Activity Report of the
International Union
Against Tuberculosis
and Lung Disease

1 January – 31 December 2005
promotes lung health in low- and middle-income countries through technical assistance, education and research.
With its mission to prevent, treat, and control tuberculosis and lung disease, one of the objectives of The Union is to help meet the UN Millennium Development Goal to halt and begin to reverse the worldwide incidence of tuberculosis by 2015. In partnership with other members of the Stop TB Partnership, we have helped develop a detailed strategy to achieve this through the new Global Plan to Stop TB 2006–2015.

But in order to scale up to implement this plan and reach the Millennium Development Goal, we must work together to address the human resource crisis in health care – a crisis that extends from basic service providers, such as nurses and allied health professionals, to top-level management at the programme and government level.

The World Health Organization estimates the global shortage of doctors, nurses, and other healthcare workers at 4.3 million. It comes as no surprise that the regions with the highest burdens of tuberculosis and HIV/AIDS are among those with the lowest per capita number of healthcare workers: Africa with 2.3 and Southeast Asia with 4.3 healthcare workers per 1,000 population. In some countries, the statistics are far worse: Malawi has an estimated one doctor per 60,000 people, compared with one doctor per 250 people in some industrialised countries.

Long hours, low pay, crumbling facilities, lack of essential supplies, and inadequate ongoing training have all contributed to an exodus of public health workers from low-income countries to seek better opportunities in the private sector or in industrialised countries.

Stemming this haemorrhage of vital human resources will require a coordinated effort to build and support a stable, well-trained healthcare workforce with strong leadership and skilled management. This will demand increased training at all levels of the healthcare system, from nursing assistants to policy analysts; measures to retain staff and improve salaries; outreach to healthcare providers in the private sector; and development of a core of community members trained in patient care and the
delivery of lung health services. Budgets of national tuberculosis control programmes must be expanded to include the costs associated with general health-service staff and infrastructure for hospitals, outpatient clinics, and DOTS monitoring.

It will be a major challenge to find these increased resources, but it will not be possible to address the growing problems of the TB-HIV co-epidemic and multidrug-resistant TB, or to expand DOTS treatment to reach those all who need it, without developing and retaining the healthcare workers and managers required to sustain this massive public health effort.

The ability to meet international goals for TB control will also depend on other factors, such as pro-poor and pro-patient policies, and strategies designed to overcome obstacles inhibiting or preventing vulnerable groups from accessing health care.

At the same time, we can look forward to the opportunities that new diagnostic tools may offer and the possibility that broad efforts at poverty reduction – also aimed at meeting Millennium Development Goals – will have a positive impact in the low-income countries where the TB burden is highest.

Education and training have always been central to The Union’s mission, reaching every level of the healthcare system through courses, conferences, consultancies and programme evaluations, technical guides, and training materials. The theme of the 2005 Union World Conference on Lung Health was ‘Scaling Up to Meet the Challenges of the TB-HIV Co-epidemic and Asthma,’ and session after session demonstrated the hard work, creativity, and dedication with which Union members from all over the world collaborate with colleagues and partners to tackle these issues. Later in this report you will read about many examples of Union work, including programmes to address the co-epidemics of TB and HIV; training for thousands of healthcare workers through The Union’s FIDELIS programme; and educational programmes such as The Union’s management courses that develop skilled public health managers at the local and national levels.

But we can, I believe, do more. Our network of members is one of The Union’s greatest strengths, and we need to be more vocal and visible advocates for lung health. Regional membership bodies and the new Interregional Council can contribute to human resource development by supporting capacity building and planning and development at the local and national level. Drawing on our expertise and proven, evidence-based strategies, we can help countries develop local solutions to meet their local needs, particularly those with special challenges such as countries with a high incidence of HIV, or those undergoing decentralisation of their healthcare systems.

At the 2005 World Conference, The Union recognised advocacy and social mobilisation as vital elements in the effort to promote and secure lung health. The theme of our 2006 conference will be ‘Strengthening Human Resources for Better Lung Health.’ Both of these themes are important to us as members and friends of The Union.

We also need to engage TB patients as the primary stakeholders in the fight against tuberculosis. They need to be involved, not only in planning and decision making, but also in the technical and implementation strategies for lung health.

We will all need to become both advocates and activists to build the human and financial resources necessary to succeed in the global effort for lung health.

For 85 years The Union has been one of the strongest international voices for tuberculosis and lung health. It is up to us to continue that tradition.

Asma El Sony, MD PhD
President, International Union Against Tuberculosis and Lung Disease
The theme of the 2005 World Conference “Scaling up to meet the challenges of the TB-HIV co-epidemic and asthma” called for an increased commitment to tackle these three diseases. This year’s Activity Report can be characterised under the same theme “Scaling up,” and it documents the efforts of The Union in 2005 to contribute with its activities in technical assistance, education, and research to improving lung health in low- and middle-income countries.

**TUBERCULOSIS**

The WHO global targets of 75% case finding for smear-positive cases and a cure rate of 85% should be reached in 2005. The Union has continued to work with partners, such as the WHO, TBCTA, and LHL, and with the support from several donors such as the French Cooperation, USAID, CIDA and others, to assist in achieving these goals. The FIDELIS initiative with projects in China, Indonesia, Pakistan, Bangladesh and in many other countries has certainly contributed substantially to improved case finding globally. It is critical that successful initiatives are now built into routine tuberculosis programme activities to continue beyond FIDELIS. Training courses in tuberculosis management, operational research, specific courses in MDR-TB and for chest physicians are the basis for improved TB control worldwide. The Union as a provider of education is well recognised and its network of courses needs to be expanded further. Courses for senior-level managers in management, planning, and budgeting have been very well appreciated by participants and country NTP managers, and The Union is being solicited to assist countries to improve management processes. This is a new development, and additional courses will be organised in the coming year to assist countries to better manage activities and the absorption of funds received by bilateral donors and the GFATM.

**TB-HIV**

Many countries are faced with the dual epidemic of TB-HIV. The Union now has several advanced projects in Myanmar, Benin, and DR Congo to better coordinate activities between TB and HIV/AIDS programmes. Several thousand TB patients have benefited from HIV testing, and the encouraging results from these projects are stimulating TB-HIV collaborative projects in other countries. Many countries are facing dramatic challenges due to an ongoing human resource crisis and deficient health system infrastructure. Integrated HIV care for tuberculosis patients living with HIV/AIDS seeks to utilise scarce human resources in an efficient way and create synergies between healthcare personnel working in both areas.

**ASTHMA**

Asthma remains a globally neglected disease, in particular in low- and middle-income countries. The burden of this disease means a reduced quality of life for individuals, families, and communities. The main reason for this is the unaffordable price of effective asthma medicines in low- and middle-income countries, which leads to unnecessary emergency room visits and hospitalisations. During 2005, The Union has continued to lay the groundwork for a pooled procurement system for good-quality asthma inhalers and will be ready to provide these medicines to poor people in 2006. At the same time, asthma
management will be improved in Union-supported countries through better diagnostic, treatment, recording, and reporting methods. It is worth noting that this major initiative has been funded through non-earmarked funds from Union Constituent and Organizational members.

TOBACCO CONTROL AND PREVENTION
Tobacco funding has been very difficult to obtain in the last decade, but The Union has nevertheless invested in improving tobacco control through publications, pilot projects in developing countries such as Sudan and Morocco, and support of advocacy activities through the International Non Governmental Coalition against Tobacco (INGCAT). At the end of 2005, a grant from the World Lung Foundation has allowed The Union to start working on a Global Tobacco Control Report with the World Health Organization. A grant from the World Bank received in 2005 to study an integrated lung health programme approach including tobacco control has started in Sudan and will be also introduced in other countries in 2006. The Union Board of Directors decided in 2005 that all Union health programmes should include tobacco prevention messages to address this most devastating global epidemic.

CHILD LUNG HEALTH
The Malawi project funded by the Gates Foundation has been presented in previous activity reports and is a flagship of The Union. It aimed at improving case management of pneumonia in children under five and has demonstrated that a dramatic reduction of case fatality can be achieved at very low cost. The Malawi project continues to be supported by the Scottish Executive. Introduction of this successful approach has now started in other countries such as Sudan. One of the major challenges for The Union in the coming years is to convince donors that this is a very worthwhile initiative to support to save millions of lives in young infants.

WORLD AND REGIONAL CONFERENCES
The World Conference of The Union – organised by its individual members – attracted 2,000 participants from more than 130 countries in 2005. Attendance at Union annual meetings has been growing steadily, from about 150 in 1992 to the numbers we see today. A meeting of a few privileged scientists in the early 1990s, the World Conference has now become a gathering of academia, programme managers, government representatives, WHO, donors, patient activists, doctors and nurses, and other healthcare personnel. Working groups of the Stop TB partnership meet beforehand and their deliberations are summarised on the first day of the conference. Regional conferences are growing increasingly successful, with several hundred participants addressing regional issues in tuberculosis and other areas in which The Union is active. Scaling up regional conferences in the North America, Latin America, Africa, Middle East, South East Asia and Asia Pacific Regions is going to be a challenge in the next years.

The Union has undergone important changes over the last few years. The organisation has grown from about 20 collaborators in 1992 to about 100 in 2005. All these changes have not been easy, and it has demanded constant adaptation to new situations. Most of the funding has been earmarked by major donors for specific projects. Innovative new initiatives have been funded by our Constituent members, and by a few non-earmarked core contributions from donors such as Norad and the Swiss Development Cooperation. The budgets of The Union have increased substantially over the last few years, and rigorous management of these resources is needed. I am pleased to report that the financial year 2005 ended with a small surplus.

I would like to thank all those who have supported the work of The Union in 2005 – donors, Constituent and Organisational members and individuals. I am sure you all can appreciate the devotion of Union personnel in Paris and elsewhere, and I assure you that we will continue on our journey to improve lung health in low- and middle-income countries in the future.

Dr Nils E Billo, MD, MPH
Executive Director
Tuberculosis

Tuberculosis is a curable disease, yet nearly 5,000 people still die from it every day – close to two million each year. Ninety-eight percent of these deaths are in low-income countries.

The Union has been at the centre of efforts to prevent, treat, and control tuberculosis since 1920. Union research led to the development of the DOTS strategy for TB control, which the World Health Organization formally adopted in 1995. It has since been implemented in 183 countries, successfully treating more than 22 million people.

The Union’s work in tuberculosis today is directed towards technical assistance, education, and research to help low- and middle-income countries achieve countrywide DOTS coverage and meet global targets for tuberculosis control. A founding member of the Stop TB Partnership, The Union is active in its seven working groups and helped shape the Global Plan to Stop TB 2006–2015.

The Union worked in 80 countries in 2005, collaborating with a range of international organisations and government agencies. Union consultants supported national tuberculosis programme (NTP) efforts to establish guidelines and policies; analysed medical and administrative procedures; helped train frontline DOTS care providers and NTP personnel; facilitated procurement of equipment and supplies; carried out research projects and clinical trials; and planned advocacy programmes to educate government officials, the public, and other groups about TB.

The FIDELIS project, whose goal is to find and cure new smear-positive patients in poor and remote areas, has funded 51 projects in 19 countries; courses in topics from multidrug-resistant tuberculosis to public health management were held in 17 countries; and training was provided for nurses and allied health professionals in many low- and middle-income countries.
FIDELIS identifies TB in communities with little or no access to health services

One of the biggest challenges today in the fight against tuberculosis is how to increase case detection while maintaining high cure rates. Despite the fact that tuberculosis was declared a global public health emergency in 1993, in 2004, only 53% of the world’s estimated new smear-positive tuberculosis cases were detected – well below the 70% global case detection target set by the World Health Organization. Detecting new smear-positive cases is a particular problem in poor and remote areas of the world where there is little or no access to health services. Five percent of the world’s undetected cases of TB are found in these areas.

A programme managed by The Union is working to detect more than half a million new cases of tuberculosis in these poor and remote communities, while, at the same time, maintaining high cure rates using the DOTS strategy.

Funded by the Canadian International Development Agency (CIDA), FIDELIS – the Fund for Innovative DOTS Expansion through Local Initiatives to Stop TB – is a global disease control initiative to rapidly assess and implement innovative local tuberculosis control activities designed to find and cure new smear-positive patients.

Since its inception in 2003, 51 FIDELIS projects in 19 countries have been approved for funding. Approximately 70% of the projects are in the world’s 10 highest-burden countries for tuberculosis. Project activities range from the introduction of DOTS services in army, police, and prison health services in Sudan, to mobilising 2.3 million primary and secondary school students in China to detect possible tuberculosis cases in their families.

‘We believe that solutions to delivering TB treatment in poor and remote areas can best be found locally,’ says Prof Donald A Enarson, coordinator of FIDELIS for The Union. ‘What FIDELIS does is offer local groups needed funds, while The Union provides the technical and management support to help them implement their solutions. FIDELIS may serve as a model to discover what best practices can be used to address other urgent global public health problems at the local level.’

In China alone, FIDELIS projects now cover 415 million people in 700 counties. In addition, FIDELIS projects have helped train more than 130,000 Chinese health workers.

Since April 2003, the FIDELIS initiative has received approximately C$32 million from the Canadian government. Each project contract is for a 12-month period, with budgets ranging from US $150,000–$250,000. If a project is successful – able to achieve an additional weighted treatment success for less than $80 per case – it becomes eligible for further funding.

Further information can be found on the FIDELIS website at http://www.fidelistb.org
Strengthening the role of community health workers in Bangladesh

Tuberculosis is a major public health problem in Bangladesh, fifth on the list of the world’s 22 highest-TB-burden countries. It is estimated that there are 300,000 new cases of tuberculosis each year and about 70,000 deaths.

The Bangladesh National Tuberculosis Programme adopted the DOTS strategy in 1993, but there are still many pockets of urban and rural poor who have very limited access to health care.

FIDELIS has undertaken two projects in Bangladesh: one to enhance DOTS services in selected urban areas and the other to strengthen community-based tuberculosis control in five rural districts. Together, the two projects cover a population of more than 23 million people.

Working through the Bangladesh Rural Advancement Committee (BRAC), both projects train community health workers to strengthen their role in the identification and management of suspected tuberculosis patients. Additional strategies include training pharmacists, village doctors, and government health workers, and, in urban areas, offering workplace education and health services to factory workers.

In one year of Phase I activities, the rural and urban projects have detected 7,892 and 3,881 new smear-positive TB cases, respectively. That is an increase in detected cases of 2,900 (58%) in rural project sites and 2,371 (257%) in urban sites over the number detected in the previous year.

‘By training health centre staff and educating private practitioners and village doctors, we hope to limit unnecessary delays in diagnosis and treatment and thus reduce transmission of tuberculosis in the community,’ says Dr I.D. Rusen, technical monitor of FIDELIS projects in Bangladesh. ‘This improved diagnosis and case management will also have a tremendous financial impact at the patient level because patients won’t have to spend unnecessary funds before they are properly diagnosed.’

Union consultant: Dr I.D. Rusen
Funding agency: Canadian International Development Agency (CIDA)
Local partner: Bangladesh Rural Advancement Committee (BRAC)

Reaching inaccessible populations in Indonesia

The fourth most populous nation in the world, Indonesia accounts for 6% of the global burden of tuberculosis, behind only India and China in the total number of cases. Approximately 150,000 people die each year in Indonesia from tuberculosis, the third highest cause of death in the country.

Indonesia achieved 98% DOTS coverage by 2002, but the reported case detection rate was only 30%, falling far short of the worldwide goal of 70%.

FIDELIS has launched two projects in Indonesia. As part of an effort to increase case detection through the private healthcare system, a project in Jogjakarta and Bali Provinces has focused on recruiting and training private practitioners to identify and refer tuberculosis suspects to primary health centres for diagnosis. In addition, the project provides private practitioners with a range of options for treatment assignment and monitoring of newly identified TB cases.

To date, 1,877 new smear-positive cases have been detected in the project area, which is an increase of 529 (39%) over the previous year.

A project in five districts in North Sumatra Province, Indonesia has taught community volunteers — including teachers, business people, and stay-at-home parents — about the symptoms of tuberculosis and the appropriate steps for diagnosis and treatment. The volunteers regularly visit families in their catchment area to identify people with symptoms of tuberculosis and support them with transportation to diagnostic centres. They help those diagnosed with tuberculosis with ongoing treatment and follow-up needs.

In one year, more than 5,200 new smear-positive cases have been detected, an increase of 2,766 (214%) over the previous year.

Union consultant: Dr I.D. Rusen
Funding agency: Canadian International Development Agency (CIDA)
Local partners: Pusat Manajemen Pelayanan Kesehatan (Centre for Health Services Management) and Jaringan Kesejahteraan/ Kesehatan Masyarakat (JKM)
FIDELIS grows in China

With an estimated 1.5 million new cases and approximately 270,000 deaths each year, China accounts for nearly 17% of the world’s burden of tuberculosis. To expand its DOTS coverage to poorer and more remote areas of the country that have minimal access to health care, China’s Centre for Disease Control and Prevention has been working closely with FIDELIS since 2003.

As of 31 December 2005, 14 Phase I projects had been approved, providing a wide range of interventions in various locations in China. And, of 11 FIDELIS projects approved for a second year (Phase II) of funding, eight are located in China. A team of Union consultants visited a number of projects throughout China in 2005 to review their progress.

Mobilising 2.3 Million Students in Anhui Province

Anhui, one of the four provinces of the Yangzi Basin, is about a two-hour flight southeast from Beijing. It has a population of 64 million, more than two-thirds of whom live in villages, and a per capita income of about US $257, which places it among the poorest provinces in eastern China.

The provincial government supported the FIDELIS project because, although DOTS had been expanded to all the counties in the province and the cure rate had almost reached 85%, the case detection rate was only 32.9%. Through FIDELIS, they hoped to reach the WHO goal of a 70% case detection rate by extending TB care to more poor and remote areas of the province.

FIDELIS projects now cover 24 of 61 counties in Anhui Province, including 17 cities and 41 districts. In the first year of project activities, an additional 4,030 new smear-positive cases were detected in FIDELIS sites, nearly a fourfold increase over the year prior to project implementation.

The Anhui Provincial TB Institute, which is leading the FIDELIS project, is using several interventions to increase the case detection rate. The first was to mobilise 2.3 million primary and secondary school students to detect tuberculosis suspects in their families. Health teachers integrated lessons on TB into the curriculum and distributed questionnaires to the students. The questionnaires were then given to the village doctor who coordinated collection of sputum samples.

In one township visited by the review team, the doctor informed them that 13 TB patients had been diagnosed since the project started, all of them after the patients had been identified by school-children. During the whole of 2004, only three TB cases had been diagnosed, according to the doctor.

One patient, a 68-year-old farmer with grown children, was identified as a TB suspect by his 14-year-old grandson who was a student at Hen Shan Middle School. The farmer was referred to the TB centre and started treatment in June 2005. He has since volunteered to help identify other TB patients like himself.

Local Solutions for Local Problems

The review team found similar stories throughout their visit: local solutions addressing local problems. Today, FIDELIS projects cover 415 million people in 700 counties in China, and more than 130,000 Chinese healthcare workers have been trained under the programme.

’The obstacles to achieving case detection targets vary from one country to another,’ says Prof Donald A Enarson, coordinator of FIDELIS for The Union. ’In a country like China, these obstacles may differ from one province to another.

’The assumption of FIDELIS is that the solutions to these problems lie within the communities themselves. It is not up to us in Paris, Genueva, or Ottawa to tell someone in China what their problem is and how they should solve that problem. The solutions to delivering TB treatment can best be found locally. Our belief is that, if local people are given the resources and assistance that they need, then they can solve their problems. That is certainly happening in China.’

Union consultants: Prof Li-Xing Zhang (Fidelis country coordinator), Prof Donald A Enarson, Dr Chen-Yuan Chiang
Funding agency: Canadian International Development Agency (CIDA)
Local partner: Anhui Provincial TB Institute
Lagos State TB programme expands rapidly

In 2002, The Union was invited by Nigeria’s Federal Ministry of Health and Lagos State to help set up a new DOTS-based tuberculosis programme. Launched in January 2003, the Lagos State TB Control Programme has expanded rapidly and, by September 2005, there were TB services in 18 of the 20 local government areas; 18 laboratories for smear microscopy, including one with fluorescent microscopy; and 37 functioning TB clinics, each with its own basic management unit, TB register, and quarterly reporting mechanism. The information system is well organised and allows precise monitoring of the programme’s performance.

Case notification in Lagos has been increasing steadily, from 4,321 TB cases in 2003, to 6,351 in 2004, and 7,244 in 2005. Treatment success has also progressed to a 76% success rate for the new sputum smear-positive cases for the first semester of 2004, compared to a 72% rate in 2003. The rate of defaulting patients decreased from 24% in 2003 to 18% in 2004. With the decentralisation of treatment to local primary healthcare centres, where more than 30% of TB patients are treated, even better results can be expected.

These results could not have been achieved without strong leadership, support from Lagos State authorities, and the dedication of the health workers. One of the perennial problems in Nigeria is lack of funds. Despite this, training sessions and the opening of the new centres took place as scheduled during 2005; supervisory visits and quarterly meetings were organised and held regularly; a fluorescence microscope was installed in Yaba, and two laboratory technicians attended The Union TB training course in Cotonou; high-capacity equipment for preparation of staining solution was delivered; and operational surveys were initiated on surveillance of HIV among TB patients. There was no problem with drug supplies or laboratory consumables.

Nigeria is implementing a number of TB-HIV activities, and several training sessions were held during 2005. HIV counselling and testing is systematically proposed to every TB patient, and 80% are tested. Patients are referred to the voluntary counselling and testing centres, but in some places TB health workers are beginning to do the counselling themselves. Preliminary results show a lower prevalence of HIV among TB patients than expected, with HIV prevalence highly dependent on the category of TB patient: 19% of sputum smear-positive patients were HIV positive, whereas there was a 29% prevalence among other TB cases.

Union consultant: Dr Arnaud Trébuch Funding agency: French Ministry of Foreign Affairs
Local partner: Lagos State TB Control Programme
Uganda continues to make progress

The Union has been collaborating with Uganda’s National Tuberculosis and Leprosy Programme (NTLP) since 2001, two years after the Ministry of Health adopted a community-based approach to address TB services and implement the DOTS strategy. Under this approach, districts implement their TB programmes and deliver TB services using trained community volunteers. Its success hinges on strong links between the communities and the formal government health services.

Consultants from The Union and the Global TB Drug Facility visited Uganda from 22 August to 2 September 2005 to review progress with officials from the Ministry of Health and the World Health Organization country office.

The consultants found that considerable progress had been made since the last visit in 2004. Uganda’s community-based DOTS strategy implementation had expanded to all 56 districts by April 2005, an increase from 46 at the time of the last visit. The technical and management capacity at the NTLP’s central level has continued to grow, and the NTLP has introduced a new country-wide drug management system to improve drug availability, procurement planning, and accountability.

The Central Public Health Laboratory has developed a new laboratory supply system and secured dedicated multi-year funding to improve availability of laboratory supplies throughout the country.

With input from the districts, work has begun on a five-year strategic plan to guide the NTLP in achieving the global tuberculosis objectives. In addition, The National Tuberculosis and Leprosy Reference Laboratory has issued Standard Operating Procedures and started External Quality Assurance to improve the quality of sputum microscopy in Kampala and the southwest part of the country; the plan is to extend this key activity throughout the country by the end of 2006.

