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38th World Conference on Lung Health

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Partnerships are the way forward in the fight against TB

SAfAIDS Southern Africa HIV/AIDS Information Dissemination Service

MRD Media Resource Desk

Inside this issue:

By Michael Gwaba, Zambia

New tuberculosis (TB) treatment and prevention tools are desperately needed, according to members of the Stop TB Partnership New Diagnostics Working Group convened during the 38th Union World Conference on Lung Health in Cape Town.

The working group aims to coordinate and facilitate the development of widely accessible diagnostic tests to help accelerate control of the global TB epidemic and has been expanded and restructured to allow it to focus on a wider range of activities.

But as the working group focuses on restructuring, medical personnel around the world face the challenge of making antiretroviral therapy (ART) and TB treatment accessible to rural communities. The working group should be focusing on partnering with governments and other international stakeholders to make treatment, care, support and new diagnostics available in every rural and urban health centre.

An example of such a partnership is the relationship between the Japanese International Corporation Agency (JICA) and two district health centres in Mumbwa and Chongwe in Zambia. This partnership provides mobile ART and TB services to rural hospitals within the district so that ART and diagnostics are made available to even the most remote areas.

In the past, many people have dropped out of ART and TB treatment programmes because they could not afford the transport costs associated with getting themselves to treatment centres, but many people have been receptive to the mobile clinic. Through this partnership, JICA has provided District Health Management Teams (DHMT) with the vehicles needed to make these trips to rural areas on a fortnightly basis and has trained health centre and support staff in HIV management, diagnostics, testing and adherence counselling.

The DHMT provide the fuel for the vehicles and the allowances for members of staff who go to rural communities. Dr Christopher K Dube, the Director of Health at Mumbwa District Hospital, said the mobile clinic had helped decongest the district hospital.

The programme has also helped patients adhere to their medication and treatment regimes. But Dube said the programme still faced several challenges, particularly in the area of diagnostics, since blood specimens, for analyses such as CD4 tests, had to be taken to the district hospital for testing and results were only available after two weeks.

The district health facility still does not have the diagnostic facilities it needs to conduct liver function tests and full blood counts. Medical staff in the hospital's ART section rely on World Health Organization (WHO) staging and the CD4 count results, while the laboratory that controls TB testing still relies on lengthy tests using old Carl Zeiss Nielssen microscopes. Not only are there not enough staff to carry out the tests but there is also not enough room at the facility for TB to be cultured.

The Global Plan to Stop TB highlights the need for the working group to bring together governments, other stakeholders and the manufacturers of testing equipment so that they can enter into agreements over the provision of equipment.

We have seen the success of partnerships in the fight against HIV and it is vital to replicate this in tackling TB. It is essential that communities are represented at the working group on diagnostics because these delegates are able to speak on behalf of the voiceless and tell decision makers what people really want in terms of treatment, care, support and diagnostics.

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Conference throws spotlight on growing TB threat

CAPE TOWN, 9 November 2007 (PlusNews) - The 38th World Conference on Lung Health started in Cape Town on 9 November, bringing together more than 3,000 scientists in the ongoing battle against tuberculosis (TB) and other respiratory diseases.

The 4-day event, usually held in Paris, pulls together international donors, scientists, governments, civil society and the private sector. This year there is a special focus on the growing problem of drug-resistant forms of TB and the increasing numbers of people who are co-infected with HIV and TB.

Some experts have blamed the growing problem of drug-resistant TB on the failure of TB control programmes to properly motivate and supervise patients to complete their 6-month course of first-line TB medication.

The rise of drug-resistant TB has highlighted deficiencies in diagnosing, treating, and preventing the disease. The main method of diagnosis is over a century old, the only vaccine against TB is partially effective and dates back more than eight decades, and the cocktails of antibiotics used in the six-month treatment of the disease are 40 years old.

Experts have also argued that without new diagnostics and treatment - preferably with faster-acting drugs - governments are not going to meet the Millennium Development Goals for TB, or the targets set out in 2006 by the Stop TB Department of the World Health Organisation (WHO), which provides technical advice and guidelines for the global TB response.

On the eve of the conference Dr Mario Raviglione, of the Stop TB Department, said funding for the WHO's Global Plan to Stop TB 2006-2015 was about half a billion dollars short of its US$900 million target budget for 2007. More funding was needed for research and development, and to improve operational implementation of existing and new anti-TB strategies.

Raviglione said there were preliminary hints that the worldwide TB epidemic might have peaked, possibly as a result of fewer new infections in countries in the former Soviet Union and Africa.

However, with about 880 million new active infections each year, over 1.6 million deaths, and a third of the world's population infected with latent TB - which can develop into active TB, especially when the immune system is compromised - the battle against the disease had to be ratcheted up.

Experts now agree that the HIV and TB epidemics are so closely entwined that they need to be treated as one. HIV and TB have a synergistic relationship: HIV attacks the immune cells that protect against TB, while TB-infected cells are more susceptible to HIV. The two diseases also tend to cause the highest burden of disease among the same socio-economic groups. Research into TB is gathering pace after decades of neglect, with six candidate vaccines developed by the Aeras Global TB Vaccine Foundation, a non-profit organisation, approaching the stage of human clinical trials. Aeras director Dr Jerald Sadoff said two candidate vaccines were already being tested in South Africa, as part of his organisation's drive to develop safe, effective and affordable TB vaccines.

