association of Bangladesh</td>
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<td>BENIN: Ministère de la Santé Publique – Service Tuberculose</td>
<td>LUXEMBOURG: Ligue de Prévention et d’Action Médico-Sociale</td>
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<td>BOLIVIA: Programa Nacional de Tuberculosis</td>
<td>MADAGASCAR: Direction de la Lutte Contre les Maladies Transmissibles</td>
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RWANDA: Programme National Intégré de Lutte contre la Lèpre et la Tuberculose (PNILT)
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UNITED KINGDOM: Development Aid Department
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**Elected 4 November 2006**

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<td>Ms Edith Alarcón Peru Latin America Region</td>
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<tr>
<th>Nils E Billo Executive Director</th>
<th>José Luis Castro Director of Finance and Development</th>
<th>Donald A Enarson Director of Scientific Activities</th>
<th>Paula I Fujiwara Senior Technical Advisor</th>
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