To address the growing problem of TB-HIV coinfection, a National Coordinating Committee for TB-HIV collaborative activities has been formed and has developed a draft TB-HIV policy. Other tools have been developed, including a Tuberculosis Communication Strategy, a Facilitator’s Training Manual, a Health Worker Desk Aide, and an External Quality Assurance manual to improve and standardise programme performance.

However, constraints such as lack of funding, inadequate quality control and inconsistent supervision, and lack of an adequate budget for anti-tuberculosis medications have resulted in a success rate of only 67.6% for 2003 and a case detection rate of 53% for 2004, both of which fall below the internationally agreed-upon targets of 85% and 70%, respectively.

The consultants recommended that the Ministry of Health allocate and defend increasing annual allocations. In addition, they recommended continued capacity building in the health sub-districts for support, supervision, and case management in the community-based DOTS programme; a dedicated budget line of US $1 million for anti-tuberculosis drugs and development of a two- to three-year drug procurement plan; improved capacity and resources for office space, communication tools, and transport; completion of a strategic plan; and collaboration between the NTLP and National AIDS Control Programme managers so that TB-HIV collaborative activities can be scaled up and implemented countrywide by December 2006.
Expansion of the DOTS strategy in the Democratic Republic of the Congo

Despite the daunting challenges of civil war and a fragile infrastructure, the Democratic Republic of the Congo’s (DR Congo) national TB programme (NTP) can be pointed to as a success story. The programme achieved an 83% treatment success rate in 2003, and case detection reached 70% in 2004, according to WHO. This increase in the case detection rate – which was only 45% in 2000 – demonstrates the rapid expansion of the DOTS strategy in less than five years.

The Union has been working with the DR Congo’s Ministry of Health since 2000, monitoring its tuberculosis programme on behalf of the Stop TB Partnership. In addition, The Union provides a range of technical assistance, which, in 2005, included:

- renovation of a warehouse for medical supplies;
- support and capacity building for laboratories;
- increased management capacity for the epidemiology data unit;
- support of US Agency for International Development (USAID) projects expanding DOTS to all DR Congo provinces;
- project management, evaluation and audit of USAID projects;
- support for implementation of management for multidrug-resistant tuberculosis (MDR-TB);
- capacity building and support for operational research; and
- support for and participation in external review.

Despite the overall quality of the DR Congo’s TB control programme, it has been hampered by periodic shortages of quality drugs and buffer stocks. With assistance from The Union, the programme applied for a second round of assistance from the Global TB Drug Facility and reorganised TB drug distribution in the country.

Like many African nations, DR Congo is facing a growing challenge of patients who are coinfected by TB and HIV. With funding from the European Commission and USAID, The Union began implementing an integrated TB-HIV programme in DR Congo in 2005.

An external review of the NTP was conducted in February 2005, and work began on a strategic plan for 2006–2010 that will be finalised soon. A national drug resistance survey is also planned.

The goals of the strategic plan are not only to detect at least 70% of new cases of smear-positive TB and cure 85% of them, but also to expand the quality of care to all tuberculosis patients through new initiatives that include:

- intensive support and reorganisation of the NTP in the provinces that have suffered from war for many years;
- management of patients with MDR-TB;
- management of patients coinfected with HIV;
- development of community DOTS; and
- development of new initiatives that target vulnerable populations that have suffered from the war, such as displaced populations, prisoners, and the military.

The progress in the DR Congo has been impressive and could be an example for other sub-Saharan countries. However, these results are fragile, according to Prof Nadia Aït-Khaled, The Union’s consultant. ‘Despite the strong involvement of the government and the constant support of the Ministry of Health, the DR Congo’s national tuberculosis programme is still largely dependent on external funding,’ she says. ‘With the new constitution that was recently voted in, and the democratic elections planned for 2006, the new challenge for the NTP will be to use this period of political stability to obtain a progressive increase in government funding for the programme and better salaries for health personnel.’

Union consultant:
Prof Nadia Aït-Khaled
Funding agencies: Tuberculosis Coalition for Technical Assistance (TBCTA), USAID, French Ministry of Foreign Affairs
Local partner: Programme National contre la Tuberculose (PNT) de la République Démocratique du Congo, Ligue Nationale Antituberculeuse et Antilépreuse du Congo (LNAC)
Strengthening laboratory services to improve TB case detection

Identifying the patient with infectious tuberculosis is the vital first step in tuberculosis control, and the most appropriate way to do this is to examine smears of sputum under a microscope to detect acid-fast bacilli (AFB).

Standardised techniques for smear microscopy have been available for many years, but the low detection rate of the most infectious smear-positive tuberculosis cases is recognised today as one of the primary obstacles to a successful worldwide DOTS strategy. Laboratory techniques and standards of practice vary widely from country to country, from lab to lab within a country, and, often, from technician to technician within a lab. A far higher yield of smear-positive cases could be obtained by standardising and optimising microscopy techniques and performance in laboratories.

Working in collaboration with the US Centers for Disease Control and Prevention and other partners, The Union has helped develop a consensus guideline on External Quality Assurance (EQA) for smear microscopy within national tuberculosis programmes, and has begun working to strengthen national laboratory networks to carry out quality assurance and improve their performance. National standards for laboratory procedures still do not exist in many countries. As DOTS expands and greater efforts are made to manage patients with multidrug-resistant TB or with TB-HIV, universal access to quality-assured sputum-smear microscopy must be a high priority, and laboratories must be equipped and staff trained to deal with the challenge.

One component of The Union’s lab strengthening effort is to establish a network of expert laboratories to monitor and support the work of national tuberculosis programmes in low-income countries and help them achieve and maintain EQA standards.

The first expert laboratory was established in 2004 at the Mycobacteriology Unit of the Institute of Tropical Medicine in Antwerp, Belgium, where The Union’s Tuberculosis Laboratory Consultant Dr Armand Van Deun is based. In addition, agreements have been signed with the National TB Reference Laboratories in Bangkok, Thailand and Cotonou, Benin to act as regional units of the expert laboratory network.

At the request of a national tuberculosis programme, consultants from a regional lab will review a country’s AFB microscopy network and quality assessment system and make suggestions for improvement. The regional lab can also assist with individual training and will monitor progress, help with interpretation, and suggest corrective measures.

During 2005, Union consultants visited laboratories in 16 countries, while the Bangkok staff visited three and the Benin staff, four. Under a special agreement with India’s Revised National Tuberculosis Control Programme and the Chennai Tuberculosis Research Centre, a Union consultant also visited six states to help improve India’s microscopy services.

In August 2005, The Union conducted a workshop in Antwerp to review AFB microscopy standards and to help international TB laboratory experts improve the knowledge and skills needed to advise high-burden countries on optimal organisation and monitoring of their AFB microscopy networks.

Regional labs are also involved in operational research to improve TB diagnosis and control. During 2005, two new studies were begun; there was follow-up on three ongoing studies; bench work and data collection were completed for two studies; and the results of three other studies are being analysed for possible publication.

The expert laboratory network works in cooperation with other lab strengthening projects, such as the Supranational Reference Laboratory Network, the WHO/Union Global Project on Drug Resistance Surveillance, training programmes provided through the Tuberculosis Coalition for Technical Assistance (TBCTA), and The Union’s Clinical Trials Division.

Union consultants: Dr Armand Van Deun, Dr Sang Jae Kim
Funding agency: USAID
The face of care for patients and their families

Nurses and allied health professionals make up the majority of workers in any health sector. They are the face of care and assistance for patients and their families.

The Union recognises the importance of nurses and allied professionals (NAPS) in improving access to treatment and the quality of care for patients, and it works to raise their profile in tuberculosis and lung health at local, regional, and global levels through technical assistance, education and advocacy, and research.

The Working Groups of The Union’s NAPS Scientific Section are active in four regions throughout the world. In the African region, representatives are developing links and planning activities with other regional networks, such as the East, Central, and Southern African College of Nursing (ECSACON) and the African Midwifery Research Network.

In the Eastern region, members received a grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) to establish a project titled ‘Human resource development among nurses for control of tuberculosis, Thailand.’ The project is aimed at enhancing the capacity of nurses to work for tuberculosis control and has involved pre-service training in nursing schools across the country. A TB manual has been developed to help faculty teach TB content for undergraduate nursing students. Training for nurses and allied health professionals has also taken place in different parts of India and in Bangladesh.

European region network members are planning NAPS activities for the 2007 Europe Region Conference in Latvia and presented a poster session at the 36th Union World Conference on Lung Health in 2005 on ‘Increasing nurses and allied professionals’ activities at the regional European level.’ Training workshops have been held for nurses across Eastern Europe.

The Latin American network is very active and well supported and includes a TB operational research network in Brazil. The strong nursing network in Mexico has developed an outstanding system for ongoing and sustainable professional development which they presented during a poster session at the 36th World Conference in 2005.

An ongoing goal is to develop training tools and materials that can be used by nurses worldwide, particularly in low-income settings. Work on a Best Practice Guide for the Care of Patients with Tuberculosis – A Guide for Low Income Countries, designed for nurses, was completed in 2005. It is hoped that the guide will help raise the profile of patient care and the importance of patient-centred approaches to TB control. Following a rigorous peer-review process, the guide will be published in the summer of 2006.

Another important goal is to facilitate collaboration between nurses and allied professionals in high-burden countries in order to improve the performance of DOTS programmes. In October 2005, as part of the World Conference, The Union and the NAPS Scientific Section sponsored a conference – ‘Facilitating South–South Collaboration’ – in which participants from a dozen countries shared their experiences and lessons learned in caring for TB patients in high-burden settings. They also planned collaborative projects in training and operational research across regions in order to test and continue to develop best practices for patient care, thereby improving DOTS programmes worldwide.

Union consultants:
Gini Williams, MSc BNurs
RGN HV; Edith Alarcón, RN
Funding agencies: The Union, Tuberculosis Coalition for Technical Assistance (TBCTA), with funds from USAID; GFATM
Tuberculosis in large cities

The urban environment is fertile ground for the transmission of tuberculosis. In the overcrowded, unhygienic conditions of many of the world’s larger cities, one infected person can transmit tuberculosis to 10–15 other people in one year.

In 2004, The Union sponsored a workshop in Bangkok to assess the status of urban TB control. The discussion was based on cities in the countries represented by workshop participants: Bangladesh, Cambodia, Egypt, Indonesia, Nepal, Pakistan, the Philippines, Thailand, and Vietnam. Participants developed a variety of recommendations for improving administrative, diagnostic, and treatment services in large cities.

In May 2005, another workshop – the third in sub-Saharan francophone countries – was organised in Dakar, Senegal with participants from Benin, Burkina Faso, Cameroon, Côte d’Ivoire, Mali, the DR Congo, and Senegal.

The Union helped sponsor a similar workshop in Paris in October 2005. More than 800 participants discussed the rapid urbanisation taking place around the world which has raised the population of a number of cities over the five million mark. In large cities such as Bangkok, Jakarta, New York, New Delhi, Karachi, and Rio de Janeiro, urbanisation has created problems in the diagnosis and treatment of tuberculosis, such as an inability of hospitals and healthcare centres to cope with increased service demand; inadequate diagnostic services, monitoring, and evaluation; difficulties in drug distribution; overdependence on the private sector in the absence of public healthcare facilities; and a general shortage of both financial and human resources.

The participants made a number of recommendations at the conclusion of the conference:

■ Central governments should take the lead in adopting guidelines, forming networks, and directing global policy downwards to national, regional, and municipal levels. Adequate budgets need to be sustained for healthcare services.

■ Collaborations between private and public health providers should be improved to raise awareness of TB in the community. The network of urban healthcare centres must be expanded.

■ TB control programmes should pay special attention to migrants and slum dwellers who cannot afford private treatment. DOTS delivery must be organised for these populations.

■ Coordination needs to be improved between national TB control programmes and TB sanatoriums, which attract a large number of patients.

■ Urban health centre facilities need to be brought within national TB programme networks and strong links established with their personnel. Personnel need to be motivated and adequately paid in order to minimise staff turnover.

■ TB specialists need to be appointed at local levels to improve case detection and cure rates. Managerial capacity needs to be strengthened at all levels.

■ Nongovernmental (NGO) organisations should lobby governments to invest more in TB control programmes.

Union consultants: Dr Chen-Yuan Chiang, Dr Arnaud Trébucq

Funding agencies: Tuberculosis Coalition for Technical Assistance (TBCTA), with funds from USAID; French Ministry of Foreign Affairs.
Clinical trials for TB drug regimen underway

The Union’s Clinical Trials Division is committed to conducting practical research that answers important questions in the field of lung health. In the case of tuberculosis, the most urgent needs are new drug regimens and innovative methods for improving delivery of treatment.

In early 2004, the division launched an international randomised controlled trial to compare the efficacy and acceptability of a four-drug fixed-dose combination treatment regimen for tuberculosis versus delivery of individual medications. The trial – Study C – involves a regimen that consists of an initial intensive phase of two months of daily ethambutol, isoniazid, rifampicin, and pyrazinamide in a fixed-dose combined tablet, followed by four months of rifampicin and isoniazid in a fixed-dose combined tablet administered three times a week. The control regimen consists of the same drugs, but given in separate formulations in the initial intensive phase.

The study began enrolling patients in 2004 and will eventually involve approximately 1,700 patients recruited from 11 sites in Algeria, Bolivia, Colombia, Guinea, Mozambique, Nepal, Peru, Tanzania, and Vietnam. 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.

By 31 December 2005, a total of 1,026 patients had been recruited and assigned to one of the treatment regimens. After treatment, patients are being followed for two years in order to assess the occurrence of relapses. Consultants and staff from the Clinical Trials Division make regular visits to the collaborating centres in order to monitor recruitment, clinical care, and follow-up of patients, as well as recording, reporting, and management procedures and financial accountability. Study C is expected to run into mid-2008, when results will begin to be available.

‘This trial is essential to study the efficacy of using a regimen of fixed-dose combination medications throughout the treatment course,’ says Prof Donald A Enarson, Director of The Union’s Department of Scientific Activities. ‘If efficacy can be demonstrated, this simplified treatment regimen could become the globally recommended standard of practice.’

Union consultants: Dr Christian Lienhardt
Funding agencies: US Agency for International Development (USAID), Global Alliance for Tuberculosis Drug Development

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Tuberculosis and HIV

Tuberculosis is the most common opportunistic infection – and one of the leading causes of death – among individuals infected with the human immunodeficiency virus (HIV). Today, one-third of the 40 million people worldwide who are HIV positive are also infected with tuberculosis; and, in sub-Saharan Africa, up to 75% of individuals with TB are coinfected with HIV. Without proper treatment, approximately 90% of HIV-positive patients die within months of contracting tuberculosis.

The overlap of these two diseases puts national tuberculosis programmes in a unique position to help identify individuals who are HIV positive. Standard drug therapy can cure TB in individuals infected with HIV, and antiretroviral drug therapy reduces the risk of HIV-positive individuals infected with *Mycobacterium tuberculosis* developing active tuberculosis. TB-HIV control is an important element of the Stop TB Partnership’s global strategy to fight TB.

It makes sense, then, to use existing tuberculosis programmes as an entry point for HIV care by offering an HIV test to individuals diagnosed with TB. In fact, studies have shown that tuberculosis patients are more likely to accept HIV testing than the general population. If a patient tests positive for HIV, he or she can then be offered treatment with antiretroviral drugs and linked to HIV counselling and care.

To develop new approaches that address this dual epidemic of tuberculosis and HIV, The Union’s HIV Department has launched several activities exploring the synergies between tuberculosis and HIV control programmes. With grants from the United States Agency for International Development (USAID); the European Commission; the Norwegian Agency for Development Cooperation (Norad); the Swiss Agency for Development Cooperation; and the Yadana project, operated by the multinational energy company TOTAL; activities were launched in 2005 in the Union of Myanmar, Benin, and the Democratic Republic of the Congo.
Integrated TB–HIV care offered in Myanmar

Although it is among the 22 countries in the world with the highest burden of tuberculosis, the Union of Myanmar has built on the strength of its healthcare system and the dedication and hard work of local staff to achieve a very successful TB control programme, reaching 100% DOTS coverage by the end of 2003. The Union has provided technical support to the programme for many years.

However, Myanmar faces another challenge from the looming threat of HIV. About 2% of Myanmar’s adults are believed to be infected with HIV – one of the highest rates in Asia – and the World Health Organization estimates that 10.9% of Myanmar’s adult TB patients are HIV positive. Myanmar has made HIV/AIDS a national priority, ranking it as the nation’s third most important health challenge after malaria and tuberculosis.

In 2004, Myanmar asked The Union to help develop a plan to study the feasibility of providing HIV care for dually infected tuberculosis patients. Union staff prepared a framework for the activity, working with consultant Dr Odile Picard of Saint Antoine Hospital in Paris. Dr Picard – who has conducted training on HIV care for Myanmar physicians in France for more than 10 years – then spent several months training clinical staff and laying the groundwork for the programme’s launch in 2005.

The aim of the Integrated HIV Care for Tuberculosis Patients Living with HIV/AIDS (IHC) programme is to deliver care in five out of seven townships in Mandalay district. Patient recruitment into the IHC programme, which serves a population of 820,503, started on 1 May 2005.

Under the 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.

For patients who test positive for HIV, another sample of blood is drawn and sent for a confirmatory test. These patients return a few days later for their results. TB patients who are HIV infected, along with their relatives (spouse/partner/children), are referred to a specialised HIV clinic for enrolment into an integrated HIV counselling programme and further treatment as required.

At the clinic, doctors interview the patients; perform a thorough clinical examination, including CD4 testing or a total lymphocyte count; then fill in the case report forms and the patient’s HIV booklet. The patient is then referred to a nurse who supervises and records the delivery of antiretroviral drugs. The cost of the antiretroviral and other medications for opportunistic infections is underwritten by the Yadana project, operated by the multinational energy company TOTAL.

Social workers and support groups of people living with HIV and AIDS (PLWHA) are responsible for follow-up and counselling of the patients within their assigned township.

Between 1 May and 30 October 2005, 1,017 TB patients and their relatives accepted HIV testing and counselling. Of these, 680 (67%) tested HIV negative and 335 tested positive, reflecting a 33% prevalence of HIV infection among those patients who were also infected with Mycobacterium tuberculosis. As of 30 October, 174 of the 335 patients who tested positive had enrolled in the IHC Programme.

Union consultants:
Dr Philippe Clevenbergh, Dr Nevin Wilson
Funding agency: Yadana project, operated by the multinational energy company TOTAL
Local partners: Myanmar National Tuberculosis and AIDS Programmes

We hope to answer a number of questions through the activities in Myanmar and other countries. Are national tuberculosis programmes effective in providing collaborative TB–HIV services? Will these collaborative TB–HIV services overwhelm TB and HIV programme performance, or will they strengthen general health services and health systems?”

Dr Philippe Clevenbergh
HIV clinical consultant to The Union
Strong TB programme makes Benin ideal site for TB–HIV project

Benin is often cited as a good example of how to implement a national tuberculosis programme (NTP). It was one of the first countries in Africa to test the DOTS strategy, and one of the first to achieve 100% DOTS coverage. The Union has been providing technical assistance to the Benin NTP since the early 1980s.

The HIV/AIDS pandemic has been relatively slow to reach Benin, but the percentage of people now living with HIV in the country is estimated at about 2%, with 10% infection in some areas. About 90% of reported AIDS cases are among adults in their most productive years: 20 to 49 years old. A survey in 2004 found that the rate of TB-HIV coinfection was higher than 16% in some areas.

Because the country’s NTP is so well integrated into its national health structure, Benin was an ideal candidate as a site for The Union’s Integrated HIV Care for Tuberculosis Patients Living with HIV/AIDS (IHC) programme, in which incoming tuberculosis patients are screened for HIV, and those who test positive are offered a programme of counselling and treatment.

The activities are part of Benin’s integrated approach to the two diseases that combines the efforts of its NTP with those of its national AIDS programme. The principle behind this is to be able to identify tuberculosis patients who can benefit from antiretroviral treatment, strengthen TB detection among HIV-positive patients, and expand HIV surveillance among TB patients.

‘Benin has a strong national tuberculosis programme and excellent TB services,’ says Dr Paula I Fujiwara, who helps coordinate the programme. ‘In collaboration with Benin’s National AIDS Programme, the National Tuberculosis Programme staff should be able to successfully manage HIV-positive individuals with TB, as well as the HIV-negative individuals with TB they already care for. It will be a team effort.’

Union consultants: Drs François Boillot, Riitta Dlodlo, and Paula I Fujiwara

Funding agency: European Commission

Local partner: Benin National Tuberculosis Control and AIDS Control Programmes

Democratic Republic of the Congo begins to address high TB–HIV prevalence

The Democratic Republic of the Congo (DR Congo) is facing a growing HIV/AIDS epidemic, with 1.1 million children and adults living with HIV/AIDS at the end of 2003, and approximately 4.2% of all adults HIV positive. Some estimates put the number of adult tuberculosis patients who are coinfected with HIV at 24%.

In January 2005, the DR Congo finalised its National Strategic Plan for Scaling Up Access to Antiretroviral Therapy for the Period 2005–2009. The Plan includes strategies for training additional health workers to deliver antiretroviral therapy, expanding prevention and care facilities, strengthening the capacity of national laboratories, and improving the procurement and supply management systems for antiretroviral drugs and other supplies.

In April 2005, The Union initiated a programme to deliver integrated HIV care for tuberculosis patients in selected sites in Bas Congo in the west of the country and in Nord Kivu in the east. Initial work involved identifying district sites where the activities will be carried out, hiring local health professionals and support staff, locating suitable office space, and developing and coordinating accounting and banking procedures. As with other Union programmes, all of this work was done in cooperation with existing agencies within the country and within the framework of national guidelines and procedures.

To be selected for the IHC programme, a district must have a functional TB programme that applies the principles of the DOTS strategy and less than a 15% combined default and transfer-out rate; a district management team in place that is interested in joint TB-HIV counselling and testing; a district hospital with a TB management unit; a network of health centres; a laboratory to perform sputum-smear microscopy; and an HIV counselling and testing facility.

Reaction to the programme among tuberculosis patients and healthcare workers has been very positive. In one survey, 99% of TB patients surveyed said that testing for HIV should be offered in a TB clinic; 100% of healthcare workers surveyed approved the idea.

‘TB treatment will always be the top priority,’ says Dr Riitta Dlodlo, one of the coordinators of the project. ‘And the TB treatment regimens will be the same in both HIV-infected and uninfected individuals. Substantial numbers of HIV-infected individuals can be detected through these TB services, which have extensive experience in managing chronic conditions. That experience is going to be very relevant to HIV care, particularly as antiretroviral agents become available for these patients.’

Union consultants: Dr François Boillot, Dr Riitta Dlodlo, and Dr 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
Child lung health

One of the United Nations’ Millennium Development Goals is to reduce childhood mortality by two-thirds by 2015. However, between 1990 and 2000, the gap in childhood mortality between industrialised and sub-Saharan countries increased from 20-fold to 29-fold. Of the nearly 11 million children under five years of age who died in 2000, 41% were from sub-Saharan Africa and 34% from South Asia.

In low-income countries, pneumonia is the second most common cause of death among children under five, surpassed only by diarrhoea. Case fatality rates for childhood pneumonia vary from 15% to 26%, depending on the region and overall death rate.

The heavy burden of childhood respiratory diseases is reflected in the use of healthcare services – up to 50% of all paediatric outpatient visits and 20–40% of all paediatric hospitalisations in low-income countries are due to acute respiratory infections.