Dr Maria Freire, of the Global TB Alliance for TB Drug Development (TB Alliance), said her organisation had 9 drugs in the development pipeline. Of these, 1 is about to enter large-scale stage III clinical trials to test efficacy, as the final requirement before applying for registration of the drug.

On the diagnostic front, Dr Giorgio Roscigno, CEO of the non-profit Foundation for Innovative New Diagnostics, announced that several new tools were heading towards the market, including 1 being tested by South Africa's Medical Research Council that could detect TB - and even drug-resistant TB - within a day.

The Tuberculosis Strategic Plan for South Africa 2007-2011, which sets targets for reducing both drug-susceptible and drug-resistant TB, was released by the government on the eve of the conference's opening.

South Africa, China, Russia and India account for two-thirds of cases of extensively drug-resistant TB (XDR-TB), which are resistant to multiple first-line and second-line treatments and are, in effect, often incurable.

A South African government presentation revealed that 481 XDR-TB cases had been diagnosed by the end of October 2007, of whom 216 had died. Thami Mseleku, Director-General of the Department of Health, said the government was looking at changing legislation to make it easier to confine defaulting TB patients as a last resort.

On a worldwide scale, about 4 percent of TB infections are thought to be multidrug-resistant, while XDR-TB has been diagnosed in 41 countries.

http://www.plusnews.org/Report.aspx?ReportId=75233

Simple measures could radically reduce TB

CAPE TOWN, 14 November 2007 (PlusNews) - Better healthcare measures could curb the tide of tuberculosis (TB) and other lung diseases, even with existing drugs and technology. This was the final message from the 38th World Conference on Lung Health in Cape Town.

At the conclusion of the 4-day meeting this week, Nils Billo, executive director of the International Union against Tuberculosis and Lung Diseases (The Union), said that improving infection control, even using simple and cheap methods, could significantly reduce the spread of tuberculosis (TB) and its death toll, especially among people with HIV.

However, the 3,000 delegates heard that better drugs and vaccines for treating and preventing TB, and faster and more accurate diagnostics were needed if the disease were to be eradicated. Much of the research into finding effective, practical and affordable technologies is being done by not-for-profit partnerships, funded by government, donors and the private sector.

TB has suffered from a lack of attention by policy-makers and funders for decades because the disease was relatively well contained in developed countries. However, an outbreak of TB in New York in the 1990s, combined with the growing toll of TB among people with HIV/AIDS, has been putting the disease on policy and research agendas.

Diagnosing TB can be difficult, especially where healthcare facilities have limited or no access to expensive machinery such as x-ray machines, or laboratories capable of the lengthy culturing of sputum samples to detect the bacillus.

But six promising TB vaccines are being shepherded towards human clinical trials within the next year, but even if one of them proves sufficiently effective, it is unlikely to be available for worldwide use before 2015.

New drugs

The Global Alliance for TB Drug Research announced that it has two new drugs for treating TB in development; one of them, moxifloxacin, is among the most advanced potential new TB drugs, and is about to go into a phase 3 clinical trial involving more than 2000 volunteers in Kenya, South Africa, Tanzania and Zambia.

The organisation hopes its new antibiotic will eventually be used as a substitute for existing medications, and help shorten the current 6-month treatment period with first-line drugs.

Unfortunately, moxifloxacin is not effective against highly drug-resistant forms of TB. The rising number of drug-resistant cases was a focus of this year's Lung Conference, along with the spread of TB among HIV-positive people.

TB cure rates are low worldwide, but particularly in developing countries with high burdens of the disease, often fuelled by HIV/AIDS. In South Africa, successful treatment for TB varies widely across provinces and districts: one district in Mpumalanga Province has reported cure rates of just 12 percent, compared to a national success rate of just under 58 percent, which is already well below the target of 85 percent recommended by the WHO.

Drug-resistant forms of TB have been driven by unsuccessful first-line TB treatment, with many patients failing to complete the 6-month course of medication. Much of the transmission of resistant strains of TB occurs in healthcare settings.

Multidrug-resistant (MDR) TB is resistant to at least two of the most effective and commonly used first-line treatments for the disease, while extensively drug-resistant (XDR) TB is also impervious to at least one of the second-line drugs. Worldwide, it is estimated that four percent of TB infections are resistant to multiple drugs, although the figure is as high as 20 percent in some areas.

More money

The WHO says it needs US$2.15 billion to fully implement its MDR-TB and XDR-TB Response Plan 2007-2008. This could potentially save 134,000 lives over the 2-year period by treating 160,000 people with MDR forms of the disease, and another 16,000 with XDR-TB.

An estimated 14 million people worldwide are co-infected with TB and HIV, while more than two-thirds of people infected with TB in sub-Saharan Africa are also living with HIV/AIDS.