The primary goal of The Union’s Child Lung Health Division is to improve the survival and well-being of children suffering from respiratory diseases in low-income countries, particularly in countries where HIV infection is highly endemic.

The division’s programmes establish sustainable and reproducible systems for the surveillance, diagnosis, and management of the respiratory diseases that afflict children, including pneumonia, tuberculosis, HIV-related lung disease, and asthma.

These childhood respiratory diseases are treatable and curable, and the model established by The Union’s Child Lung Health Division has demonstrated that the dismal record of childhood fatality from lung disease can be dramatically improved.
Malawi Child Lung Health Project expands to Christian-operated hospitals

As the first six years of the Malawi Child Lung Health Project (CLHP) drew to a close in December 2005, plans were being set in place to expand the reach of the programme to facilities operated by the Christian Health Association of Malawi (CHAM), which serve close to 37% of population. Based on a 2005 pilot project in two CHAM hospitals, The Union and its Malawi partners received a three-year grant from the Scottish Executive to expand the project to CHAM facilities throughout the country. This new phase is expected to result in significant further reductions in child mortality from pneumonia in Malawi.

The Child Lung Health Project first introduced a model for delivery of child lung health services in Malawi based on The Union’s successful strategy to treat tuberculosis in 2000. The CLHP’s standard case management approach was implemented at the district hospital level in 25 of 26 districts in Malawi; and case fatality rates for severe and very severe pneumonia in children under five dropped from 18.3% in 2000 to 8.4% in 2005, based on a total of 48,631 patient admissions. This was a reduction of 54.8% over the baseline, much better than the 30% reduction predicted at the outset of the project.

Now widely recognised as an innovative and effective model for child lung health, the Malawi CLHP demonstrates the successful application of The Union’s TB model to another critical public health issue. Key to its results were government commitment, clear diagnostic guidelines, well-trained staff, carefully managed supplies and logistics, accurate reporting and record-keeping, and effective supervision and evaluation.

The major challenge the programme faced was a shortage of healthcare workers, especially in the paediatric wards in district hospitals. To address this problem, a small in-service education fund was established at each district hospital to provide training for workers new to the project.

Another challenge came with the recognition that the pneumonia case fatality rate could not be greatly reduced in some districts owing to the high prevalence of exacerbating factors such as malaria, malnutrition, anaemia, and HIV/AIDS. As a result, CLHP training materials were revised so that health workers could adequately manage pneumonia cases complicated by these conditions.

This child lung health model can be implemented with similar or even better results in other low-income countries with adverse social, economic, and geographic conditions, according to Penny Enarson, head of The Union’s Child Lung Health Division. Plans are now underway to replicate the CLHP in Sudan and Mozambique.

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 and Melinda Gates Foundation, the Scottish Executive

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Sudan moves forward on child lung health pilot project

In 2005, the Government of Sudan approved a proposal to implement a Child Lung Health Project in collaboration with The Union. In September, at the invitation of the Federal Ministry of Health and the Sudan Epidemiological Laboratory (Epilab), The Union conducted a situation analysis regarding child lung health and the specific services needed to improve care in Sudan.

In 2004, pneumonia was the leading cause of death among children in Sudan and represented 17% of total paediatric deaths. The incidence of acute respiratory disease among Sudanese children is high, accounting for 28% of the inpatient caseload.

The Union analyst identified a number of areas that the Sudan Child Lung Health Project will target for improvement. For example, current practice for treatment of childhood pneumonia does not follow standard case management as recommended by the World Health Organization, especially in terms of antibiotic dosage, frequency of administration, and length of treatment. Up to 80% of children who were seen in the outpatient departments of tertiary-level paediatric hospitals should have first been seen at primary- and secondary-level health facilities. Most children, regardless of age or pneumonia classification, were discharged within 48 hours from most facilities.

As a result of this assessment, the project team outlined a series of steps to be taken. The Epilab, with technical support from The Union, will conduct an 18-month pilot study that will begin as soon as funds are available. The project will focus on the states of Gezira and Khartoum and include 14 hospitals representing all three levels of the health system – central, local, and rural. A medical officer or nurse will be designated as Child Lung Health Project coordinator for each hospital.

Sudan will prepare a proposal for funding, including a calendar of activities and budget. Epilab will be the focal institution responsible for the implementation of the pilot, but ongoing responsibility will pass to the Curative Service Department within Sudan’s Federal Ministry of Health. After an evaluation of the pilot, the project partners will consider whether the Child Lung Health Project should be implemented throughout the whole country.

Union consultant: Penny Enarson
Local partners: Federal Ministry of Health, Sudan Epidemiological Laboratory (Epilab)
Funding agency: The Union

Planning begins to replicate CLHP in Mozambique

In 2003, in collaboration with the Government of Malawi, The Union hosted an international course on improving child survival in Eastern and Southern Africa. The four-day course introduced paediatricians and public health specialists to the methods used by the Child Lung Health Project (CLHP) in Malawi, and demonstrated its success in lowering the pneumonia case fatality rate for children under five. As part of the course, participants developed plans for a child lung health programme tailored to the needs and priorities of their country.

After the course, Mozambique expressed interest in obtaining The Union’s assistance to establish a CLHP within its existing health services.

Mozambique faces challenges similar to other sub-Saharan countries. It has a high mortality rate for children under five (180/1,000), and acute respiratory infection is one of the leading causes of morbidity. As one of the 10 nations most affected by malaria, Mozambique has difficulty estimating its childhood pneumonia caseload because of the clinical overlap between malaria and pneumonia. Other threats include AIDS-related diseases, which killed 16,200 children under five in 2003; diarrhoeal diseases, including cholera; and malnutrition.

In August 2005, the Child Lung Health Division was invited to hold preliminary discussions with the Ministry of Health. Division head Penny Enarson described the CLHP and explained how it could complement and strengthen the Integrated Management of Childhood Illnesses approach used in Mozambique.

The next steps will be for the Ministry of Health to conclude its internal planning and then make a formal request for assistance from The Union.

Union consultant: Penny Enarson
Local partner: Ministry of Health, Mozambique
Funding agency: The Union
Asthma

Asthma is one of the most common chronic diseases and a worldwide public health problem. Today there are 300 million asthma sufferers throughout the world, and another 100 million are expected by 2025. Low-income countries, where there is an unfortunate lack of affordable drugs and good asthma management, are especially vulnerable.

The cost of asthma is enormous and includes not only the direct costs of drugs and health services, but also indirect costs linked to loss of productivity that affect the patient, the patient’s family, and society at large.

The Union’s Asthma Division was created in 1995 to focus on asthma in low- and middle-income countries. One of its guiding principles is to use the framework developed by The Union for the delivery of tuberculosis services as the model for asthma management. The Union guide *Management of Asthma: A Guide to the Essentials of Good Clinical Practice* is based on that model.

The Asthma Division participates in research, such as the International Study of Asthma and Allergies in Children (ISAAC), which seeks to estimate the prevalence, risk factors, and trend of asthma symptoms in the world; and the Global Asthma Survey on Practice (GASP), which is assessing emergency room procedures for asthma patients.

The high cost of asthma drugs is one of the primary obstacles to successful long-term management of patients, particularly those from the poorest population groups. The most critical need in asthma today is consistent access to affordable, high-quality drugs. To address this issue, The Union has been working with a number of other international organisations to create an Asthma Drug Facility modelled after the Global TB Drug Facility. By enabling pooled drug procurement, the Asthma Drug Facility could have a major impact on the care and quality of life for asthma patients in low-income countries.
Asthma Drug Facility
to improve access to quality drugs

It has been clearly demonstrated that asthma symptoms can be dramatically reduced and the disease managed effectively through standardised care using low-cost inhaled corticosteroids and bronchodilators. Yet millions of asthma patients in low-income countries still suffer needlessly – at significant economic cost – because they cannot afford these drugs.

Ensuring that affordable quality drugs are accessible to all who need them is a primary goal of The Union’s Asthma Division, and, after a number of years of planning, negotiation, and organisation, The Union has launched an innovative Asthma Drug Facility (ADF) that will make essential drugs available and affordable for asthma patients in low-income countries on a sustainable basis.

The model for the ADF is the Stop TB Partnership’s Global Tuberculosis Drug Facility, whose pooled procurement of TB drugs over the last decade has led to reductions in the price of anti-tuberculosis drugs and a rapid expansion of the DOTS strategy in most high-burden countries.

Supported by a partnership of The Union, the World Health Organization, the Stop TB Partnership, and many other international organisations, the ADF will use pooled procurement and other purchasing strategies to obtain the lowest possible prices for asthma medication. It will provide this medication – as well as technical assistance and monitoring of the storage, distribution, and use of asthma drugs – to participating asthma management programmes. Low prices, combined with accurate diagnosis and treatment according to disease severity, should significantly reduce the total cost per patient of medications, thus allowing more patients to afford effective treatment. It is estimated that the ADF will bring affordable medications to an additional 100 million asthma patients.

‘By making these drugs available and affordable for people in low-income countries on a sustainable basis, we will help improve the standardisation of treatment regimens and reduce the expense caused by emergency visits; hospitalisation; and ineffective, inappropriate treatment,’ says Prof Nadia Aït-Khaled, head of The Union’s Asthma Division. ‘By assisting countries to develop effective asthma management programmes, we hope to increase the commitment of governments and donors to invest in asthma as a means of reducing poverty and improving the quality of life in low-income countries.’

For further information, please refer to the story on page 40 or visit the Asthma Drug Facility website at http://www.GlobalADF.org

Union consultants: Karen Bissell, DrPH; Prof Nadia Aït-Khaled; Peter Evans
Funding agency: The Union
Sudan asthma study demonstrates that remarkable improvements are possible

Like many countries in Africa, Sudan has seen significant increases in the incidence of asthma in recent years, especially in urban areas. Surveys conducted in Sudan as part of the International Study of Asthma and Allergies in Childhood (ISAAC) found that the prevalence of asthma was highest in Khartoum, with a rate of 12.3%, compared with a rural area of Gadarif, which has a rate of 5%.

Between 1998 and 2002, the number of asthma patients visiting emergency rooms in Sudan more than doubled, according to figures from the register of the Federal Ministry of Health. This suggests that, not only has the prevalence of asthma increased in recent years, but also that a lack of adequate asthma management in the country is driving asthma patients to visit emergency rooms.

The Sudan Epidemiological Laboratory (Epilab) is a Union collaborating centre based in Khartoum which has provided technical assistance to the Federal Ministry of Health to implement Sudan’s successful countrywide national tuberculosis programme. Epilab now plans to use this TB model as a template for other public health challenges in Sudan, including the growing problem of asthma.

‘Asthma cases are on the rise in the Sudan, and there aren’t clear guidelines for asthma management,’ says Dr Asma El Sony, Epilab’s Director of Scientific Activities. ‘The care of asthma patients can differ from one unit to another unit within the same hospital, and consultants tend to manage patients according to where they went to school. This results in high morbidity. Management of asthma patients needs to be improved, and the way ahead, we believe, is a functioning asthma control programme based on the model of tuberculosis.’

To begin laying the groundwork for a countrywide asthma control programme, Epilab conducted a pilot study from July 2003 to December 2004 in four health centres in Khartoum and Gazira states. The objectives of the study were to register all asthma patients who came to the centres, treat and follow the patients according to standardised asthma management guidelines recommended by The Union, and improve the patients’ accessibility to drugs and health services.

Six-hundred patients were enrolled in the study, conducted by Dr Mai Eltigany, coordinator of Epilab’s asthma section, and Prof Omer Abdel Aziz Musa. More than two-thirds of the patients had moderate to severe asthma symptoms when they presented to the centres, and 40% reported that they had visited an emergency room for asthma treatment more than three times in the past year.

All of the patients were managed according to standard treatment guidelines. However, during the 9-12 month follow-up period, 70% of the patients defaulted. This was undoubtedly due to the unavailability of drugs. At the beginning of the study, fundraising support assured a good supply of drugs, but, as these funds decreased, drugs became more scarce.

‘An irregular drug supply can cause a majority of patients to default,’ says Dr El Sony. ‘Patients are simply unable to buy their drugs. The cost of drugs for one year’s asthma treatment in Sudan is the equivalent of US $200. By way of comparison, the average salary of a nurse is US $864 a year. A regular supply of good-quality, affordable drugs is a prerequisite if we want to reduce default rates and combat the problem of asthma in the developing world.’

Among the 30% of patients who completed follow-up, most reported that their symptoms had improved from severe and moderate to mild and intermittent, or to no symptoms at all. Emergency room visits declined sharply as well. Seventy-five percent of the follow-up group had visited the emergency room four or more times for asthma treatment in the year prior to enrolling in the study. During follow-up, 52% made no emergency room visits, and 34% made less than four. The remaining 14% made four or more visits to the emergency room.

‘Giving patients the proper management drastically reduces emergency room visits,’ says Dr El Sony. ‘In our case, emergency room visits fell by more than half. This could have been far lower if we had access to a regular supply of drugs.’

Dr El Sony believes one can draw an important conclusion from the study: That regular asthma management and follow-up, combined with a regular supply of drugs, can result in remarkable improvements in asthma symptoms and a sharp decrease in emergency room visits. It is a lesson she wants to take to the whole country.

‘Our goal is to establish an asthma control programme throughout the Sudan,’ she says. ‘We want to have asthma coordinators in every state.’

Union consultant: Prof Nadia Aït-Khaled
Funding agency: The Union
Local partners: Sudan Epidemiological Laboratory (Epilab)
Phase III of asthma study involves 1.2 million children and adolescents

The Union’s Asthma Division has been actively involved in the International Study of Asthma and Allergies in Childhood (ISAAC) since its inception in 1991. This global investigation attempts to better understand the worldwide increase in asthma by using standardised methodologies to measure the prevalence and severity of asthma, rhinitis, and eczema among children in different populations throughout the world.

‘Asthma has become a global emergency,’ says Prof Nadia Aït-Khaled, head of The Union’s Asthma Division and member of the ISAAC steering committee. ‘This 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.’

Phase I of ISAAC used a simple questionnaire to survey asthma prevalence among 700,000 children from 156 centres in 56 countries. The results showed significant differences in global patterns of asthma prevalence in children, as well as worldwide variations in the prevalence of symptoms of asthma that could not be explained by current understanding of the disease. These results provided a framework for research into the factors affecting the disease.

Phase II involved more detailed investigations in 30 study centres in 22 countries. The goal was to examine the risks and protective factors that may contribute to the differences observed in Phase I.

Phase III, whose results are now becoming available, involved the same methodology and questionnaires as the Phase I survey, but an environmental questionnaire was added regarding socio-economic factors and risk factors such as pollution, tobacco, and diet.

The survey to explore trends of these symptoms was conducted in 105 of the same centres as Phase I, but, in addition, Phase III added many new centres to help determine the prevalence of asthma and allergic disease symptoms worldwide, and to develop a more comprehensive world map. In all, Phase III involved 1.2 million children and adolescents from 285 centres in 107 countries.

Phase III results for Africa were presented at the 36th Union World Conference on Lung Health in November 2005. According to Prof Aït-Khaled, who is also the regional coordinator of ISAAC for francophone Africa, the prevalence of asthma, already high in the big cities of Africa, has increased over the last five years and is expected to continue to rise in the next decade.

Study results from Cape Town, South Africa showed that the highest prevalence of asthma symptoms was found among adolescents with a higher standard of living, suggesting that a Western lifestyle may increase the chances of developing asthma. However, the highest severity of asthma symptoms in Cape Town was found among children with a low standard of living. Similarly, children of illiterate mothers in Casablanca exhibited the most severe asthma symptoms.

‘This is undoubtedly linked to poor management and a lack of affordable drugs among the poor,’ says Prof Aït-Khaled.

Further research, based on the results of Phase III, is already being planned for ISAAC Phase IV. Studies under consideration include intervention trials in some low-income countries; measurement of the cost-effectiveness of interventions; and surveys of knowledge, attitudes, and practices.

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

GASP undertakes asthma intervention trial

In 2003, The Union’s Asthma Division commissioned a Working Group of the Respiratory Disease Scientific Section to conduct a survey of asthma treatment in emergency rooms and casualty departments to evaluate an audit procedure that they could use to improve the management of asthma and thus reduce the need for patients to make emergency visits.
This survey – the Global Asthma Survey on Practice (GASP) – involved 15 centres in Algeria, Bosnia, Canada, Chile, Kuwait, Palestine, Sudan, Syria, Tunisia, and the United Kingdom; and the results were presented at the 35th Union World Conference on Lung Health in 2004.

The survey found that many patients who present at emergency rooms with asthma are not receiving a steroid dosage appropriate to the severity of their disease. The survey also found that, among asthma patients who made emergency room visits, those who were receiving an adequate dose of steroids were less likely to have lost time at work because of asthma, and those who had health insurance were more likely to have taken adequate inhaled steroids. GASP concluded that drug affordability is critical to adequate treatment.

Now the Working Group is beginning the second part of the GASP study – a more formal trial that builds on the results from the first part of the study.

‘The survey was the starting point to help us determine how we should best manage things,’ says Prof Peter Burney, coordinator of GASP. ‘Now we need a clinical trial to demonstrate how certain changes in asthma care – regular access to affordable quality drugs through the Asthma Drug Facility, for example, and treatment in clinics that are using standard asthma protocols – could change practice and improve the situation for people living with asthma.’

The study will involve 12 countries or regions, each of which will provide four emergency rooms that each see 100 or more chronic asthma patients per year and are willing and able to implement either a new or the standard treatment protocol.

The study will collect information from patients regarding severity of disease; lung function; quality of life; costs of the illness, both in terms of direct treatment costs and indirect costs, such as loss of income; current treatment; and compliance with that treatment. Patients will be followed for three months to assess whether they have achieved better control of their asthma.

Prof Burney estimates that the trial will take two years to complete once it has been started. In the meantime, centres need to be recruited, details of the protocol need to be confirmed, budgets developed, and funds raised.

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

Physicians from 17 countries contribute to revised asthma guide

When The Union’s Asthma Division was created in 1995, one of its primary objectives was to use the framework developed by The Union for delivery of tuberculosis services as the model for the delivery of asthma management. In 1996, the Asthma Division published Management of Asthma in Adults: A Guide for Low-Income Countries, which was based on the tuberculosis model and current knowledge about asthma management, but adapted for use in less industrialised countries.

In the decade since that guide was published, studies have been conducted in many low- and middle-income countries to evaluate the feasibility, efficiency, and effectiveness of the management practices it recommended. In December 2000, the results of these studies were presented in a workshop that was attended by a range of international experts, including many of the physicians who had conducted the research. The principal conclusion of the workshop was that the measures outlined in the guide were effective in reducing asthma severity for the majority of patients, resulting in a sharp reduction in visits to emergency departments and hospitalisations.

The workshop participants recommended that a second edition of the guide be published that would take into account the evaluation of the management practices outlined in the first edition and that would extend the technical recommendations to the management of asthma in children aged five years or older. They also recommended that the guide be published with a new title which indicated that the technical measures contained in it could be considered essential for the management of asthma patients in any country.

Physicians in 17 countries contributed to the revision process, and the updated version Management of Asthma: A Guide to the Essentials of Good Clinical Practice was published by The Union in 2005. As in the first edition, the new edition applies the model adopted for management of tuberculosis in the health services to implement the range of technical measures for asthma management in adults and children aged five years or older. The guide proposes a method of asthma management that is applicable in any country, including low-income countries, and introduces standardised treatment to improve the care of patients and reduce the cost of care.

‘The guide is not a medical textbook,’ says Prof Donald A Enarson, Director of Scientific Activities, who, with Asthma Division head Prof Nadia Aït-Khaled, coordinated the revision project. ‘It simply proposes essential measures for the management of the majority of asthma patients. Other measures – which may be necessary to manage specific forms of asthma, or for the minority of patients whose asthma is poorly controlled by the treatment recommended – are the responsibility of specialist referral services and are not described in this guide.’

The revised asthma guide can be downloaded at no charge from The Union’s website at http://www.iuatld.org. Print copies can be requested from documents@iatld.org

Union consultants: Prof Nadia Aït-Khaled, Prof Donald A Enarson
Funding agency: International Asthma Council
Tobacco control and prevention

Over the past decade, the tobacco control movement has grown dramatically and become stronger and more effective. Countries from Ireland to India – where the culture of smoking has been deeply entrenched – have now passed stringent restrictions on tobacco use.

But tobacco use still causes five million preventable deaths each year, while tobacco companies continue to post enormous profits and use their formidable resources to cultivate new markets – often among the most vulnerable populations of low-income countries.

The Union’s Tobacco Control and Prevention Division has worked for tobacco control through education, technical assistance, and research since its inception in 1996. In keeping with the goals of the World Health Organization’s Framework Convention on Tobacco Control (FCTC), The Union uses its activities to support legislative strategies, including advertising bans; tax policies; clean air policies; product, packaging, and sales regulations; smuggling control; and health protection for tobacco workers.

In addition, The Union promotes stronger financial support for tobacco control; the elimination of subsidies for growing tobacco; bans on political contributions or lobbying by tobacco companies; the imposition of excessive profit fees; and the elimination of the profit motive in manufacturing tobacco.

Collaboration is key to the success of the tobacco control effort, and, in 2005, The Union provided technical assistance to groups such as the International Union for Health Promotion and Education and the International Union Against Cancer, while continuing to work closely with the International Non Governmental Coalition Against Tobacco on behalf of the FCTC. Research projects in Morocco and Sudan are ongoing, and the division’s educational programmes reached audiences in settings ranging from public meetings, university courses, and specialist seminars to international conferences.

Over the past decade, the tobacco control movement has grown dramatically, but tobacco use still causes five million deaths each year.
Carrying the message about tobacco control

Building support for tobacco control and prevention among health professionals and other key constituencies is one of The Union’s important ongoing activities. During 2005, Dr Karen Slama, head of the Tobacco Control and Prevention Division, was invited to speak in the following settings: the Global Lung Health symposium in Edmonton, Canada; the Collège de Pathologie Respiratoire in Strasbourg, France; the International Francophone Conference on Tobacco Control (CIFCOT-2) in Paris; a workshop on cancer prevention in Montpellier, France; the Executive Board Meeting of the International Union for Health Promotion and Education; a cancer prevention seminar offered by the European School for Oncology in Hammamet, Tunisia; at an Epilab-sponsored public symposium; and at Ribat and Sudan Universities in Khartoum, Sudan.

In addition, Dr Slama spoke on ‘Growing Up Without Tobacco’ and led a workshop on adolescent smoking at the Winter School in Smoking Prevention and Cessation, held in Sligo, Ireland.

At the university level, she gave lectures on tobacco use in a graduate course on health risk management at the University of Paris; on tobacco as a risk management and public health issue for a Diplôme d’Etudes Supérieures Spécialisées (DESS) programme in Saint-Maurice (France); and on global tobacco prevention for a university diploma programme (DIU) in Le Kremlin-Bicêtre (France). Dr Slama also served as co-chair of the People Track of the Organising Committee for the 13th World Conference on Tobacco OR Health, which will be held in Washington, DC in 2006.

As the lead speaker for a panel on the tobacco epidemic in low-income countries at the 36th Union World Conference in Paris, Dr Slama summarised the major challenges facing The Union and other tobacco control advocates.

Union consultant: Karen Slama, PhD
All Union projects to incorporate tobacco control measures

In June 2005, The Union’s Board of Directors increased its commitment to tobacco control by passing a declaration that all Union projects should incorporate a tobacco control component. Based on a proposal from The Union’s Tobacco Control and Prevention Division, the declaration will encourage tobacco control measures throughout the healthcare system.

A tobacco control element is defined as making general information about tobacco and health available to people encountered in the course of Union projects; detection and, where possible, follow-up of smokers among patients encountered; and the inclusion of brief non-judgmental cessation interventions for those patients. These actions might be taken by the project staff, by project funders, or in collaboration with local tobacco control organisations.

Unlike the policy established by the World Health Organization’s Practical Approach to Lung Health (PAL), The Union declaration is not limited to projects that encounter patients with smoking-related respiratory symptoms. The Union proposal is an attempt to integrate a small element of tobacco control into all encounters in the health system.

Plans are to circulate the declaration and include it in Union policies and/or as part of its mission statement beginning in 2006.

As far back as 1981, The Union adopted a non-smoking policy for all of its meetings, conferences, courses, and workshops. It was among the first international health organisations to recognise the health crisis caused by increased smoking in low-income countries, and also the first to commit resources for full-time tobacco control staff with the establishment of its Tobacco Control and Prevention Division in 1996.

Tobacco control research in Sudan

The Union is collaborating with Sudan’s Epidemiological Laboratory (Epilab) and the Sudan National Tuberculosis Programme to test the feasibility and efficacy of incorporating brief advice about the risks of tobacco use and the benefits of cessation into tuberculosis treatment.

For the feasibility study, more than 500 male TB patients were enrolled in 24 centres in four different states during a four-month recruitment period. The patients were then followed throughout their treatment for TB and again 12 months after treatment ended.

The results were very encouraging. Medical assistants who were trained to give the patients brief advice felt that this was a useful addition to their tasks as it gave them a better rapport with patients. Patients felt that this was a normal part of the care they received. The advice itself was successful in convincing a large proportion of patients to stop tobacco use, and TB treatment results showed higher cure/completion rates and lower default rates than among unenrolled patients.

Although the feasibility study has been completed, the results have not yet been published, which has slowed down the dissemination of the data and the impact of the research.

This year’s major emphasis has been on the final draft of a sustainability study to be run in TB clinics. Project partners are seeking funds to explore whether or not staff will continue to implement the tobacco intervention protocol in the long term, and to determine if people who stop using tobacco as a result of brief advice remain abstinent.

A number of key issues in the protocol remain unresolved. For example, during the feasibility study, some medical assistants in remote locations received financial incentives for participation in the study. In the follow-up research, incentives could interfere with the focus of the research on sustainability, which is conceived as the first step towards permanently incorporating tobacco intervention into TB treatment.

Formidable obstacles hinder the work of following patients since they do not return to the TB clinic after completing treatment. Patients frequently use temporary addresses during treatment; and patient records are decentralised at small clinics, making access to some data difficult to obtain. One advantage to the current environment is the widespread availability and use of mobile telephones.

Training for those working in the centres participating in the trial will begin in 2006, and the trial itself is scheduled to begin later that year.

Union consultant: Karen Slama, PhD
Local collaborators: Sudan Epidemiological Laboratory (Epilab)
Funding agency: The Union

Intervention and prevalence research projects in Morocco progress

Two tobacco prevention studies in Morocco which The Union is conducting in partnership with the Department of Epidemiology and Public Health at the Faculty of Medicine in Fez moved forward during 2005 despite a number of challenges.

The first study is designed to examine the efficacy of incorporating tobacco cessation advice into tuberculosis treatment. Enrolment was short of the goal of 2,000 patients by the end of 2005. Competing priorities in TB control and funding issues slowed the study’s progress. However, follow-up of the first groups of patients has been completed, and, with the support of the National Tuberculosis Programme, plans are underway to relaunch with new centres and complete patient recruitment in 2006.
The second study is a national prevalence survey, conducted jointly by The Union and the University of Fez. It will examine attitudes towards tobacco and behaviour regarding tobacco use across the country. Other research has shown a 17% increase in tobacco consumption in Morocco since the multinational tobacco company Altadis bought out the state tobacco monopoly and began heavily investing in manufacturing and promoting tobacco products there.

Data from the survey of more than 10,000 people aged 10 years and above, from rural and low-, middle-, and high-income urban areas from across the country should be available in mid-2006.

Union consultant: Karen Slama, PhD
Local partners: Department of Epidemiology and Public Health, Faculty of Medicine, Fez, Morocco
Funding agency: The Union

Study to examine association between tobacco smoke and TB outcomes

Working in collaboration with the World Health Organization (WHO), The Union has undertaken a qualitative systematic review to determine the strength of evidence that there is an association between active and passive exposure to tobacco smoke and tuberculosis outcomes, including infection, disease, case management, treatment outcomes, and mortality.

The study involved a steering committee of 30 tuberculosis and tobacco control experts from Brazil, Canada, Colombia, France, India, Italy, South Africa, Switzerland, the United Kingdom, and the United States. The reviewers were The Union’s Chen-Yuan Chiang, Donald A Enarson, and Karen Slama; Anne Fanning from the University of Alberta, Canada; and Prakash Gupta and Cecily S Ray from the Healis Institute in India.

The systematic review demonstrated that tuberculosis infection, disease, recurrence of disease, and mortality were all significantly associated with exposure to tobacco smoke. However, more cohort and case-control studies are needed, with much more care taken in measuring tobacco smoke exposure.

The review will be used by the WHO’s Tobacco-Free Initiative and Stop TB Programme in collaboration with The Union to recommend policy on tobacco control in relation to tuberculosis treatment. Results of the study will be published in 2006.

Union consultants: Karen Slama, PhD; Dr Chen-Yuan Chiang; Prof Donald A Enarson
Funding sources: World Health Organization, The Union

Union hosts intern from minority research programme

For the third consecutive year, the Tobacco Control and Prevention Division hosted a scholarship winner from the Pennsylvania State University Minority International Research and Training Programme in the United States. This year’s intern was Kimberly Thomas, a recent graduate from Harvard University. During her time at the Secretariat in Paris, she reviewed literature on the impact of smoking on the development and treatment of asthma and worked on data analysis of the treatment cards of patients in respiratory clinics in several low-income countries.

This year’s internship programme was undertaken in collaboration with The Union’s Asthma Division. Ms Thomas’s work highlighted a need for further research to investigate the role of smoking in the development of asthma, the role smoking plays in exacerbating the severity of the disease and diminishing the effect of asthma medications, and the need for a clear strategy for tobacco cessation in treating asthma patients.

Union consultants: Karen Slama, PhD; Prof Nadia Aït-Khaled
Funding source: Pennsylvania State University Minority International Research and Training Programme (USA)
Collaborations advance progress on tobacco control

In collaboration with the French Institut de Veille Sanitaire (the National Institute for Health Surveillance), The Union’s Tobacco Control and Prevention Division participated in the analysis of data gathered by the research institute Grès Médiation, concerning the attitudes and practices of general practitioners in counselling their patients about smoking cessation. The final report will be released in 2006.

The division has also worked closely with the International Union for Health Promotion and Education on a number of tobacco control issues over the past several years. In 2005, the division worked on three projects: needs assessment for tobacco control research in francophone Africa; the development of a study of tobacco control in terms of getting evidence into practice; and the development of a policy document concerning the funding of health promotion activities by earmarking taxes on tobacco and alcohol. These activities are part of a widening circle of collaboration between international organisations to advance the progress of tobacco control within and outside of the context of the Framework Convention on Tobacco Control.

Work is also ongoing with the French League Against Cancer and the International Union Against Cancer in relation to cancer prevention and best practices developed in tobacco control for transfer to other prevention activities.

Union consultants: Karen Slama, PhD
Funding sources: Grès Médiation, International Union for Health Promotion and Education (IUHPE), French League Against Cancer, The Union

Union support of tobacco control treaty continues in 2005

The Framework Convention on Tobacco Control (FCTC) became law on 27 February 2005, and the provisions and protocols of this historic public health treaty are now legally binding on the 116 countries that have ratified it.* As a major player in its drafting and ratification, The Union continues to actively support the implementation of the treaty.

The key provisions encourage countries to enact measures designed to reduce the devastating health and economic impacts of tobacco. Already the FCTC has helped to strengthen laws in scores of countries by giving governments greater access to scientific research, raising awareness of the issues, motivating leaders to rethink priorities, and mobilising support from all levels of society.

The Union provides a variety of resources for health professionals, agencies, activists, and legislators engaged in this process. These include Tobacco Control and Prevention: A Guide for Low-Income Countries, developed by The Union; position papers on second-hand smoke and tobacco advertising; fact sheets on youth prevention programmes and current challenges in tobacco control; and PowerPoint presentations on topics such as smoking cessation techniques for women. All are available at no charge and can be downloaded from The Union website.

When the process of defining plans and policies to govern implementation of the treaty begins in February 2006, The Union will be represented by the International Non Governmental Coalition Against Tobacco (INGCAT), which lobbies on behalf of its partners. Establishing a clear role for nongovernmental organisations such as The Union in the treaty implementation will be a key concern.

The number of countries that have ratified the FCTC increased by 67 to 116 during 2005. Full parties to the treaty now represent nearly 75% of the world’s population. The United States remains a significant holdout.

Many countries have already implemented some of the measures in the convention. Ireland, Norway, and Spain, for example, recently banned smoking in indoor public places. India has comprehensive tobacco advertising bans; and Brazil, Canada, Thailand, and Singapore now print graphic warnings on cigarette packages. Each of these national efforts will ultimately contribute to a global reduction in tobacco-related deaths.

* as of 31 December 2005.

The Union provides a variety of resources for health professionals, agencies, activists, and legislators. These include The Union’s Tobacco Control and Prevention: A Guide for Low-Income Countries; position papers on second-hand smoke and tobacco advertising; fact sheets on prevention programmes and tobacco control; and PowerPoint presentations on a variety of topics. All are available at no charge and can be downloaded from The Union website.
Policy analysis must be an essential component of lung health research and programme development if these are to scale up to meet global health targets. Policies need to be negotiated, adopted, and expanded by diverse partners, and adapted to varied and changing environments. This requires not only an understanding of the technical content of policies, but also of policy processes, and the transfer of policy and ideas between those involved in and affected by their formulation and implementation.

The Union’s Health Policy Unit facilitates these efforts by developing methodologies to analyse the complex processes by which policies are decided, communicated, and adapted by countries, organisations, administrative levels, professions, sectors, and communities.

Policy transfer analysis can reflect multiple perceptions about what helps or hinders health strategies from being appropriately expanded. With its focus on learning, this analysis can identify the most effective ways for different groups to draw lessons from each other’s positive and negative experiences. It can provide a valuable complement to the standard technical programme data collected by national tuberculosis programmes and health systems.

It is especially necessary as we aim for changes in policy and practice related to access to care for the poor and marginalised; addressing the human resource crisis; collaborations between programmes and sectors that have been operating separately; expanding new approaches, such as the Practical Approach to Lung Health; strengthening lung health programmes and health systems; ensuring that international funding mechanisms have a positive influence on the scale up of lung health strategies; and promoting advocacy and social mobilisation activities that will be effective in increasing political and social commitment and participation.

Policy transfer analysis can provide a valuable complement to standard technical programme data collected by national tuberculosis programmes.
Asthma Drug Facility will stimulate changes in policy and practice

Since March 2005, the Health Policy Unit has provided intensive support for the establishment of The Union’s Asthma Drug Facility (ADF), whose goal is to make good-quality essential asthma medications accessible and affordable for all who need them. The unit’s expertise in analysing policy issues and processes has played a key role in the development of this project because many of the challenges ahead are policy related.

Asthma has been identified as a major global public health problem, and international treatment and management guidelines exist. However, in low-income countries, where the majority of the world’s 300 million asthma sufferers live, almost all cases go undiagnosed, untreated, or mistreated. The consequences of this neglect are far-reaching. By causing unnecessary disability and expense, asthma significantly increases the poverty of individual sufferers and their families, their communities, and their countries. People with asthma are less able to work or look after their families. Children with asthma are likely to miss much of their primary education. Emergency visits, hospitalisations, and inappropriate treatments create a huge financial drain on struggling health systems.

The World Health Organization’s essential medicine list includes low-cost inhaled high-dose corticosteroids and bronchodilators, and a standardised asthma management programme using these drugs has been clearly demonstrated as cost-effective. So why aren’t all countries able to implement the international guidelines? The main barrier is access — poor availability and affordability of these drugs. At current prices, neither health services nor patients can afford them.

In countries struggling with high-profile health problems like HIV/AIDS, malaria, and tuberculosis, treating asthma has not been considered a high priority. Drug prices have remained high and linked to trends influenced predominantly by the pharmaceutical industry. Asthma treatment has been provided by specialists and within the private or semi-private sectors; it has not been included in the package of basic healthcare services provided by public health systems.

Few countries have developed comprehensive national or statewide asthma programmes comparable to those in place for tuberculosis, which provide structures and procedures that aim to record and analyse incidence, patient outcome, and quality of care; manage distribution of drugs and other supplies; and organise training and supervision, among other activities. Social mobilisation and lobbying for universal asthma care are also virtually non-existent in low- and middle-income countries.

For these reasons, asthma has remained a disease that only the richest individuals in these countries can afford to treat. The rest of the population, in particular the poor and vulnerable, has effectively been excluded from care — for a disease that can be successfully managed with low-cost essential medications and a low-cost standardised management strategy that is suitable for public and private healthcare services.

By making affordable drugs accessible through the ADF, The Union is initiating one major step towards change in policy and practice. Advocates of universal asthma care have then to address many other issues related to health policy, financing, systems, and community participation. If tuberculosis control is anything to go by, the effectiveness of asthma programmes is likely to depend on the quality of processes initiated to achieve dialogue between public and private sectors, professional societies, institutes that train health professionals, pharmaceutical industries, and affected communities.

For further information, please refer to the story on page 28 or visit the website at http://www.GlobalADF.org

Union consultants: Karen Bissell, DrPH; Prof Nadia Aït-Khaled; Peter Evans
Funding agency: The Union

Studies analyse how DOTS policies are expanded

The Union’s Health Policy Unit continued its work on a four-country study during 2005. This qualitative study analyses and compares policy processes in Brazil and Mexico, and Malawi and Zambia. It traces the DOTS strategy as it moves between global, national, and subnational levels. It explores decision making, communication, learning, and adaptation, as well as how political, social, organisational, and resource issues can influence policy processes.

The Health Policy Unit is coordinating this collaborative research, which involves The Union, the UK’s London School of Hygiene and Tropical Medicine, and researchers from institutions in the four participating countries: the University of Rio de Janeiro State and the Federal University of Rio de Janeiro in Brazil; the Mexican Health Foundation (FUN-SALUD); Malawi’s Reach Trust (Research on Equity and Community Health), formerly Equi-TB Malawi, and Chancellor College, University of Malawi; and Zambia’s Institute of Economic and Social Research and the Demography Department at the University of Zambia. Fieldwork began in 2004 with in-depth, semi-structured interviews and document review. Analysis and report writing continued during 2005.

POLICY PROCESSES DISCUSSED AT WORKSHOP IN PARIS

Results from the two major research activities coordinated by The Union’s Health Policy Unit were presented to an audience of national tuberculosis pro-
programme managers, subnational programme officials, and researchers at a workshop during the 36th Union World Conference on Lung Health in 2005. Participants reflected on the results from a series of regional workshops, held since 2002, about district-level policy processes in DOTS expansion. Regional pictures had been generated from the perceptions of health personnel at different levels in the programme (national and district) and from different disciplines (doctor, nurse, laboratory technician). Discussion continued with the preliminary results from the above-mentioned four-country comparative policy transfer study and proposed applications for policy analysis within DOTS expansion activities. NTP participants concluded that more attention should be paid to policy processes; health systems; and other political, social, economic, and organisational issues which they have seen affecting the success of their programmes.

Union consultant: Karen Bissell, DrPH

Funding agencies: Tuberculosis Coalition for Technical Assistance (TBCTA)/USAID for regional workshops and World Conference workshop; United Kingdom Department for International Development (DFID) and The Union for the four-country comparative policy transfer study

Overcoming the barrier of poverty in TB control

The Union has long played a central role in international efforts to improve the access of poor and vulnerable people to quality tuberculosis care. With its focus on low-income countries, The Union has developed feasible, low-cost public health strategies, including the DOTS strategy for TB now used in 183 countries. It developed innovative programmes to make medication and supplies affordable and available, including a pooled procurement programme that was a precursor to the Global TB Drug Facility. Currently, the FIDELIS project (see page 8) is supporting innovative TB control activities for increasing case detection and cure of new smear-positive cases in communities with little or no access to modern TB health care.

Although the DOTS strategy aims to reduce poverty by promoting standardised, subsidised quality TB care and equitable provision, some poor people face considerable barriers to accessing health education, diagnosis, and treatment services. These barriers may be caused by the economic, geographical, health system, social, or cultural characteristics of the country or local setting. By understanding who is affected, how, and why, national TB programmes and their partners can begin to develop and share strategies aimed at overcoming these barriers.

‘Operational and policy research would allow countries to assess the impact of pro-poor approaches and see how effective changes in policy and practice can be achieved,’ says Dr Karen Bissell, coordinator of The Union’s Health Policy Unit.

In 2005, a TB and Poverty Subgroup was created for the DOTS Expansion Working Group of the Stop TB Partnership. Drs Bissell and Vishnuvardhan Kamineni participate in this Subgroup, which grew out of the international Network for Action on TB and Poverty, created in 2003. In 2005, with members of the Network and the World Health Organization’s Stop TB Department, the TB and Poverty Subgroup developed and published a manual, Addressing Poverty in TB Control: Options for National TB Control Programmes. It covers the rationale for integrating pro-poor and equity-enhancing measures in TB control; barriers to accessing TB services by poor and vulnerable groups; potential actions for overcoming these barriers; situations and population groups requiring special consideration; harnessing resources to deliver pro-poor measures; and practical steps to address poverty in TB control.

Union consultants: Karen Bissell, DrPH; Dr Vishnuvardhan Kamineni

* This manual can be downloaded at no charge from the WHO website at http://whqlibdoc.who.int/hq/2005/WHO_HTM_TB_2005.352.pdf
The Union as an educational resource

Global strategies for improving lung health can have little impact without a stable, well-trained healthcare workforce to implement them. In many low-income countries, staff shortages are reaching crisis proportions as health workers struggle to provide care despite crumbling facilities and minimal resources. In countries with a high burden of disease, the demand for trained, experienced public health workers and consultants is great, but the pool of available people is small. Issues from long hours and low pay to lack of training lead many to leave the public health sector for jobs in the private sector or to move to industrialised countries to seek better opportunities.

Strengthening the capacity of the healthcare workforce at every level – from community health workers and nursing assistants to physicians and programme administrators – must be a top priority if we are to win the battle against tuberculosis and lung disease.

Since its inception, education has been central to The Union’s mission. The Union offers education programmes designed to reach every level of the healthcare system. Its 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.

This commitment to transmit knowledge and skills is reflected in all Union activities. By building on the strengths of every health worker we encounter – whether in an educational programme or through a technical assistance or research project – The Union is contributing to the development of a resilient and effective healthcare workforce that can meet the international health targets of the coming decade.
Union International Courses

The Union’s international courses provide intensive training in both the theoretical principles and practical challenges of tuberculosis control and lung health management in low-income settings. By combining educational methods such as lectures, case studies, self-assessments, and field experience, the courses ensure that participants have ample time to absorb new knowledge and apply skills to the work environment they will return to after the course.

In 2004, the scope of The Union’s course offerings was expanded to include not only technical knowledge, but also managerial and administrative expertise. This reflects the reality that the clinical effectiveness of a national tuberculosis programme (NTP) or other public health programme is dependent on the leadership skills and administrative expertise of its managers.

Curricula for the technical courses are developed by the Department of Scientific Activities, and courses are conducted in close coordination with the NTP or other local sponsor in the country where they are held. Instructors are well-known experts in their fields, guaranteeing high scientific and academic standards.

Current course offerings are designed to meet the needs of those involved in TB and lung health from a variety of perspectives, such as NTP personnel, NTP managers, specialist physicians, and university and medical school faculty.

Funding for courses and sponsorship of individual participants is provided by a variety of international agencies, sponsors, and local partners, as well as by fees paid directly by the participant.
Good managers essential to address human resource crisis

The shortage in human resources for health care extends from top-level management to basic service providers. In order to scale up tuberculosis control activities and meet international goals, national tuberculosis programmes (NTPs) need a stable, well-trained workforce – and central to achieving that is strong leadership and skilled management.

The need for technical training has long been acknowledged in the public health field, but, in many instances, physicians, TB control managers, and other key personnel have never been offered the kind of training their counterparts in business receive. Yet now more than ever, it is essential that skilled leaders in lung health not only have solid medical knowledge and public health expertise, but also know how to:

- think strategically and solve problems creatively;
- provide leadership and motivate staff working under difficult conditions;
- manage complex budgeting and grant-reporting requirements;
- handle the logistics of procurement and distribution;
- lobby government and influence public opinion; and
- foster a culture of continuous improvement.

To help senior TB managers succeed in meeting this challenge – and to cultivate future leaders – The Union has developed a series of three management courses designed to fit their needs. Unlike more generic management programmes, these courses are targeted precisely at the issues and demands faced by managers working in TB control in low-income countries.

Developed in collaboration with the Indian Institute of Health Management Research, the series offers a two-week overview of management, finance, and logistics for TB control; then provides an intensive two-week course on effective budgeting and financial management; and concludes with a 10-day course targeted to the special needs of senior managers. Conducted in English, the courses are limited to seminar size and may be taken singly or as a series. Funding has been provided by the Tuberculosis Coalition for Technical Assistance (TBCTA) and the US Centers for Disease Control and Prevention (CDC).

Ever since the first course was offered in 2004, the response to the management programme has been enthusiastic. The courses have been attended by 168 participants from 28 countries, and The Union is seeking funds to expand the programme as the Management Education and Development Project (MEDP).

The strengths of the programme are its international faculty; a carefully targeted curriculum; teaching methods that include self-assessment, participation, and practice; thorough grounding in public health concepts and principles; small class size; an intensively supportive atmosphere; and follow-up activities.

Follow-up has been a key component of the courses since their inception. ‘We’ve all had the experience of taking a course that seems marvellous while you’re there, but you find it hard to incorporate what you learned on the job,’ explains José Luis Castro, course coordinator for The Union. ‘We wanted to make sure that this training really made an impact where it matters – back home in the participants’ TB control programmes.’

Participants in the overview course develop an action plan that addresses some issue facing their national tuberculosis programme. After the course,
instructors follow up with them to monitor how they are progressing. The budgeting and management courses use a similar approach. Networking among the participants is strongly encouraged so that they can also turn to each other for advice after the courses are concluded.

In 2005, The Union began using the Virtual Management Training Centre (VMTC), created by India’s Centre for Growth Alternatives, to conduct online follow-up. The VMTC also acts as an online resource for management tools and information. The Union eventually hopes to use the VMTC for self-paced online management courses, thereby increasing access to people from low-income countries.

The year 2005 also saw the first course offered to participants who were all from the same country. Ms Lan Yu, Health Promotion Specialist for China’s National Tuberculosis Programme took two of the courses in the series and was instrumental in inviting The Union to present the course for 40 managers from China’s NTP.

As more people complete the series, The Union hopes the impact will broaden and deepen. ‘The ultimate goal,’ says Mr Castro, ‘is to show how improved leadership can bring better results for TB control.’

Dr Feiying Liu, Director of the Tuberculosis Department, Guangxi Centre for Disease Control and Prevention, PR China, has completed all three courses in the series and already sees a difference. She says, ‘I treat the staff in my department the way the teacher taught us. Now we have greater solidarity to fight tuberculosis.’

Consultants trained by The Union take active role in TB and HIV programmes

International consultants who can meet the wide-ranging needs of national tuberculosis programmes (NTPs) are in great demand in low- and middle-income countries. These medical professionals bring not only expert knowledge about TB and public health, but also offer NTPs their skills in developing and analysing policies and procedures; conducting education and training activities; planning, implementing, and evaluating research projects; solving procurement and logistical problems; assessing programmes; and helping to develop strategic plans. In countries where resources are chronically in short supply, their ability to play so many different roles makes them a very highly valued resource.

In 2005, two new international TB consultants joined the Secretariat’s roster after completing the Junior Consultant Programme, a Union pilot project funded by USAID. This 18-month curriculum of mentoring and training prepared Dr Panganai Dhliwayo of Zimbabwe and Dr Nevin Wilson of India to take on a variety of technical assistance and teaching assignments this year.

Dr Dhliwayo worked primarily in Zimbabwe, assisting the Zimbabwe National Tuberculosis Control Programme to develop its national TB manual and prepare a funding request for the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM). He also served on Zimbabwe’s TB Expert Committee and facilitated a 12-day Trainer of Trainers on TB Control course sponsored by the NTP in Harare.

In Malawi, he joined the Royal Netherlands Tuberculosis Foundation (KNCV) review team evaluating Malawi’s NTP and was among the facilitators of a 12-
day course on TB-HIV, sponsored by the US Centers for Disease Control and Prevention (CDC). In Botswana, he served as a facilitator for a Trainer of Trainers course on TB-HIV surveillance, also sponsored by the CDC.

Dr Dhliwayo’s responsibilities also included serving as a facilitator for The Union’s operational research course in Paris; the international TB course in Arusha, Tanzania; and an abridged version of the international TB course offered for senior health workers in Namibia.

He continued his own consultant training by attending The Union’s course in Management, Finance, and Logistics for TB Control in Jaipur, India and the Tuberculosis Division meeting in Paris. He also participated in World Health Organization (WHO) courses on writing proposals and implementing GFATM grants and completed TB-HIV training in Sodalo, Italy.

‘This year I feel that I have begun to give back what I learned from The Union’s consultant training,’ says Dr Dhliwayo. ‘I have now the opportunity to contribute in so many different ways.’

Dr Nevin Wilson works with The Union’s Integrated HIV Care for Tuberculosis Patients Living with HIV/AIDS (IHC) programme in Myanmar, which he helped to set up and launch in May 2005. He assisted with designing the programme in consultation with colleagues from The Union and the Myanmar Ministry of Health; trained partners implementing the programme; set up systems for patient services, drug logistics, and management; and participated in recording, reporting, and collaborating with external partners, including donors and WHO.

In 2004, Dr Wilson attended The Union’s International Course on Management, Finance, and Logistics as a participant; this year he returned as a facilitator. In India he evaluated methods used to deliver TB services in the slums of Mumbai and Thane, issues related to HIV coinfection among TB patients in the Guntur district on behalf of international and local NGOs, and local and national TB and HIV/AIDS programmes. Dr Wilson continued his association with the Revised National Tuberculosis Control Programme (RNCTP) and served on the Strategic Planning Cell for Tamil Nadu’s Health Systems Development Project.

He continued his professional development by participating in The Union’s courses on Management of Managers in TB Control and Operations Research, and he is applying the skills he learned to a multi-country TB operations research project and development of an EpiData database for Myanmar’s IHC programme.

‘The Junior Consultant Programme reinforced and added skills that will stand me in good stead,’ says Dr Wilson. ‘It has been one of the highlights in my career, and I am privileged to be working with The Union.’

Dr Nevin Wilson
India

‘This year I feel that I have begun to give back what I learned from The Union’s consultant training. I now have the opportunity to contribute in so many different ways.’

Dr Panganai Dhliwayo
Zimbabwe

‘The Junior Consultant Programme reinforced and added skills that will stand me in good stead. It has been one of the highlights in my career, and I am privileged to be working with The Union.’

Dr Nevin Wilson
India

Union consultant: Dr Paula I Fujiwara
Funding agencies: The Union; Tuberculosis Coalition for Technical Assistance (TBCTA), with funds from USAID
The India Resource Centre (IRC) in New Delhi supports the work of The Union in the region that carries the highest TB burden with 11 of the 22 high-burden countries. IRC activities promote TB control and lung health through The Union’s education and technical assistance programmes.

The IRC has played a central role in the development of The Union’s growing management training programme.

India Resource Centre supports Union activities in Asia

The IRC also worked with the Centre for Growth Alternatives in New Delhi to develop a new element of the management programme – the Virtual Management Training Centre. With this innovative online tool, The Union provides continuing assistance to all participants who successfully complete the management courses and workshops.

In October, the IRC was the site of a three-day continuing medical education programme on ‘Public Health Aspects of Lung Health.’ Dr R K Srivastava, then the Additional Director General, Health Services of India, inaugurated the programme, which included expert speakers from the World Health Organization and the public and private sectors. Thirty-nine postgraduates in tuberculosis and community medicine from the Medical Colleges of Delhi University attended the programme of lectures, discussions, and field visits. Organised by the World Lung Foundation – South Asia and The Union, the programme was approved by the Delhi Medical Council for 16.30 hours of continuing medical education credit (CME).

From its base in India, the IRC is well placed to promote and represent The Union at international, regional, and national conferences in the region. This year, they disseminated information at the TB Association of India conference; Forum 9, a health policy meeting organised by Switzerland’s Global Forum for Health Research; The Union Eastern Region Conference; and a conference attended by more than 2,000 Indian chest specialists from the private sector.

The IRC now manages the printing and distribution of some of The Union’s technical guides and other educational materials. The staff also worked closely with a website developer in India to create The Union’s new social mobilisation for TB control and Asthma Drug Facility websites.

This year, the eight IRC staff also supported the work of the Secretariat in development and grant writing; handled a variety of procurement projects; organised an anti-tobacco rally with 2,000 schoolchildren in Nagpur; advised India’s TB control programme on information, education, and communication (IEC) strategies; and delivered presentations and participated in symposia and technical working group meetings on TB control.
AFB MICROSCOPY AND EXTERNAL QUALITY ASSESSMENT
This course is designed to improve acid-fast bacilli (AFB) microscopy networks in countries with a high prevalence of TB by creating a local nucleus of expertise. Since lack of understanding about AFB microscopy issues among general (non-laboratory) national tuberculosis programme (NTP) supervisors contributes to the problems that NTPs face in this field, this course is targeted not only at national reference laboratory chiefs and managers, but also at central unit NTP staff. After the training, participants should be able to review, and, if necessary, adapt training in AFB microscopy (including curricula for non-laboratory supervisors) and the national system for external quality assessment (EQA) of AFB microscopy. The two-week curriculum covers a one-week intensive review of AFB microscopy, including practice, and one week on EQA, which is taught according to global guidelines. Before the conclusion of the course, participants draw up action plans to improve AFB microscopy in their respective countries.

EPIDEMIOLOGY AND CONTROL OF TUBERCULOSIS
The goal of this course is to disseminate information on the epidemiology and control of tuberculosis within the context of a national tuberculosis programme. It covers both theoretical and practical aspects of managing a tuberculosis control programme. Special topics include case detection and the role of social mobilisation in building support for TB control. Designed for TB programme personnel, the teaching methods include lecture, discussion, field visits, and laboratory work.

INTENSIVE COURSE FOR SPECIALIST PHYSICIANS
Enlisting the participation of chest and other specialists in TB control is important to the success of all national tuberculosis programmes. This course is designed to update specialists’ knowledge of tuberculosis and explain the rationale behind and the critical importance of the DOTS strategy and the principles of TB prevention, treatment, and control within the context of a national tuberculosis programme. Currently offered only in Spanish, the course is presented in one-, two-, and three-day formats.

INTENSIVE COURSE FOR UNIVERSITY AND MEDICAL SCHOOL FACULTY
This course is designed to introduce the DOTS strategy and the principles of TB prevention, treatment, and control to professors from universities and medical schools. Offered in a two- or three-day
format, the course emphasises the importance of changing medical school and university curricula and adopting the DOTS strategy as the basis of teaching about tuberculosis. This course is currently offered in Spanish.

INTERNATIONAL TUBERCULOSIS CONTROL
The Union’s international tuberculosis control course is a three-week programme for a maximum of 25 participants. The curriculum covers five modules: bacteriologic basis of TB control, clinical presentation and diagnosis, epidemiologic basis of TB control, interventions for TB control and elimination of TB, and principles of TB control in a national programme. Teaching methods include lectures, discussion, group work, laboratory bench work, and field visits. This course is offered each year in both English and French.

MANAGEMENT OF MULTIDRUG-RESISTANT TUBERCULOSIS
Multidrug-resistant TB has become a significant threat to the future of TB control in many parts of the world. This course is currently offered in Spanish in a two-day national and a five-day international format. Designed for both TB managers and clinicians, it covers all aspects of the prevention, treatment, and control of multidrug-resistant tuberculosis.

OPERATIONS RESEARCH TO PROMOTE LUNG HEALTH
The operations research course is a two-week course designed to enable countries to develop and implement their own national health research programmes. The premise is that all national tuberculosis programmes have access to sufficient data to show them how they need to improve, but lack the skills to collect and analyse the information. This course provides these skills by taking participants through all the stages of a research project. Since data processing is essential to research, basic computer knowledge is a prerequisite, and participants are trained to use Epi-Data and EpiInfo software. The course also uses as resource material, Research Methods for Promotion of Lung Health: Guide to Protocol Development for Low-Income Countries, which was developed and published by The Union with financial support from USAID.

MANAGEMENT COURSE SERIES
MANAGEMENT, FINANCE, AND LOGISTICS FOR TB CONTROL
This international course for senior managers of national tuberculosis programmes was developed in 2004 in collaboration with the Indian Institute of Health Management Research. One of a series of three management courses offered by The Union, it provides a two-week intensive overview of the principles of management, finance, and logistics, with emphasis on their application to tuberculosis control.

BUDGETING AND FINANCE FOR TB CONTROL
In this two-week intensive course, participants learn how to develop, implement, and monitor budgets and manage projects. The curriculum covers the basics of evaluating and allocating resources, and the development of an effective financial reporting and project management system.

MANAGEMENT OF MANAGERS FOR TB CONTROL
This two-week intensive course provides senior managers from national tuberculosis programmes with the concepts, skills, and techniques needed to supervise subordinate managers effectively. It addresses tricky problem areas such as managing people with more experience, providing leadership without relying too heavily on formal authority, building effective work relationships and networks, and maximising managerial performance. The teaching methods include experiential learning as well as lecture and discussion. A three-day follow-up workshop is offered six months later.

'I enrolled in the management training courses to improve my knowledge for the benefit of the TB Programme in Afghanistan, and so that I could transmit that knowledge to the TB staff in my country. All of the courses will be helpful to me in my position, particularly those on team building and leadership. I was very impressed with the expertise of the training staff, and the follow-up activities have helped me apply the skills that I have learned. I would definitely recommend these courses to my colleagues.'

Dr Ataullah Zarabi
Quality Control Disease Officer,
National Tuberculosis Programme,
Afghanistan

50 – Education
COURSES IN ENGLISH

- Applied Epidemiology for Operations Research in Tuberculosis Control
  France: Paris
  10–19 January 2005
  Participants: 10
  Coordinator: Dr Hans L Rieder
  Donor: TBCTA/USAID

- International Course in Management, Finance, and Logistics for Tuberculosis Control
  India: Jaipur
  6–21 February 2005
  Participants: 33
  Coordinator: José Luis Castro
  Donor: TBCTA/USAID, CDC, and The Union

- Door-to-Door: A Guide to Monitoring TB Control Services
  South Africa: Cape Town
  (presentations)
  Mozambique: Maputo (fieldwork)
  8–19 August 2005
  Participants: 22 (Maputo), 28 (Cape Town)
  Coordinator: Dr I.D. Rusen
  Donor: Zamstar Research Project

- Management of Managers for TB Control: Follow-up Workshop
  India: New Delhi
  21–23 February 2005
  Participants: 8
  Coordinator: Jamshed Chhor
  Donor: TBCTA/USAID

- International Tuberculosis Course
  Vietnam: Ho Chi Minh City
  11–29 April 2005
  Participants: 22
  Coordinator: Dr Hans L Rieder
  Donor: TBCTA/USAID
  Vietnam: Hanoi
  29 August–16 September 2005
  Participants: 23
  Coordinator: Dr Hans L Rieder
  Donor: TBCTA/USAID, The Netherlands Medical Committee–Vietnam (MCNV)

- Tanzanian: Arusha
  7–25 November 2005
  Participants: 22
  Coordinator: Dr Hans L Rieder
  Donor: TBCTA/USAID

- AFB Microscopy Quality Assurance for International TB Consultants
  Belgium: Antwerp
  1–5 August 2005
  Participants: 14
  Coordinator: Dr Armand Van Deun
  Donor: TBCTA/USAID

- Door-to-Door: A Guide to Monitoring TB Control Services
  South Africa: Cape Town
  (presentations)
  Mozambique: Maputo (fieldwork)
  8–19 August 2005
  Participants: 22 (Maputo), 28 (Cape Town)
  Coordinator: Dr I.D. Rusen
  Donor: Zamstar Research Project

- Training Course on Quality Assurance of Sputum–Smear Microscopy for TB Control
  China: Taipei
  18–26 August 2005
  Participants: 23
  Coordinator: Dr Chen-Yuan Chiang
  Donor: Taiwan National Tuberculosis Association, The Union (Eastern Region)

- Advanced Course on AFB-Microscopy and External Quality Assessment
  Ethiopia: Addis Ababa
  29 August–10 September 2005
  Participants: 15
  Coordinator: Dr Armand Van Deun
  Donor: German Leprosy Relief Association and The Union

- International Course in Budgeting and Finance for Tuberculosis Control
  Thailand: Bangkok
  5–17 September 2005
  Participants: 21
  Coordinator: José Luis Castro
  Donor: TBCTA/USAID

- China: Changsha
  22 November–4 December 2005
  Participants: 40
  Coordinator: José Luis Castro
  Donor: Canadian International Development Agency (CIDA), FIDELIS

- XIV Curso Internacional de Epidemiología y Control de Tuberculosis
  Nicaragua: Granada
  4–12 April 2005
  Participants: 40
  Coordinators: Dr José Caminero; Edith Alarcón, RN
  Donor: TBCTA/USAID

- Curso de Supervisión en el Control de Tuberculosis
  Dominican Republic: Santo Domingo
  10–13 May 2005
  Participants: 30
  Coordinator: Edith Alarcón, RN
  Donor: Dominican Republic NTP, USAID

- Curso Intensivo de Manejo de MDR-TB
  Chile: Santiago
  9 December 2005
  Participants: 30
  Coordinator: Dr José Caminero

- COURSES IN SPANISH

- Curso Intensivo de Actualización en TB para Médicos Especialistas
  Brazil: Sao Paolo
  22–25 February 2005
  Participants: 40
  Coordinator: Dr José Caminero
  Donor: TBCTA/USAID

- Brazil: Rio de Janeiro
  28 February–2 March 2005
  Participants: 40
  Coordinator: Dr José Caminero
  Donor: TBCTA/USAID

- Curso Intensivo para Médicos Especialistas: Diagnóstico y Tratamiento de la Tuberculosis
  Mexico: Merida
  28 March 2005
  Participants: 40
  Coordinator: Dr José Caminero
  Donor: TBCTA/USAID

- Curso Intensivo de Manejo de MDR-TB
  Chile: Santiago
  9 December 2005
  Participants: 30
  Coordinator: Dr José Caminero

- COURSES IN FRENCH

- Cours International de Lutte Contre la Tuberculose
  Benin: Cotonou
  22 August–9 September 2005
  Participants: 28
  Coordinator: Dr Arnaud Trébucq
  Donor: French Ministry of Foreign Affairs (Coopération Française)
Union Conferences

When 31 national tuberculosis associations formed The Union in 1920, one of their major goals was to create a central organisation that could coordinate conferences and other joint educational activities. Since then The Union has organised more than 120 international and regional conferences. The purpose is to bring together TB experts and advocates from around the world to share the latest research developments, progress reports, challenges, and opportunities; participate in education and training activities; and build support for the fight against tuberculosis.

Preparation for the annual world conference is a year-long enterprise involving the Secretariat’s conference team, which handles the administrative, marketing, and logistical aspects of the conference; Union members and non-members who submit abstracts for presentations; the Coordinating Committee of Scientific Activities, which selects the presentations to be included in the scientific programme; and many other Union departments, staff, and members.
The critical demand for more services for TB-HIV and asthma was the focus of the 36th Union World Conference on Lung Health in Paris, France. The annual conference, held from 18–22 October at the Palais des Congrès, attracted 2,000 delegates from 131 countries, including tuberculosis and lung health experts, ministers of health, TB and HIV programme managers, healthcare professionals, and patient advocates.

The conference theme focused on scaling up and coordinating TB and HIV programmes to provide satisfactory care to the growing number of coinfected patients. The two deadliest infectious diseases in the world today claim some five million lives each year, and the epidemic prompted the World Health Organization (WHO) to declare TB an emergency in Africa in August 2005.

Social mobilisation is a key factor in raising awareness and building the social and political commitment to address this TB-HIV crisis and ensure that enough funds are provided by governments, development agencies, and private donors to enable all affected populations to receive the best possible care.

Patient advocacy groups are now active in different parts of the world, and several of them participated in the conference. They added their voices to demands for improved health programmes and more research funds to develop better diagnostic tools and new drugs. South African TB and HIV patient advocate Zackie Achmat spoke at the opening ceremony on how social mobilisation can contribute to enhancing and sustaining TB and HIV/AIDS control in low-income settings.

Other lung health issues were also addressed during the five-day conference, including asthma, childhood pneumonia, and tobacco control. The scientific programme offered four plenary sessions, 12 postgraduate courses and workshops, 35 symposia, nine meet-the-expert sessions, three thematic slide presentations, and close to 750 posters presented as poster discussions and displays.

In addition to assessments of the challenges facing them, delegates also heard about progress: the launch of The Union’s Asthma Drug Facility, the continuing success of the FIDELIS projects, the passage of WHO’s Framework Convention for Tobacco Control, and the development of a new blood test that promises to diagnose TB more quickly and accurately.

Annual meetings of The Union’s Regions, Scientific Sections, Working Groups, Coordinating Committee of Scientific Activities, General Assembly, and Board of Directors also took place during the conference. The Union Awards were presented at the opening ceremony, and 13 countries participated in the annual Christmas Seals contest. (For details on these activities, please turn to Member Activities, pages 58–73.)

Reports on the 2005 regional conferences are on pages 69–71.
Publications and Other Resources

The Union developed its first technical guide in the late 1970s to facilitate the knowledge and technology transfer between consultants with extensive field experience and low-income countries in the throes of establishing national tuberculosis control programmes and policies. *Management of Tuberculosis in Low-Income Countries* first appeared in 1978 and has since been updated four times and translated into French, Spanish, Russian, Indonesian, and Portuguese. More than 50,000 copies have been disseminated around the world.

The widespread use of this first guide encouraged The Union to develop additional guides. The series now includes 13 other technical guides on topics from conducting clinical trials to tobacco control and prevention. Many are published in English, Spanish, and French. The Union also produces other educational resources such as CD-ROMs, videos, posters, and PowerPoint presentations.

To make these educational resources as broadly accessible as possible, most Union materials may be downloaded at no charge from the website at http://www.iuatld.org. Requests for print copies and other enquiries can be sent to documents@iuatld.org.

**New Publications in 2005**

**TECHNICAL GUIDES**

**ATLAS DIAGNOSTIC DE LA TUBERCULOSE INTRATHORACIQUE CHEZ L’ENFANT**
(DIAGNOSTIC ATLAS OF INTRATHORACIC TUBERCULOSIS IN CHILDREN)

Author: Robert Gie

- 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.

**MANAGEMENT OF ASTHMA:**
A GUIDE TO THE ESSENTIALS OF GOOD CLINICAL PRACTICE

Authors: Nadia Aït-Khaled, Don Enarson
Editions: English (2nd edition, 2005); Spanish (online only, 2005)

- The Union’s first asthma technical guide, *Management of Asthma: A Guide for Low-Income Countries*, was published in 1996. This new edition incorporates lessons from subsequent field experience; extends the technical recommendations to the management of asthma in children aged five years and older; takes into account the evaluation of the first edition; and changes the title, since the proposed technical measures may be considered essential for managing asthma patients in any country. The overall strategy proposes that The Union’s model for managing tuberculosis be applied to asthma management. Chapters cover what asthma is, how to diagnose asthma and determine its severity, how to manage asthma attacks, how to organise the care of asthma patients, essential long-term treatment for asthma, and providing quality service.

**MANAGEMENT OF THE CHILD WITH COUGH OR DIFFICULT BREATHING:**
A GUIDE FOR LOW-INCOME COUNTRIES

Authors: Penny Enarson, Don Enarson, Robert Gie

- The second edition of this Union technical guide focuses primarily on pneumonia in children. Providing information needed by the most basic level of the health service, the guide incorpo-
rates the technical approach to managing childhood pneumonia developed by the World Health Organization and proposes a management system based on The Union’s experience with tuberculosis in low-income countries. It also discusses the management of asthma and tuberculosis in children, diseases that are ‘uncovered’ when the large burden of acute diseases is cared for systematically.

**MANUAL DE ENFERMEDADES RESPIRATORIAS**

(Manual of Respiratory Diseases)

Authors: Pedro Cabrera Navarro, Felipe Rodríguez de Castro

This guide is designed for generalist doctors, pneumonology students, and lung specialists alike and fills the need for a guide to lung diseases in Spanish. The format synthesises current knowledge about pneumonology into 39 concise illustrated chapters covering upper respiratory infections, bronchitis, pneumonia, sleep apnea, emphysema, lung cancer, tuberculosis, and much more. It is an invaluable resource for all professionals dedicated to reducing the burden of respiratory disease in Hispanic countries.

**AFB MICROSCOPY TRAINING**

Author: Akiko Fujiki
Funder: Tuberculosis Coalition for Technical Assistance (TBCTA), with funds from USAID
Co-sponsors: Research Institute of Tuberculosis (RIT/Japan), The Union, the US Centers for Disease Control and Prevention (CDC) and USAID

This manual is designed to help trainers teach acid-fast bacilli (AFB) microscopy with a focus on practical skills and a minimum of theory. It covers only the essential components of microscopy practice, which are presented simply and clearly in the order they must be learned.

The guide will also help trainers and trainees identify problems or weaknesses in their practice and determine ways to overcome them. As a result, trainees should learn to demonstrate uniform skill in smearing, staining, and smear microscopy; manipulate and maintain a microscope properly; and correctly record and report results in a national tuberculosis programme laboratory registry.

**OTHER PUBLICATIONS**

**SOCIAL MOBILISATION OF NONGOVERNMENTAL ORGANISATIONS IN TB CONTROL**

This report, published in 2005, is based on two international TB social mobilisation workshops sponsored by The Union in 2004. It includes a full report on the Bangkok workshop and the recommendations arising from the Brazil workshop. Short chapters provide regional case studies and summarise topics such as the role of nongovernmental organisations and the media; mobilisation at municipal, state, and national levels; and funding.

**CD-ROM**

**TUBERCULOSIS DOCUMENTATION FOR HEALTH CARE PROFESSIONALS 2005**

This is an update of the CD-ROM first produced by The Union in 2003. It replicates the website http://www.tbrieder.org; contains PDF versions of Union technical guides, as well as other international publications; PowerPoint presentations; photographs; educational material for courses; and other valuable data and references for understanding global TB control.

**POSTER**

**AFB QUALITY ISSUES POSTER**

Co-sponsors: World Health Organization (WHO), Research Institute of Tuberculosis (RIT/Japan), US Agency for International Development (USAID), Centers for Disease Control and Prevention (CDC), Institute of Medical and Veterinary Science (IMVS/South Australia), and The Union

This sturdy waterproof poster illustrates the good parts of the sputum to be smeared; examples of good and bad smears; good and bad staining, decolourisation and counterstaining; well and poorly stained acid-fast bacilli and their various appearances; and some commonly observed artifacts.
International Journal of Tuberculosis and Lung Disease opens access in 2005

The principal goal of the *International Journal of Tuberculosis and Lung Disease* is to disseminate the most up-to-date information on tuberculosis and lung health. In July 2005, The Union decided to further advance that goal by providing access to back issues from 1997 to 2004 free of charge to all via the Ingenta website.*

Despite the possible risk of economic losses associated with this decision, it was felt that the information in the Journal should be circulated to a wider audience and that making it available to all was the best solution.

The Union and the editors hoped that this measure would enable more health professionals in low-income countries to obtain information that is vital to their work in the field, and, if increased usage is a good measure, they have been proved right. Usage skyrocketed immediately. More than 8,000 articles were downloaded in August alone, bringing the average number of downloads to more than 4,000 per month in 2005 compared to 1,300 per month in 2004.

Submission of papers to the Journal increased again this year, up from 40 per month to 47. The introduction of page charges (100€ per excess page) for authors whose articles exceed the permitted length has not led to a huge increase in pages. By continuing to rigorously supervise article lengths, the editors have reduced the problematic backlog to a manageable volume, despite the increased submissions. The main reason for this is the tighter rejection rate, which has risen to 60% (compared to 47% in 2004). These efforts will lead to a better quality of articles published in the Journal.

The time between acceptance and publication is still more than six months due to the backlog, but this is expected to shorten in 2006, thanks to the improved procedures. The peer-review process was also improved this year, with the time to first decision falling from 40 days to less than 30.

We are always looking for ways to improve the peer-review process of the *Journal*. There is little evidence that blind reviewing, practised since peer reviewing was first instigated in the days of *Tubercle and Lung Disease*, improves the quality of the reviews. Consequently, in 2006 this practice will be discontinued, and the review process will be re-evaluated after 12 months.

In 2005, the *Journal* published a series of six State of the Art reviews on HIV infection in low-income, high-burden settings, with Prof John Murray as guest editor. The educational series consisted of a six-part serialisation, from July to December, of the second edition of The Union technical guide *Management of the Child with Cough or Difficult Breathing*. These two series will continue in 2006 with a focus on asthma.

Clare Pierard
Managing Editor

* The web address for the IJTLD on Ingenta is www.ingentaconnect.com/content/iuatld/ijtld

**JOURNAL ARTICLES**


BOOKS / CHAPTERS


The 1,600 members of The Union today are part of a tradition of public health stretching back a century. The late 19th century discoveries that tuberculosis was a distinct infectious disease with an identifiable bacillus dramatically changed both medical and social attitudes towards TB, but fledgling efforts to prevent, control, and treat the disease were uncoordinated and ineffective. By the early 1900s, several national tuberculosis associations had been formed, but they quickly found that they would need to reach beyond their own borders and resources to have a significant impact on an endemic and intractable problem like tuberculosis.

Thirty-one of these associations met in Paris in 1920 and agreed to form the International Union Against Tuberculosis to provide centralised services and resources, including scientific conferences and education programmes, publications, research, and technical assistance. Over the past 85 years, The Union has served this function, expanding into other areas of lung health and evolving into the highly regarded and effective international scientific organisation that it is today. Its landmark contributions include not only the research that led to the DOTS strategy, but also extensive field experience; clinical trials; global dissemination of information through its conferences, journal, and guides; and courses that have trained many of the leading figures in TB control.

Working within their home countries, in their Scientific Sections and Regions, as well as in collaboration with the Secretariat in Paris, Union members are part of a united front of public health experts and activists determined to meet the challenge of tuberculosis and lung disease around the world.

Union member activities

Union members are part of a united front of public health experts and activists determined to meet the challenge of tuberculosis and lung disease around the world.
New website offers members-only services

A website launched in 2005 provides new services to Union members. Members can now go to the Union website at http://www.globallunghealth.org to review their personal membership data and access the Annik Rouillon Documentation Centre (ARDOC). Personal data on the site include Scientific Section and Region affiliations and other details relating to Union membership. ARDOC is an archive of information about tuberculosis and lung disease covering the years 1917–1966.

Additional services will be added to the site, which is intended to foster an online community for Union members.

Online archive provides valuable resource for TB research

In 1994, The Union established the Annik Rouillon Documentation Centre (ARDOC) as a permanent research library housed at the Secretariat in Paris. The collection includes journals dating back to 1917, as well as books, reprints, and country reports.

Among the special features of the archive are The Union’s collection of back issues of Acta Pathologica et Microbiologica Scandanaavica, American Review of Respiratory Disease, American Review of Tuberculosis, American Review of Tuberculosis and Pulmonary Disease, Bulletin of the International Union Against Tuberculosis and Tubercle.

These journals document the history of tuberculosis research going back to the early years of the 20th century. Since MedLine, the major online life science and biomedical publication database used by researchers, only documents publications after 1965, ARDOC preserves important historic public health records.

Archivist Bruce Callarman has been employed part-time since 2003 to assist researchers and oversee the ongoing organisation, documentation, rehabilitation, and digitisation of ARDOC. In 2005, it became accessible to all Union members and other registered users via the ARDOC Bibliographic Gateway at http://ardoc.globallunghealth.org/

ARDOC is dedicated to Dr Annik Rouillon, who served as Executive Director of the International Union Against Tuberculosis and Lung Disease from 1978 to 1992. During her long career, Dr Rouillon played a strong leadership role in the growth of The Union’s research, technical assistance, and education programmes. She worked closely with the late Dr Karel Styblo, then Director of Scientific Activities, to develop the principles that became the DOTS strategy, and her many published articles are still a highly regarded part of the literature on tuberculosis and lung disease.

ARDOC was initially funded by a grant from the King Oscar II Foundation of Sweden. Generous donations from the Rotterdam TBC Fund, Prof John Murray, and the International Tuberculosis Foundation have also helped to support its work.
The Scientific Sections offer Union members from around the world an opportunity to share their experience and expertise. The Sections’ main responsibility is to plan the content of the scientific programme for The Union’s annual World Conference on Lung Health. Other activities range from developing training manuals to planning advocacy events.

Working Groups (WGs) are subcommittees of the Scientific Sections that take on specific projects. Some WG projects require members from different Sections to work together; the Sections also occasionally collaborate with the Secretariat. The Sections report to the Chair of the Scientific Coordinating Committee, who is a member of the Board of Directors.

The Scientific Sections and their WGs meet annually at the World Conference on Lung Health to present progress reports, plan activities for the coming year, and hold elections. Copies of their complete reports are available on The Union website, http://www.iuatld.org under About the Union/Structure.

Bacteriology and Immunology Scientific Section

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

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

Nursing and Allied Professionals (NAPS) Scientific Section

Chair: Chantelle Allen (Nepal)
Vice chair: Evita Berga (Latvia)
Programme secretary: Helen Wallstedt (Sweden)
Secretary: Rajita Bhavaraju (USA)

At this year’s meeting, the Section elected officers who will serve from 2006–2009. They are Chair: Sirinapha Jittimanee (Thailand); Vice chair: Mariam Walusimbi (Uganda); Programme secretary: Rajita Bhavaraju (USA); and Secretary: Tereza Villa (Brazil). The Working Groups also presented their reports.

Working Group
CASE MANAGEMENT
Leader: Gert Doornenbal (Netherlands)

The WG completed a major redraft of its ‘Best Practice Guide’ in September 2005. The guide will now go through a rigorous review, aiming for publication in 2006. Future objectives are to implement and evaluate these best practices; to develop tools to evaluate the impact of implementing these best practices; to report on results through symposia, poster sessions, and postgraduate courses; and to advocate for French and Spanish editions.

Working Group
REGIONAL MOBILISATION
Leader: Gini Williams (UK)

The goal of this WG is to increase support for and participation of NAPS at the regional level, to raise their profile locally, and to create a mechanism for...
them to become involved at an international level. Four regions have active networks now: Africa, Eastern, Europe, and Latin America. Funding is still a concern, as is the need for support from national tuberculosis programmes. The regional representatives each presented a full report on their training, networking, and other activities.

Highlights include:

- The Africa NAPS network is linking up with other regional networks such as the East, Central, and South African College of Nursing (ECSACON) and African Midwifery Research Network (AMRN). They plan to organise an event through ECSACON in 2005–2006. However, communication problems persist between anglophone and francophone countries. NAPS in francophone countries are struggling to obtain access to training and communications.

- European network members presented a poster at the 2005 Union World Conference on Lung Health on the development of their network and its achievements.

- An Eastern Region member received a grant from the Global Fund for a project titled ‘Human resource development among nurses for control of tuberculosis, Thailand.’ This project will be presented at a symposium during the 2006 World Conference.

- The NAPS network in Mexico is particularly strong and has demonstrated how building a network can provide excellent opportunities for ongoing and sustainable professional development. They developed a poster for the 2005 World Conference and will present a symposium in 2006.

Working Group

EDUCATION AND TRAINING

Co-leaders: Nisha Ahamed (USA), Nick DeLuca (USA)

At the 2005 World Conference, this WG sponsored a postgraduate course, two symposia, and an education and training materials display and discussion. The postgraduate course, attended by more than 20 delegates, covered how to conduct and assess TB programme
training. The symposia addressed the issues of patient and provider education and human resource development to ensure a competent TB workforce.

In addition 25 WG members attended the annual meeting to plan next year’s activities.

Respiratory Disease Scientific Section

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

The Respiratory Disease Scientific Section meeting was attended by 12 members representing nine countries. Elections were held and the outgoing officers thanked. They were Isabella Annesi (Chair), Steve Graham (Vice chair), Christer Janson (Programme secretary), and Gregory Erhabor (Secretary).

The Section discussed the activities organised for the 2005 World Conference: a postgraduate course on Epi method; symposia on asthma in low-income countries, HIV in the child, and preventing childhood lung disease; a plenary session on access to HIV and asthma drugs; and a meet-the-expert session on the Asthma Drug Facility. Proposals for next year’s symposia and postgraduate courses were also reviewed and informally approved.

Members welcomed a proposal to merge this Scientific Section with the Tobacco Prevention Section, with the proviso that the three main subsections – child lung health, tobacco prevention, and adult respiratory disease – all continue to be represented in the scientific programme.

Active WGs also presented their reports, and three new working groups were proposed: chronic obstructive pulmonary disease (COPD) in developing countries, Bacillus Calmette-Guerin (BCG) vaccinations, and children in surveillance.

Working Group

AIR QUALITY AND LUNG HEALTH IN DEVELOPING COUNTRIES
Leader: Nourredine Zidouni (Algeria)
This WG conducted surveys in Casablanca and Algiers. They organised a symposium at the 2004 World Conference and made several presentations. Two papers have been written up, of which one has been published in the International Journal of Tuberculosis and Lung Disease. The other is being revised after a favourable first review in a journal. The group has now completed its work.

EMERGENCY ROOM TREATMENT OF ASTHMA IN DEVELOPING COUNTRIES
Leader: Peter Burney (UK)
This WG has made one survey, which was presented at the 2004 World Conference. An abstract will be submitted for presentation at the 2006 conference. The group is planning a clinical trial in collaboration with the Asthma Drug Facility.

CHILD LUNG HEALTH: TB IN CHILDREN
Leader: Lisa Nelson (USA)
The Child TB Working Group was formed to improve prevention, diagnosis, and management of children with TB, particularly in the low-resource setting. The WG works in conjunction with the Childhood TB Working Group within the DOTS Expansion Working Group of the Stop TB Partnership.

Recent activities have included:

- Development of generic guidelines for national TB programmes (NTPs) on the management of childhood TB. Goals were set and guidelines drafted in Paris in 2003. The final version will be published in 2006.
- Enhancement of surveillance of childhood TB through modified recording and reporting systems. Many NTPs collect very limited data on TB in children, and even these data are rarely reported beyond the country level. The WG is collaborating with the Recording and Reporting Subgroup of the DOTS Expansion Working Group/Stop TB Partnership to ensure that new forms include data relevant for children and that these fields are pilot-tested in a select number of countries.

Tobacco Prevention Scientific Section

Chair: Javaid Khan (Pakistan)
Vice chair: Chakib Nejjari (Morocco)
Programme secretary: Lee Abdelfadil (Sudan)
Secretary: Stefano Nardini (Italy)

The Tobacco Prevention Scientific Section held its annual meeting at the 2005 World Conference. Members proposed topics for next year’s scientific programme and chose several to put forward for approval. They also discussed the planned reorganisation of The Union’s Scientific Sections.

Two areas of work particularly related to Union activities were addressed at the meeting. First, there is a clear need to study current attitudes and behaviours of medical, nursing, pharmacy, and public health students around the world as a follow-up to Union data about medical students compiled in the 1980s and early 1990s. Sir John Crofton strongly encouraged undertaking a worldwide survey. Related to that, many members felt that creating a list of websites concerning training or courses about tobacco would provide a useful resource for members that could be placed on The Union website.

Second, with the growing evidence base of a connection between tobacco use and all of the diseases that are the object of activity at The Union, the next logical step would be to develop a guide on tobacco cessation for health professionals working in those fields. This would fill a significant gap, since there are few resources available for busy professionals who want to use the most effective techniques to assist patients to stop using tobacco and remain abstinent.
Tuberculosis Scientific Section

Chair: Vacant
Vice chair: M Amir Khan (Pakistan)
Programme secretary: Michael Kimerling (USA)
Secretary: Fraser Wares (India)

The Tuberculosis Scientific Section meeting was attended by 56 members. Past president Anne Fanning chaired the meeting on behalf of the absent chair.

During the meeting, members voted on resolutions before the General Assembly and on candidates proposed for the Board of Directors by the Nominating Committee. The choice of venue for the 2007 World Conference was shared with the members.

They also discussed the proposed reorganisation of the Scientific Sections; the definition and role of Working Groups; the timing of the Section meetings at the World Conference; plans and procedures for submitting proposals for next year’s conference; and the methods used by The Union for developing conference themes.

The leaders of the Working Groups also made their reports to the whole Section.

Working Group
TRANS-BORDER MIGRATION AND TB
Leader: Fraser Wares (India)

The WG organised a symposium on access to TB care for undocumented migrants for the 2005 World Conference. The symposium was moderately well attended, however it was noted that, although interlinked, three of the four presentations discussed migration into the USA. Although the WG had set up an information platform hosted on the migrant clinicians’ network website, it has been little used. The WG is still working on a draft manuscript and statement on TB in people of undocumented residence status which it hopes to submit to the Section and for publication in 2006. About 25 people – almost all new members – attended the annual WG meeting to discuss issues around TB and migration.

Working Group
TB EDUCATION
Leader: M Amir Khan (Pakistan)

The WG organised a postgraduate course for the 2005 World Conference on training experiences linking diverse care providers to national TB programmes. More than 20 participants from various backgrounds attended. The WG proposes to offer a similar course at the 2006 World Conference.
Working Group
TB AND HIV

Leader: Renee Ridzon (USA)

The WG primarily functions as a discussion group that meets during the World Conference. The WG feels that it has achieved most of its initial goals, most importantly getting TB-HIV higher on the agenda of The Union, especially at the conference, and also at HIV/AIDS meetings and conferences.

Working Group
TUBERCULOSIS IN PRISONS

Leader: Michael Kimerling (USA)

The WG continues to function primarily as an advocacy and information-sharing group, with a working e-mail list. More than 80 people attended the annual WG meeting. The agenda included a presentation from Bangladesh, results of a prison survey conducted in the Europe Region, viewing of a video from Kazakhstan, and discussion on advocacy and information products on TB in prisons in Thailand. The WG also discussed possible revisions to the WHO guidelines on TB in prisons.

Those present decided that the Section’s 2006 symposium would be on the contribution of *Mycobacterium bovis* to the total burden of human tuberculosis, which is poorly documented and misunderstood. The Section also agreed to organise one symposium every two years and focus on other types of activities during alternate years.

Members also discussed ways to build up their numbers and visibility, as well as the reorganisation of the Scientific Sections. Those present felt that the proposed amalgamation of this Section with one of the larger Sections (Bacteriology and Immunology or Tuberculosis) would not allow its interests to be maintained. A survey on these issues was circulated to members of the Section after the meeting.

Working Group
MYCOBACTERIUM AVIUM COMPLEX

Leaders: Charles Thoen (USA), Ivo Pavlik (Czech Republic)

The objective of this WG was to bring a clearer understanding of the classification and pathogenic role of *Mycobacterium avium* complex subspecies. The correlation between molecular and serological typing was of particular interest. Presentations were given by experts from the USA, Mexico, and the Czech Republic. A written report on Dr Pavlik’s presentation has been submitted to the Programme Officers. The activities of this WG are now closed.

Working Group
MYCOBACTERIUM BOVIS COMPLEX

Leaders: Charles Thoen (USA), Ivo Pavlik (Czech Republic)

The suggested title of this new Working Group is *Mycobacterium bovis* in human populations. The intent of the group is to identify risk factors, preventive measures, diagnostic challenges, and the prevalence of *M. bovis* in human populations.

The Scientific Sections offer Union members from around the world an opportunity to share their experience and expertise. The Sections plan the content of the scientific programme for The Union’s annual World Conference on Lung Health, help develop training manuals, and plan advocacy events.

Working Groups (WGs) are subcommittees of the Scientific Sections which take on specific projects.

The Scientific Sections meet annually at the World Conference to present progress reports, plan activities for the coming year, and hold elections. Copies of their complete reports are available on The Union website at http://www.iuatld.org under About the Union/Structure.

Tuberculosis in Animals Scientific Section

Chair: Claude Turcotte (Canada)
Vice chair: R Kazwala (Tanzania)
Programme secretary: John B Kaneene (USA)
Secretary: Guilina Moda (Italy)

Eight participants attended the Section meeting this year. The low attendance was attributed to the fact that many regular members attended a professional meeting in Ireland and were unable to obtain travel funds for two events. No elections were held.
Constituent, Organisational, and Individual Union members work together by affiliating with one of The Union’s regions. In 2005, the General Assembly approved a proposal from the Eastern Region to split into the South-East Asia and Asia Pacific Regions to better serve this large and diverse area. This change will go into effect in 2006. The other regions are Africa, Europe, Latin America, Middle East, and North America.

One of the principal activities of the Regions is to sponsor regular conferences. These events bring together TB and lung health experts to discuss current challenges and opportunities from a regional perspective. The Regions also provide a focus for advocacy and social mobilisation efforts.

Members from each Region meet annually at The Union’s World Conference on Lung Health and at other times throughout the year as needed to carry out their plans. A representative from each Region is elected to serve on The Union’s Board of Directors.
The Pakistan Anti TB Association

Constituent Member Profile

T he Pakistan Anti TB Association (PATA) was formed in 1956 and became a Constituent Member of The Union in 1981. PATA heads a network of TB associations in Pakistan, with affiliates in Punjab, Northwest Frontier Province (NWFP), Sindh, and Balouchistan. These associations maintain 105 clinics at the district and Tehsil levels that provide free treatment to some 500,000 TB patients each year.

As the country with the seventh highest burden of tuberculosis in the world, Pakistan faces difficult challenges in TB control. PATA has developed a strategic partnership with the Pakistan National Tuberculosis Programme, and they collaborate on activities such as the country’s US $2.5 million project, funded by the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM).

The two-year GFATM project is establishing a public-private partnership that will cover 20 million people, providing DOTS to some 44,000 TB patients through 105 diagnostic centres and 200 treatment centres. Other objectives are to strengthen referral services, encourage patients to seek early diagnosis, and improve treatment compliance.

In 2005, with its own resources and the help of GFATM funds, PATA registered approximately 20,000 TB cases, of which 12,000 were smear positive, and provided modern microscopes to its whole network of diagnostic centres. It also provided DOTS training for 105 doctors, 105 laboratory technicians, 150 paramedical staff, 1,000 community health workers, and a larger number of volunteer treatment supporters. With this programme, they achieved an 85% treatment success rate.

In addition, PATA offers health education, coordinates World TB Day activities, and operates a Model Chest Clinic and Research Centre in Lahore. In collaboration with the Social Welfare Department (Punjab), PATA is establishing five Model Rehabilitation Centres where former TB patients, especially women, can be trained to re-establish themselves economically.

Last year PATA also hosted the Union Eastern Region Conference, held on 25–28 September in Lahore. This successful event was attended by more than 800 delegates from Pakistan and other countries in the region.

Chaudhary Muhammad Nawaz, President of PATA and the Eastern Region, served as chairman of the conference organising committee and also currently chairs the steering committee for Pakistan’s GFATM project. An advocate of the Lahore High Court with 35 years in the legal profession, Nawaz has been active in tuberculosis control since 1983. He held positions with Red Crescent and the Punjab Anti TB Association before becoming Honorary Secretary of PATA in 1995 and President in 2001. He was a member of the Union Eastern Region Executive Committee for four years prior to his election as President in 2003. He has been a delegate to 10 Union world conferences and presented papers on public-private partnerships for TB control in Pakistan in 2002 and 2003. Nawaz has been honoured for his work by the Pakistan Social Workers Association, PATA, Red Crescent, Pakistan National Tuberculosis Control Programme, and The Union.
Eastern Region

President: Chaudhary Muhammad Nawaz (Pakistan)
Secretary General: Babe Ying-Yee Chan (Hong Kong)

In September 2005, the Council of the Eastern Region considered and unanimously passed a proposal to divide into two regions because of the vast geographic area and large burden of tuberculosis the Region covered. This proposal was approved by The Union General Assembly in October and will become effective in 2006. This new structure mirrors the regional structure of the World Health Organization.

The new South-East Asia Region includes members from Afghanistan, Bangladesh, India, Myanmar, Nepal, Pakistan, and Sri Lanka. Members from Australia, Cambodia, China, Hong Kong, Japan, Republic of Korea, Laos, Malaysia, Mongolia, other Pacific Islands, Philippines, Singapore, Taiwan, and Vietnam will affiliate as the Asia Pacific Region.

Other activities of the Region in 2005 included the 2nd Eastern Region IUATLD training course on Quality Assurance of Sputum-Smear Microscopy for Tuberculosis Control held from 18–26 August in Taipei. The course was organised by the National Anti-Tuberculosis Association in Taipei and the Hong Kong Tuberculosis, National Anti-Tuberculosis Association in Taipei. The course was organised by the Chest and Heart Diseases Association.

ATTRACTS 800 PARTICIPANTS

The Pakistan Anti TB Association hosted the 23rd Union Eastern Region International Conference on Tuberculosis and Lung Diseases from 25–28 September 2005 at the Avari Hotel Lahore, Pakistan. The conference was held under the auspices of The Union, in collaboration with the National TB Control Programme and the Pakistan Chest Society.

The theme ‘Stop TB, lung health for all’ attracted 800 delegates, including 500 from Pakistan and 300 from 23 other countries. More than 150 abstracts were submitted addressing recent advances in TB diagnosis and management, TB from Pakistan’s perspective, and problems in managing lung disease. Of these, 100 were selected for the conference.

The scientific programme also included four workshops and seminars. A highlight of the conference was a special symposium on ‘Tuberculosis Control in Big Cities in Asia and the Middle East.’

Other activities of the Region in 2005 included the 25th Regional Conference of the Union held in Damascus in 2005.

Middle East Region

President: Dr Mohammed Eyad Chatty (Syrian Arab Republic)
Secretary General: Prof Mohammad Reza Masjedi (Iran)

The Middle East Region comprises members from Egypt, Iran, Iraq, Jordan, Kuwait, Saudi Arabia, Sudan, Syria, Turkey, United Arab Emirates, and Yemen. Member organisations include charity foundations, ministries of health, and anti-tuberculosis societies. Active in The Union for many years, the Region held its 25th conference in 2005.

MIDDLE EAST REGION CONFERENCE HELD IN DAMASCUS

The 25th Regional Conference of the Union Middle East Region was held from 5–7 April 2005 at the Al Assad University Hospital in Damascus, Syria. The conference theme was the latest advances in the clinical diagnosis and treatment of TB and respiratory diseases. The conference chair was Dr Abdul Ghani Arafeh, President of the Eastern Mediterranean Committees Against Tuberculosis and Respiratory Diseases.

More than 500 delegates from 14 countries attended the conference. Speakers came from Algeria, Canada, Egypt, France, Iran, Iraq, Morocco, Sudan, Syria, Tunis, and Turkey. Dr Paula Fujiwara, Senior Technical Advisor to The Union, spoke on ‘The New Experience with Tuberculosis: From Chaos to Control.’

Sessions covered topics from social network analysis and new trends in treatment, to medical practice and ethics in ancient civilisations. TB-HIV, multidrug-resistant TB, asthma, chronic obstructive pulmonary disease, sleep apnea syndrome, and other issues were also discussed. For the first time, there was a special symposium for nurses planned with the active collaboration of the Iranian working team. The focus was on TB and HIV/AIDS.

During the conference, Union members also met to discuss issues such as creating a more active presence for The Union in the region, membership development, nomination of members for Union committees and Scientific Sections, and funding for regional activities.

Damascus is the oldest inhabited city in the world, so conference delegates enjoyed the opportunity to visit the National Museum, Hamidya Bazaar, and other sites that illustrated the juxtaposition of ancient archaeological sites and fashionable modern Syria.
Latin America Region

President: Dr Elisabeth Ferreira (Mexico)
Secretary General: Dr Joseney Santos (Brazil)

The Latin America Region comprises members from 13 countries, including ministries of health, national tuberculosis programmes, lung health associations, and a chest clinic. The Region organises biannual conferences, of which the 11th was held in 2005.

LATIN AMERICA CONFERENCE FEATURES

WORKSHOP FOR NURSES

The 11th Conference of The Union Latin America Region was held concurrently with the 64th National Congress of the Mexican Society of Pneumology and Thoracic Surgery; the 30th Pan American Congress of the Latin American Society of Tuberculosis and Respiratory Diseases (ULASTER); the 11th Latin American Conference of ULASTER; the 2nd IberoAmerican Conference on Tobacco; and the 1st Latin American Conference on Pediatric Pneumology.

The event was held in Merida, Mexico from 28 March–1 April 2005.

The joint conference was organised by the Mexican Society of Pneumology and Thoracic Surgery, The Latin American Thoracic Association, ULASTER, and The Union.

Topics included asthma, pulmonary tuberculosis, pneumonia, smoking, lung cancer, and child lung health. A highlight of the conference was the 4th Regional Latin America and Caribbean Workshop for Nurses and Allied Professionals (NAPS), organised by The Union and funded by the Tuberculosis Coalition for Technical Assistance (TBCTA), with financial support from the US Agency for International Development (USAID). Conference sessions were held in Spanish and English.

Organisational Member Profile

The Norwegian Association of Heart and Lung Patients

The Norwegian Association of Heart and Lung Patients (LHL), the largest patient organisation in Norway today, was founded in 1943 as a support group for tuberculosis patients struggling with the fear and prejudice they experienced because of their disease. At that time called The Support Organisation for TB Patients (THO), the group fought for the right to social security and jobs in Norway. More than 60 years later, they have taken up that cause around the world.

In 1961, THO became the Norwegian Association of Heart and Lung Patients (LHL), and it now boasts 60,000 members in 301 local groups and 19 county organisations. Although it has expanded its mission to include advocacy for the rights of heart and lung patients, as well as the handicapped, LHL has never forgotten its roots.

In the 1980s, former TB patients from LHL launched an aid programme to show their solidarity with TB patients in other parts of the world. LHL then became a partner in The Union’s mutual assistance programme to help implement the new model of TB programme in low-income countries. LHL’s vision of a united society is based on solidarity beyond frontiers, and supports the human right to treatment, rehabilitation, and other measures to improve the lives of the sick and handicapped.

The growth of the TB-HIV epidemic has made a new generation of advocates aware of the fight against TB and for TB patients. They have a well-seasoned and powerful ally in this long-time Union member – the Norwegian Association of Heart and Lung Patients.
North America Region

President: Dr Charles Nolan (USA)
Secretary General: Dr E Jane Carter (USA)

The North America Region (NAR) represents five of the largest and most influential lung health organisations in the world: the American Lung Association, American Thoracic Society, American College of Chest Physicians, Canadian Lung Association, and British Columbia Lung Association. Staunch supporters of The Union, these members make invaluable contributions to TB and lung disease research and education each year.

The NAR holds an annual conference, alternating between Canada and the United States.

NORTH AMERICA REGION CONFERENCE EXPLORES NEW TERRITORY

The Union North America Region’s 9th Annual Conference, ‘Challenges to TB Control’, covered a wide range of TB topics, including the effect of the disease on children, the growing concern of TB-HIV coinfections, and the impact of TB on aboriginal and immigrant communities in British Columbia. Discussions took on a newfound sense of urgency, spurred on in part by the aftermath of the December 2004 tsunami disaster in Southeast Asia and the global health concerns that it raised.

Some 500 delegates from North America and Latin America gathered for the event, hosted by the British Columbia Lung Association from 23–26 February at the Sheraton Vancouver Wall Centre Hotel in Vancouver, BC.

According to Dr Menn Biagtan, Conference Secretary, the event provided a vital forum for the exchange of ideas and information. Highlights were presentations by Dr Gerald Mazurek of the US Centers for Disease Control and Prevention, who described recent innovations in TB diagnosis using blood tests; and Union President Dr Asma El Sony of Sudan, who detailed the growing TB problem in that country. The region also followed the lead of The Union and added a session on the global problem of HIV, focusing on both the human impact of this pandemic, as well as its explosive interaction with the global TB problem.

While most delegates came from North America, the Region has made mentoring colleagues from other countries one of its priorities. Through the use of travel awards, more than 25 individuals from higher-TB-burden countries were able to attend this conference. This not only gave them the opportunity to participate in the programme, but also to establish personal connections for ongoing collaborations.

2005 General Assembly
Paris, France

The Union General Assembly was held on Saturday, 22 October 2005 in Paris. Union President Dr Asma El Sony welcomed Constituent, Organisational, Honorary, and Individual members, as well as the Chairs of each Scientific Section.

RESOLUTIONS PASSED

During this meeting, the General Assembly unanimously passed resolutions to approve The Union Activity Report, Treasurer’s Report, and audited accounts for 1 January–31 December 2004. They also approved the 2006 budget and terms and conditions of the mortgage for the purchase of additional office space for the Secretariat at 109 Boulevard Saint-Michel. Resolutions approving the division of the Eastern Region into the South-East Asia Region and the Asia Pacific Region and renewing the mandate for KPMG to serve as The Union’s auditors for six years also passed.

Finally, the General Assembly, having read all of the reports and approved the audited accounts and activities, gave full discharge to the President and the Board of Directors for the management of that period. They also resolved to give power to the Board or its President by delegation to fulfill the resolutions adopted at the meeting.

ELECTIONS AND ANNOUNCEMENTS

The General Assembly re-elected Dr Asma El Sony of Sudan and Mr Louis-James de Viel Castel of France to their seats on the Board. They also validated the appointment of the Board Members selected by the Regions to represent them: Ms Edith Alarcón, Latin America; Prof Robert Loddenkemper, Europe; and Prof Mohammad Reza Masjedi, Middle East.

Dr H J Chum of Tanzania and Prof George Comstock of the United States were welcomed as new Honorary Members. Dr Chum was recognised for his pioneering work in implementing the DOTS strategy, and Prof Comstock for his long-standing support of The Union and contribution to TB control as an epidemiologist.

The Assembly also approved the decision to hold the 38th Union World Conference on Lung Health in Cape Town, South Africa. Winners of the 2005 Christmas Seals contest were announced and roundly congratulated.
The Union presents awards to individuals and organisations that have made an outstanding contribution to tuberculosis or non-tuberculous lung disease at its annual World Conference on Lung Health. A nominating committee of Union Board members 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.

SIR JOHN CROFTON (UNITED KINGDOM)
The Union Medal was presented to Sir John Crofton in recognition of his pioneering contribution to tuberculosis treatment and control. He is one of the major heroes in humanity’s long struggle to defeat TB.

Born in Ireland in 1912, Sir John was educated at Cambridge University and trained at St Thomas’s Hospital, London. He qualified in 1936 and served with the Royal Army Medical Corps during World War II.

In 1952, Sir John became professor of respiratory diseases and tuberculosis at the University of Edinburgh. There he assembled a team to address the disease in Scotland, and they demonstrated that, with meticulous bacteriology and the available chemotherapy, a 100% cure rate for TB was a reasonable objective. This was unheard of, but, between 1954 and 1957, they successfully halved TB notification rates in Edinburgh. A subsequent clinical trial, begun in 1960 under the auspices of The Union, was the first international trial of any treatment and proved the method’s success. The ‘Edinburgh Method’ became the gold standard of TB treatment.

The British Medical Research Council began implementing the method in India and East Africa, and The Union’s Drs Karel Styblo and Annik Rouillon went on to pioneer short-course chemotherapy in Tanzania and other African countries. By the late 1980s, they were achieving cure rates of more than 80% – a feat that was considered astonishing. Thus, the DOTS strategy, which has now been used to treat 22 million people in 183 countries, was born.

Sir John was president of the Royal College of Physicians of Edinburgh from 1974 to 1977, and he was knighted in 1977. In 1992 he helped develop Clinical Tuberculosis, a widely translated guide on TB for health workers, distributed by The Union. Now in his 90s, Sir John Crofton continues to be a tireless campaigner, not only for TB, but also for other health issues, such as tobacco control.

PROFESSOR NEIL WALTON WHITE (SOUTH AFRICA) 1954–2004

A special medal was awarded posthumously to Prof Neil Walton White for his outstanding contributions through research, education, technical assistance, and advocacy. Born in Edinburgh, his education took him from the United Kingdom to Canada and South Africa, where he served on the faculty of the University of Cape Town and headed its Occupational Medicine Unit and Lung Institute.

A lifelong human rights activist, Prof Walton White devoted his academic career to the epidemiology of lung diseases affecting the people of Africa. His published work led to the exposure of occupational lung diseases caused by South African industry, and he campaigned for compensation of the affected workers. A long-standing Union member, he taught courses in Africa and contributed to the Management of Asthma: A Guide for Low-Income Countries. Prof Walton White died in 2004 in Cape Town, South Africa.

The Karel Styblo Public Health Prize

The Karel Styblo Public Health Prize of US $2,000 is awarded to a health worker (layperson or physician) for a contribution to tuberculosis control or non-tuberculous lung disease.

DR LIU JIANJUN (CHINA)

Dr Liu Jianjun was honoured as the first director of the National Centre for TB Control and Prevention (NCTB) of the China Centre for Disease Control. Under his leadership, the NCTB developed a three-year plan which called for changing the TB control model from a project approach to a programme approach. This triggered a rapid expansion of the programme and, between 2002 and 2004, DOTS coverage in China reached 95%, with a case detection rate of 64% and a cure rate of 85%. These achievements lay a solid basis for achieving international TB control targets.

A graduate of Beijing Medical University, Dr Liu formerly directed the Lhasa
Health Bureau in Tibet and served as deputy director of the Beijing TB Research Institute. Author of more than a dozen published papers and manuals, he received the World Bank President Award in 2004.

Scientific Prize

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

DR AJIT LALVANI (UNITED KINGDOM)

Dr Ajit Lalvani of the University of Oxford received the Scientific Prize for his development of the ELISPOT test, which will potentially replace the century-old tuberculin skin test for diagnosing TB infection in asymptomatic individuals. The rapid and highly sensitive blood test has been validated in more than 5,000 people in eight countries. Results from the first 2,000 participants have been published in 13 separate papers since 2001. Studies have demonstrated that ELISPOT can improve screening of high-risk groups. The test has European Union regulatory approval and is being used in more than 30 countries marketed as T-SPOT TB.

Based at the University of Oxford, Dr Lalvani, 41, is Wellcome Senior Research Fellow in Clinical Science, Nuffield Department of Clinical Medicine, and a lecturer at Magdalen College. He is also an Honorary Consultant Physician in Infectious Diseases and General Medicine at the John Radcliffe Hospital, Oxford.

Other Awards

Princess Chichibu Memorial TB Global Award

This US $10,000 award memorialises Princess Chichibu of Japan (1909–1995), who was active for many years in the Japan Anti-Tuberculosis Association (JATA) and served as its president. It recognises outstanding achievement in anti-tuberculosis activities. Candidates are recommended by The Union Board of Directors, irrespective of nationality, and the winner is selected by JATA.

DR MARIO RAVIGLIONE (SWITZERLAND)

Dr Mario Raviglione was honoured for his leadership role as Director of the World Health Organization’s Stop TB Department, a position he has held since 2003. He joined the WHO in 1991 and was responsible for setting up the global drug-resistance surveillance project and the new TB surveillance and monitoring system. Between 1999 and 2003, he directed WHO’s tuberculosis strategy and global operations.

Dr Raviglione is author of more than 150 published articles, in addition to the TB chapters in the last three editions of Harrison’s Principles of Internal Medicine. He regularly serves as a visiting professor at medical schools and lectures at international conferences. A graduate of the University of Turin (Italy) in 1980, he trained in internal medicine and infectious diseases in New York and Boston, where he was appointed an AIDS Fellow at Beth Israel Hospital, Harvard Medical School.

2005 Christmas Seals Contest

The Union holds a Christmas Seals Contest each year at its World Conference on Lung Health, honouring the commemorative stamps that have helped raise money for tuberculosis and lung disease for more than 100 years.

In 2005, 13 organisations from the following countries submitted seals to the contest: Australia, Canada, Germany, Hong Kong, India, Israel, Mexico, The Netherlands, Norway, Panama, The Philippines, Portugal, and Singapore.

Conference delegates voted for their favorite seals, and the winners were announced at the meeting of the General Assembly. They were:

1st prize: Philippine Tuberculosis Society, Inc.

2nd prize: Tuberculosis Association of India

3rd prize: Comité Nacional de Lucha Contra la Tuberculosis y Enfermedades del Aparato Respiratorio (Mexico)
Prof Eero Tala, former professor of pulmonary medicine at Finland’s University of Turku and the head of the pulmonary clinic at Turku University Hospital, died on 20 June 2005.

Prof Tala is best remembered for his ardent anti-tuberculosis work both in Finland and abroad. He played an active part in dealing with Finland’s serious TB problem and saw the situation improve during his years as a member and President of the Finnish Anti-tuberculosis Association. He was also a member of the board of The Union’s Europe Region and served as its President from 1986–1990. He organised Wolfheze tuberculosis meetings of The Union and WHO during his presidency and presided over the first two meetings in 1991 and 1994. The international community greatly appreciated his courtesy and discretion, as well as his comprehension of the enormous human suffering caused by tuberculosis.

Prof Tala was a member of several scientific societies, and he also acted as editor of the European Respiratory Journal and served on the editorial boards of IUATLD Bulletin and Tubercle and Lung Disease.

Under his direction, the respiratory clinic at Turku University developed into a modern unit of pulmonary medicine, with lively scientific activities and fine patient care. He also tutored a large group of new specialists.

Eero Tala had a keen interest in architecture, and I wonder if it was a coincidence that his clinic was situated in Paimio Hospital, a world-famous building better known as the Paimio Sanatorium designed by architect Alvar Aalto.

Prof Tala will be sadly missed by his family, as well as his many friends and colleagues all over the world.

Dr Kari Liippo
Head of the Department of Pulmonary Diseases
Turku University Hospital/Paimio Hospital
Finland
Mr James Yue, Secretary General of The Union Eastern Region and an expert in management and public administration, died on 28 May 2005 at the age of 61. Mr Yue’s involvement with The Union dated back to 1988, and he was elected Secretary General of the Eastern Region Council in June 1999. His activities included organising training courses; representing the Region at all meetings of the Board of Directors; and faithfully supervising the display of Christmas Seals from the Hong Kong Tuberculosis, Chest and Heart Diseases Association, a Constituent Member of The Union. His tireless efforts and contributions to tuberculosis prevention were much appreciated by all of his colleagues, and he will be greatly missed.

At the time of his death, Mr Yue was the Executive Secretary of the Hong Kong Tuberculosis, Chest and Heart Diseases Association, a position he had held since 1969. Under his supervision, various major projects were completed, such as the transformation of the Ruttonjee Sanatorium into a general hospital in 1991 and the establishment of the Hong Kong Centre for Health Promotion and Disease Prevention in 2003.

Mr Yue was also active in tobacco prevention and an advocate for public health, becoming a founder member of the Hong Kong Council on Smoking and Health in 1987. He served on the board of the Chinese Anti-Tuberculosis Association (Beijing) for many years, and, in 2004, he was elected Secretary General of the World Association of Chinese Public Health Professionals.

A native of Shanghai, and educated in Hong Kong and the United Kingdom, Mr Yue was a widower and is survived by his four children.

Dr Asma El Sony
President, The Union
Finance and administration

The Department of Finance and Development is 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.

This Activity Report covers the accounting period from 1 January–31 December 2005. During that time, the department prepared 115 financial reports to donors and prepared accounts for nine external audits. In order to further strengthen national tuberculosis programmes, the department also assisted several countries by procuring drugs, laboratory supplies, and equipment valued at almost two million euros. The department was also actively involved in designing and teaching four international financial and management training courses during the year.

All activities of the Department of Finance and Development support the mission of The Union by providing efficient and effective financial and administrative services, by enabling access to information and resources, and by promoting the financial health and security of each unit and The Union as a whole.

The Union strives to be the most effective manager of the resources entrusted to us by our members and donors. To be the best, we must continue to achieve superior operating performance and deliver high-quality services and science.
Financial Report
from the Treasurer
Fiscal Year 2005

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 2005.

During this, the 85th year of its existence, The Union operated within a balanced budget, donors continued their generous commitment to our programmes, and our balance sheet showed favorable financial results. Through careful fiscal management, our operating budget finished the year with 46,428 € (US$ 54,772) surplus. It is important to highlight that for the first time in five years, the International Journal of Tuberculosis and Lung Disease operated on a balanced budget, and we expect this trend to continue in the years ahead.

These positive developments are attributable to many things and many people. As always, it begins with our determination to keep our commitments, to continuously improve operations, and exercise disciplined financial management. During Fiscal 2005, The Union improved its management and operating procedures in order to reduce costs and control expenditures. We continue to finance the most significant portion of our major activities and budget requirements through grants, gifts, and managed funds, and new accounting and management procedures have allowed The Union to more effectively manage the breadth of resources entrusted to us by donors, government agencies, and members. The management of the US $22 million FIDELIS project, which is funded by the Canadian International Development Agency (CIDA), is testimony of The Union’s capacity to effectively implement and monitor large-scale projects in multiple countries.

During Fiscal 2005, the level of programme funding rose to new heights as The Union sought new opportunities for growth in the fields of HIV/AIDS, education and training, and research. In Fiscal 2006, we will continue to earmark free cash flow to realise further growth in these and other areas, and to maximise the development of new scientific methods, education and training, and investments in plant and equipment. Grant revenue is expected to

**Union Budget 2001–2008**

![Graph showing Union Budget 2001-2008](image-url)
increase significantly over the next few years as a result of new opportunities.

Of course, growth does not come without new challenges. We enter Fiscal 2006 with improved financial results, but the changing priorities of funding agencies, declining revenue from Constituent Members, the effects of currency exchange rates, costs of office space, the need to retain talented staff, and the rising costs of personnel and travel all have an impact on our financial picture.

A sound financial position is vital to give us the flexibility to take advantage of new opportunities, especially during times of substantial change in international health. The Union maintains its stable financial base by ensuring sufficient liquidity and maintaining the high credit worthiness that permits it to access low-cost, stable financing. This is crucial as funding from some key donors does not arrive on schedule; and the development of new scientific approaches, research, and programme expansion often requires considerable amounts of financing. As a result, while total assets have grown from around €0.9 million (US$ 0.8 million) in Fiscal 2000 to €3.4 million (US$ 4 million) in Fiscal 2005, The Union’s cash levels have in fact decreased. Improving and sustaining cash levels is crucial for The Union to be able to implement new, forward-looking strategies, establish a physical presence overseas for expansion of operations in key regions, and to create opportunities in new fields.

We are proud of what we have accomplished during Fiscal 2005 and look forward to building on these achievements as we strive to provide even more valuable services in the future. Our Fiscal 2005 accomplishments demonstrate that we have the management depth and talent to improve our operating performance and keep The Union a key player in international health.

FINANCIAL STATEMENTS
The audited financial statements and the accompanying notes which follow include all funds and accounts for which the Board of Directors have 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 their fair presentation. A complete Audit Report, including detailed comments and notes to supplement the Balance Sheet and the Income and Expenditure Accounts, is available upon request.

The Union strives to be the most effective manager of the resources entrusted to us by our members and donors. To be the best, we must continue to achieve superior operating performance and deliver high-quality services and science. We must constantly strive to be an effective advocate, a good neighbor, and a strong partner in the communities in which we work. And we must remain committed to integrity, accountability, and continuous improvement.

I would like to thank our members and donor agencies for their continued trust and support. I would also like to thank the management team and all of our staff and consultants for their exemplary work and sacrifice.

Respectfully submitted,

Louis-James de Viel Castel
Treasurer

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LHL recognises The Union’s 'tremendous achievement'

The Norwegian Association of Heart and Lung Patients (LHL) presented its 2005 Honorary Award to The Union at a ceremony in Oslo on 12 October 2005. The award paid tribute to The Union’s efforts to improve global lung health, emphasising its pioneering role in proving to a skeptical international health community that it was possible to control tuberculosis, even in resource-poor settings. The principles of the model programme developed by The Union were subsequently called the DOTS strategy and promoted as the official policy of the World Health Organization. In addition to a commemorative sculpture and certificate, The Union received NOK 100,000. Union President Dr Asma El Sony is shown accepting the award from LHL President Svein Erik Myrseth.
AUDITOR'S OPINION

International Union Against Tuberculosis and Lung Disease
Registered office: 68, boulevard St Michel – 75006 Paris

Statutory Auditors’ Report on the financial statements
For the year ended 31st December 2005
(free translation of a French language original)

In compliance with the assignment entrusted to us by the Executive comitee, we hereby report to you, for the period ended 31st December 2005:

- the audit of the accompanying financial statements of International Union Against Tuberculosis and Lung Disease;
- the justification of our assessments;
- the specific verifications and information required by law.

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

1 Opinion on the financial statements

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 consolidated 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 by management, 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 Company’s financial position and its assets and liabilities as of 31st December 2005, and of the results of its operations for the year then ended in accordance with the accounting rules and principles applicable in France.
2 Justification of our assessments

In accordance with the requirements of article L.225-235 of the Commercial Code relating to the justification of our assessments, we bring to your attention the following matter:

Rules and accounting principles:

Note III of the Annexes to Financial Report explains the rules and accounting procedures in force in the Union.

As part of our opinion concerning the rules and accounting principles applied in your association, we have checked the suitable feature of the accounting principles above mentioned, and of the informations supplied in the Annexes, and we made sure of their correct practice.

Accounting valuations:

As part of our opinion, we made sure of the reasonable nature of these valuations.

The assessments were made in the context of our audit of the financial statements, taken as a whole, and therefore contributed to the formation of the opinion expressed in the first part of this report.

3 Specific verifications and information

We have also performed the specific verifications required by law in accordance with the professional standards applicable in France.

We have no matters to report regarding the fair presentation and the conformity with the financial statements of the information given in the financial report, and in the documents addressed to the members with respect to the financial position and the financial statements.

Levallois-Perret, August, 3rd 2006

KPMG Entreprises
Department of KPMG S.A.

Françoise Rimmel
Partner

FK - For the year ended 31st December 2005
### Net Amount

#### 31.12.2005

<table>
<thead>
<tr>
<th>Assets</th>
<th>€</th>
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<th>€</th>
<th>US$</th>
</tr>
</thead>
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<td></td>
</tr>
<tr>
<td>Software</td>
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<td>97 601</td>
<td>64 780</td>
<td>88 237</td>
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<tr>
<td>Land</td>
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<td>589 850</td>
<td>500 000</td>
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<tr>
<td>Building</td>
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<td>2 932 061</td>
<td>2 621 506</td>
<td>3 570 753</td>
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<td>Fixtures and equipments</td>
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<td>204 419</td>
<td>156 446</td>
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<td>Other tangible fixed assets</td>
<td>134 652</td>
<td>158 849</td>
<td>195 336</td>
<td>266 067</td>
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<td>Financial fixed assets</td>
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<td>32 265</td>
<td>35 428</td>
<td>48 256</td>
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<td><strong>Total 1</strong></td>
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<td>4 015 046</td>
<td>3 573 496</td>
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<td>Constituent members</td>
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<td>280 263</td>
<td>238 552</td>
<td>324 932</td>
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<td>Suppliers advance</td>
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<td>264 982</td>
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<td>217 060</td>
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<td>Managed funds receivable</td>
<td>8 606 850</td>
<td>10 153 501</td>
<td>10 565 203</td>
<td>14 390 864</td>
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<td>Other receivables</td>
<td>200 122</td>
<td>236 084</td>
<td>309 455</td>
<td>421 508</td>
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<tr>
<td>Sundry debtors</td>
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<td>737 773</td>
<td>735 998</td>
<td>1 002 503</td>
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<td><strong>Total 2</strong></td>
<td>9 894 552</td>
<td>11 672 603</td>
<td>12 008 565</td>
<td>16 356 866</td>
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<tr>
<td>Financial investment for managed funds</td>
<td>0</td>
<td>0</td>
<td>3 866 191</td>
<td>5 266 139</td>
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<tr>
<td>Cash and bank for managed funds</td>
<td>7 248 099</td>
<td>8 550 582</td>
<td>4 079 350</td>
<td>5 556 483</td>
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<td>Cash and bank of the Union</td>
<td>1 074 019</td>
<td>1 267 020</td>
<td>741 571</td>
<td>1 010 094</td>
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<td><strong>Total 3</strong></td>
<td>8 322 117</td>
<td>9 817 602</td>
<td>8 687 113</td>
<td>11 332 716</td>
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<tr>
<td><strong>Prepaid expenses</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total 4</strong></td>
<td>238 204</td>
<td>281 010</td>
<td>123 468</td>
<td>168 176</td>
</tr>
<tr>
<td><strong>Realisable exchange losses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total 5</strong></td>
<td>9 457</td>
<td>11 157</td>
<td>96 172</td>
<td>130 996</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>21 867 778</td>
<td>25 797 417</td>
<td>24 488 814</td>
<td>33 356 214</td>
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NB: 2004 1 € = US$ 1.3621  
2005 1 € = US$ 1.1797
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>€</td>
<td>US$</td>
</tr>
<tr>
<td><strong>Equity</strong></td>
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<tr>
<td>Reserves</td>
<td>429 820</td>
<td>507 059</td>
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<td>Result carried forward</td>
<td>-941 709</td>
<td>-1 110 935</td>
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<td>Result from the financial year</td>
<td>46 428</td>
<td>54 772</td>
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<td>Restatement reserve on premises</td>
<td>1 887 396</td>
<td>2 226 561</td>
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<td><strong>Total 1</strong></td>
<td>1 421 935</td>
<td>1 677 457</td>
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<tr>
<td><strong>Contingent liability</strong></td>
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<tr>
<td></td>
<td>9 457</td>
<td>11 157</td>
</tr>
<tr>
<td><strong>Total 2</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Dedicated funds</strong></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>15 503 813</td>
<td>18 289 848</td>
</tr>
<tr>
<td><strong>Total 3</strong></td>
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<td></td>
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<tr>
<td><strong>Debts</strong></td>
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<td></td>
</tr>
<tr>
<td>Borrowing from credit institutions</td>
<td>595 470</td>
<td>702 476</td>
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<tr>
<td>Current bank advances (Short-term)</td>
<td>1 906 883</td>
<td>2 249 550</td>
</tr>
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<td>Suppliers and similar accounts</td>
<td>540 568</td>
<td>637 708</td>
</tr>
<tr>
<td>Tax and social security</td>
<td>386 663</td>
<td>456 147</td>
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<tr>
<td>Charges to be paid (Accrued Expenses)</td>
<td>527 146</td>
<td>621 874</td>
</tr>
<tr>
<td>Other Creditors</td>
<td>176 344</td>
<td>208 033</td>
</tr>
<tr>
<td><strong>Total 4</strong></td>
<td>4 133 074</td>
<td>4 875 787</td>
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<td><strong>Deferred income</strong></td>
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<tr>
<td><strong>Total 5</strong></td>
<td>256 365</td>
<td>302 433</td>
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<tr>
<td><strong>Realisable exchange profit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total 6</strong></td>
<td>543 134</td>
<td>640 735</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>21 867 778</td>
<td>25 797 418</td>
</tr>
</tbody>
</table>

NB: 2004 1 € = US$ 1.3621
2005 1 € = US$ 1.1797
# Income Statement (in €)

**1 January 2005 - 31 December 2005**

<table>
<thead>
<tr>
<th></th>
<th>General Funds</th>
<th>Managed Funds</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contributions</td>
<td>864 501</td>
<td>0</td>
<td>864 501</td>
<td>824 601</td>
</tr>
<tr>
<td>Operating grant</td>
<td>1 414 804</td>
<td>0</td>
<td>1 414 804</td>
<td>1 663 319</td>
</tr>
<tr>
<td>Grants and gifts</td>
<td>2 306 327</td>
<td>9 394 431</td>
<td>11 700 758</td>
<td>7 421 248</td>
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<tr>
<td>Write back of provisions</td>
<td>368 061</td>
<td>949</td>
<td>369 010</td>
<td>700 411</td>
</tr>
<tr>
<td>Write back of dedicated</td>
<td>12 556 431</td>
<td>76 000</td>
<td>12 556 431</td>
<td>11 335 386</td>
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<tr>
<td>Other income</td>
<td>1 421 923</td>
<td>76 000</td>
<td>1 497 923</td>
<td>1 016 765</td>
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<tr>
<td><strong>Total</strong></td>
<td>6 375 617</td>
<td>22 027 810</td>
<td>28 403 426</td>
<td>22 961 730</td>
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<table>
<thead>
<tr>
<th></th>
<th>General Funds</th>
<th>Managed Funds</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Expenses</strong></td>
<td></td>
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<tr>
<td>External charges</td>
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<td>8 179 260</td>
<td>11 537 857</td>
<td>11 393 938</td>
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<tr>
<td>Taxes</td>
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<td>4 033</td>
<td>254 956</td>
<td>211 623</td>
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<tr>
<td>Wages and salaries</td>
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<td>1 737 697</td>
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<td>Social contributions</td>
<td>803 187</td>
<td>609</td>
<td>803 796</td>
<td>679 056</td>
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<tr>
<td>Depreciation charges and</td>
<td>495 349</td>
<td>0</td>
<td>495 349</td>
<td>408 513</td>
</tr>
<tr>
<td>addition to provisions</td>
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<td></td>
<td></td>
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<tr>
<td>Obligations for projects</td>
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<td>9 537 494</td>
<td>9 537 494</td>
<td>5 222 464</td>
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<tr>
<td>Other expenses</td>
<td>128 142</td>
<td>4 298 280</td>
<td>4 426 422</td>
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<td><strong>Total</strong></td>
<td>6 773 894</td>
<td>22 019 675</td>
<td>28 793 570</td>
<td>23 025 733</td>
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<thead>
<tr>
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<th>General Funds</th>
<th>Managed Funds</th>
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<th>Total</th>
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<tbody>
<tr>
<td><strong>Operating result</strong></td>
<td>-398 277</td>
<td>8 134</td>
<td>-390 143</td>
<td>-64 003</td>
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</table>

<table>
<thead>
<tr>
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<th>General Funds</th>
<th>Managed Funds</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign exchange profit or</td>
<td>291 051</td>
<td>-8 319</td>
<td>282 732</td>
<td>-391 246</td>
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<tr>
<td>loss</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Write back of financial</td>
<td>96 172</td>
<td>0</td>
<td>96 172</td>
<td>644 728</td>
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<tr>
<td>provisions</td>
<td></td>
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<tr>
<td>Interest and financial</td>
<td>66 940</td>
<td>185</td>
<td>67 125</td>
<td>-88 492</td>
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<tr>
<td>charges</td>
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<td>Provision of risk for</td>
<td>-9 457</td>
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<td>-9 457</td>
<td>-96 172</td>
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<tr>
<td>foreign exchange losses</td>
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<table>
<thead>
<tr>
<th></th>
<th>General Funds</th>
<th>Managed Funds</th>
<th>Total</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td><strong>Net financial result</strong></td>
<td>444 706</td>
<td>-8 134</td>
<td>436 572</td>
<td>68 818</td>
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<table>
<thead>
<tr>
<th></th>
<th>General Funds</th>
<th>Managed Funds</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net result for financial year</strong></td>
<td>46 428</td>
<td>0</td>
<td>46 428</td>
<td>4 814</td>
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---

NB: 2004 1 € = US$ 1.3621
2005 1 € = US$ 1.1797
## Income Statement (in US$)

<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Operating Income</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Contributions</td>
<td>1 019 852</td>
<td>0</td>
<td>1 019 852</td>
<td>1 123 190</td>
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<tr>
<td>Operating grant</td>
<td>1 669 044</td>
<td>0</td>
<td>1 669 044</td>
<td>2 265 606</td>
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<tr>
<td>Grants and gifts</td>
<td>2 720 774</td>
<td>11 082 610</td>
<td>13 803 384</td>
<td>10 108 481</td>
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<tr>
<td>Write back of provisions and transferred charges</td>
<td>434 202</td>
<td>1 119</td>
<td>435 321</td>
<td>954 030</td>
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<tr>
<td>Write back of dedicated funds</td>
<td>0</td>
<td>14 812 821</td>
<td>14 812 821</td>
<td>15 439 930</td>
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<tr>
<td>Other income</td>
<td>1 677 443</td>
<td>89 657</td>
<td>1 767 100</td>
<td>1 384 935</td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td>7 521 315</td>
<td>25 986 207</td>
<td>33 507 522</td>
<td>31 276 172</td>
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</tbody>
</table>

| **Operating Expenses** |    |            |        |       |
| External charges      | 3 962 136 | 9 649 073  | 13 611 209 | 15 519 682 |
| Taxes                 | 296 014   | 4 757      | 300 771   | 288 251   |
| Wages and salaries    | 2 049 961 | 0          | 2 049 961 | 2 316 906 |
| Social contributions  | 947 520   | 718        | 948 238   | 924 942   |
| Depreciation charges and addition to provisions | 584 363 | 0 | 584 363 | 556 435 |
| Obligations for projects | 0    | 11 251 382 | 11 251 382 | 7 113 519 |
| Other expenses        | 151 169   | 5 070 680  | 5 221 850 | 4 643 616 |
| **Total 2**           | 7 991 163 | 25 976 611 | 33 967 774 | 31 363 351 |

| **Operating result** | -469 848 | 9 596     | -460 252 | -87 179 |

| **Foreign exchange profit or loss** | 343 353 | -9 814    | 333 539 | -532 917 |
| **Write back of financial provisions** | 113 454 | 0         | 113 454 | 878 183 |
| **Interest and financial charges** | 78 969   | 218       | 79 187   | -120 535 |
| **Provision of risk for foreign exchange losses** | -11 157 | 0         | -11 157 | -130 996 |

| **Net financial result** | 524 619 | -9 596    | 515 024 | 93 735 |

| **Net result for financial year** | 54 772   | 0         | 54 772   | 6 556 |

NB: 2004 1 € = US$ 1.3621
2005 1 € = US$ 1.1797
The work summarised in this Activity Report would not have been possible without the assistance and support of all our donors. We would like to express our sincere thanks to the following organisations, agencies, and foundations:

<table>
<thead>
<tr>
<th>ORGANISATION</th>
<th>PROJECTS FUNDED IN 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Columbia Lung Association</td>
<td>• Core activities</td>
</tr>
<tr>
<td>Canadian International Development Agency (CIDA)</td>
<td>• FIDELIS</td>
</tr>
<tr>
<td></td>
<td>• Technical assistance w/ GFATM applications</td>
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<tr>
<td></td>
<td>• Uganda NTLP</td>
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<tr>
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<td>• FIDELIS Budget Management and Financial Reporting Course</td>
</tr>
<tr>
<td>Damien Foundation</td>
<td>• DR Congo</td>
</tr>
<tr>
<td>Dominican Republic National Tuberculosis Programme</td>
<td>• Course on Supervision and Tuberculosis Control</td>
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<tr>
<td>European Commission (EC)</td>
<td>• Integrated HIV Care (IHC) programmes in DR Congo and Benin</td>
</tr>
<tr>
<td>French League Against Cancer</td>
<td>• Tobacco control and cancer prevention research</td>
</tr>
<tr>
<td>French Ministry of Culture and Communication</td>
<td>• 36th World Conference on Lung Health</td>
</tr>
<tr>
<td>French Ministry of Foreign Affairs</td>
<td>• Technical support to national tuberculosis programmes of Benin, Cameroon, Cote d'Ivoire, Cuba, Democratic Republic of the Congo, Haiti, Madagascar, Nigeria, Uganda, and Vietnam</td>
</tr>
<tr>
<td></td>
<td>• Operational research in Benin, Cameroon, Cuba, Nigeria, and Vietnam</td>
</tr>
<tr>
<td></td>
<td>• Educational activities: 36th World Conference on Lung Health, International TB Course in Benin, TB in large cities seminar in Senegal</td>
</tr>
<tr>
<td></td>
<td>• Translation and production of IJTLD articles (print and electronic versions) and CD-ROM in French</td>
</tr>
<tr>
<td></td>
<td>• Core activities</td>
</tr>
<tr>
<td>German Leprosy Relief Association (GLRA)</td>
<td>• Advanced AFB Microscopy &amp; EQA Course/Ethiopia</td>
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<tr>
<td>GlaxoSmithKline/Spain</td>
<td>• Publication of Manual de enfermedades respiratorias</td>
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<tr>
<td>Global Alliance for TB Drug Development</td>
<td>• Clinical trials</td>
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<tr>
<td></td>
<td>• 36th World Conference on Lung Health</td>
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<tr>
<td>Global Fund to Fight AIDS, TB, and Malaria</td>
<td>• Intensive courses on TB for medical specialists in Honduras and Dominican Republic</td>
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<tr>
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<td>• Eastern Region Nurses and Allied Professionals (NAPS) network project</td>
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<tr>
<td>Grès Médiation</td>
<td>• General practitioners and tobacco control study</td>
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<tr>
<td>International Asthma Council</td>
<td>• Publication of the revised asthma guide</td>
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<tr>
<td>International Tuberculosis Foundation (ITF) –</td>
<td>• Child Lung Health Project/Malawi</td>
</tr>
<tr>
<td>with grants from the Bill &amp; Melinda Gates Foundation</td>
<td>• 36th World Conference and Lung Health</td>
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<tr>
<td>International Tuberculosis Foundation (ITF)</td>
<td>• Annik Rouillon Documentation Centre (ARDOC)</td>
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<tr>
<td>International Union for Health Promotion and</td>
<td>• Tobacco control research</td>
</tr>
<tr>
<td>Education (IUHPE)</td>
<td>• AFB Quality Issues poster</td>
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<tr>
<td>Institute of Medical and Veterinary Science</td>
<td>• International TB Course in Vietnam</td>
</tr>
<tr>
<td>(South Australia)</td>
<td>• To enhance the capacity of The Union to address major public health threats related to lung diseases through technical assistance, education, and research</td>
</tr>
<tr>
<td>The Netherlands Medical Committee</td>
<td>• Technical assistance in Sudan, Senegal, and Nepal</td>
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<tr>
<td>Norwegian Agency for Development Cooperation</td>
<td>• Summer research intern for Tobacco/Asthma Divisions</td>
</tr>
<tr>
<td>(NORAD)</td>
<td>• AFB Quality Issues poster</td>
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<td>• AFB Microscopy Training manual</td>
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<tr>
<td>Norwegian Association of Heart and Lung Patients</td>
<td>• Core activities</td>
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<td>(LHL)</td>
<td>• Annik Rouillon Documentation Centre (ARDOC)</td>
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<tr>
<td>Pennsylvania State University Minority International Research &amp; Training Programme (MIRT)</td>
<td>• Malawi Child Lung Health Project</td>
</tr>
<tr>
<td>Research Institute of Japan (RII)</td>
<td>• 36th World Conference on Lung Health</td>
</tr>
<tr>
<td>Estate of Richard Riley and the Barbara S Ellis Trust</td>
<td>• To enhance the capacity of The Union to address major public health threats related to lung diseases through technical assistance, education, and research</td>
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<tr>
<td>Rotterdam TBC Fund</td>
<td>• Technical assistance for Benin</td>
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<td>The Scottish Executive</td>
<td>• AFB Microscopy Course/Taipei</td>
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<tr>
<td>Stop TB Partnership</td>
<td>• Technical assistance for Senegal, Brazil, and DR Congo</td>
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<td>• AFB Microscopy Course</td>
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<td>• Junior consultant training programme</td>
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<tr>
<td></td>
<td>• Nursing workshops and support of Nurses and Allied Professionals (NAPS) networks; courses for nurses in Spanish</td>
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<td>• Health policy transfer workshop</td>
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<td>• International TB Control courses/Vietnam &amp; Tanzania</td>
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<td>Swiss Agency for Development Cooperation</td>
<td>• To enhance the capacity of The Union to address major public health threats related to lung diseases through technical assistance, education, and research</td>
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<td>Swiss Pulmonary League</td>
<td>• Technical assistance for Senegal</td>
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<tr>
<td>Taiwan National Tuberculosis Association</td>
<td>• AFB Microscopy Course/Taipei</td>
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<tr>
<td>Tuberculosis Coalition for Technical Assistance (TBCTA) with financial support from USAID</td>
<td>• Technical assistance for Senegal, Brazil, and DR Congo</td>
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</tr>
<tr>
<td></td>
<td>• AFB Microscopy Training manual</td>
</tr>
</tbody>
</table>
Benefactor profile

Richard Lord Riley, MD (1911-2001)

Richard L. Riley was a longtime member and benefactor during his life, so it is not surprising that he chose The Union as a beneficiary of his estate. Both tuberculosis and lung disease were the main focus of his career in medicine and public health. The mechanisms by which tuberculosis and other airborne respiratory infections were transmitted from person to person, and how air might be disinfected, were the subject of his most important life work as Chairman of Environmental Hygiene, Johns Hopkins School of Public Health.

Before that post, he had also been a pioneering respiratory physiologist on the Bellevue Chest Service, grappling with the quantitative aspects of oxygen transport and developing early methods of measuring oxygen tensions in the blood. While that work was ultimately supplanted by newer technology, his contributions to tuberculosis transmission and its control, especially with upper room germicidal irradiation, remain the seminal work in the field to this day. Indeed, in an era of emerging infectious diseases, SARS, MDR-TB, and threat of pandemic influenza, Riley’s work has taken on renewed significance. As a medical student at Harvard, Richard worked with William Firth Wells, the industrial hygienist who had developed the first air centrifuge to capture and culture microorganisms from the air. Although, Wells credited Riley for the “droplet nuclei” concept of person-to-person airborne transmission, they both share that honour. In the photograph, taken in 1996 in his Petersham, Massachusetts home, Richard sits at the harpsichord he built and played in a chamber group, holding a portrait of Wells with his air centrifuge. In his latter years he enthusiastically contributed to plans to re-establish an experimental ward in South Africa similar to the one in Baltimore he used to prove and quantity airborne transmission tuberculosis. He would have been pleased to have known that the AIR (Airborne Infections Research) facility is now operative, continuing the important work he and Wells began more than 70 years ago. His generous donation to The Union, likewise, will assure that his contributions to the fight against TB and lung disease will continue at the global level.

Edward A Nardell, MD
Associate Professor of Medicine
Brigham & Women’s Hospital
Boston, Massachusetts
We would also like to thank the following Constituent, Organisational, and Individual members for their support:

**DONOR ACKNOWLEDGEMENTS**

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ALGÉRIA: Comité Algérien de Lutte contre la Tuberculose
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BANGLADESH: National Anti-tuberculosis Association of Bangladesh
BELGIUM: Belgian Lung and TB Association
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ESTONIA: Tartu University Clinics, Lung Clinic
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GEORGIA: National Tuberculosis Programme
GERMANY: Deutsches Zentralkomitee zur Bekämpfung der Tuberkulose – Lungenklinik Heckeshorn
GUATEMALA: Liga Nacional Contra la TB
GUAYANA: Georgetown Chest Clinic, The Guayana Chest Society
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NEPAL: Nepal Anti-Tuberculosis Association – Central Office
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TAIPEI, CHINA: National Tuberculosis Association
TUNISIA: Ligue Nationale Contre la TB et Maladies Respiratoires
TURKEY: Turkish Anti-TB Association, Cumhuriyet Universitesi
UGANDA: National Tuberculosis and Leprosy Programme
UNITED KINGDOM: British Thoracic Society
UNITED STATES OF AMERICA: American Lung Association
VIETNAM: National Hospital of TB and Respiratory Disease
YEMEN: Ministry of Health – Tuberculosis Department

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