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South Africa: Treat TB, HIV As 'A Single Threat'

Business Day
7 November 2007

Tuberculosis (TB) and HIV should be thought of as a single challenge instead of two separate diseases, Dr Greg Hussey of the University of Cape Town's Institute for Infectious Diseases said yesterday.

Hussey called for TB to be considered not only as a medical problem, but also as a social and community problem that required a "broader approach" if it was to be solved.

Hussey told reporters before the start of the 38th Annual World Conference on Lung Disease that the combination of TB and HIV should not be regarded as a "new" epidemic and should be seen as a single threat.

A national consultative forum was needed where "all voices" in the medical field and elsewhere could be heard. SA needed to start thinking "out of the box".

"Let's not think along traditional lines and traditional models in SA where you lock up someone with multiple-drug-resistant TB (MDR). We need to consider the alternatives and we have not yet tried those alternatives."

Hussey said problems with MDR and extreme drug-resistant (XDR) TB reflected the failure of SA's national TB control programme. He said 250000 new cases of TB were reported a year and the number was growing. Of these, 50000 were children.

He said that of TB cases now, 50% involved people who were HIV-positive. More than half of all those infected with TB and HIV would die.

Hussey said that while the World Health Organisation's target for curing TB was 85%, SA managed only an average of 50%, while in parts of Mpumalanga and Kwa- Zulu-Natal it was as low as 30%, which was "a disaster".

Gregg Gonsalves, of AIDS Rights Alliance for Southern Africa, said while the health department had been warned of XDR TB's impending spread from east to west, there had been no action by the government.

SA, with the largest AIDS epidemic rate in the world and a big TB epidemic, had to provide leadership in southern Africa, "but if you look at facts and figures, it's not there. And I'm saying this in the context of the failure of global political leadership on TB," Gonsalves said.

Hussey said more people with HIV should be tested for TB, and the testing procedures should be made easier. Anti-infection programmes were needed in clinics, schools and homes.

There were many simple procedures available which were not "rocket science" and they did not need to be costly, he said.

http://allafrica.com/stories/200711070322.html

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The two diseases reinforce each other in the body, each weakening the immune system's defences against the other.

Conference delegates heard of the critical need to co-ordinate action against both diseases, to create an effective response to what some presenters characterised as an epidemic of co-infection. Speakers repeatedly pointed out that the fight against TB has been relatively poorly resourced, compared to the more high-profile HIV/AIDS fight.

On the day the Lung Conference ended, the Global Fund to Fight Aids, TB and Malaria announced US$1.1 billion in new grants, but TB accounted for only 10 percent of funding, compared to 48 percent for HIV/AIDS and 42 percent for malaria.

Among the calls for action at the conference was to make greater use of one of the most effective anti-TB drugs, Isoniazid, (also called isonicotinyl hydrazine, or INH). Research in Brazil found that it could prevent TB infection in HIV-positive patients by up to 75 percent, if used in conjunction with antiretroviral therapy.

But presenters also emphasised the positive impact that better healthcare management could make, including basic steps to prevent the spread of TB in healthcare settings: opening windows, reducing the number of TB patients in a ward, and even simply separating coughing - and therefore potentially infectious TB patients - from others.

The 2008 World Conference on Lung Health will take place in Paris.

http://www.plusnews.org/Report.aspx?ReportId=75304

Africa: HIV And TB - An Ever Threatening Combination

Inter Press Service
(Johannesburg)
The prevalence of tuberculosis (TB) amongst people living with HIV in sub-Saharan Africa has reached crisis levels and will escalate further if decisive steps are not taken, says a new report by the Forum for Collaborative HIV Research -- 'HIV-TB Co-Infection: Meeting the Challenge'.

The forum is a public-private initiative based in Washington.

With more than 60 percent of HIV positive people living in sub-Saharan Africa, the region has proved fertile ground for TB: the compromised immune systems of AIDS patients are often unable to combat the disease.

In addition, failing health systems and insufficient knowledge, research, data collection and funding are encouraging the spread of HIV-TB across sub-Saharan Africa and the rest of the world, notes the study -- released Friday. Half of new TB cases now occur amongst people in sub-Saharan Africa who have contracted the AIDS virus, while a third of the world's 40 million HIV positive people are infected with TB.

"The global threat of the HIV-TB co-epidemic is not hypothetical. It is here now; yet the science and co-ordination that are needed to stop this are utterly insufficient," said Veronica Miller, co-author of the report and director of the Forum for Collaborative HIV Research.

"HIV and TB programmes and research funding have run through completely different funding and administrative streams. Because of this, opportunities for taking both diseases into account, instead of tackling either one of them, have been missed." Miller told IPS that funding for new drugs and diagnostics to treat TB is very limited, "This despite these new tools (being) urgently needed, considering the effects that HIV has on the TB disease course and vice versa."

"Action is needed now, especially for sub-Saharan Africa, where not only half of new cases are HIV co-infected -- but where drug-resistant TB is in the rise," said Miller.

TB is an airborne disease which mostly affects the lungs and is transmitted through coughing -- also a symptom of the illness -- and sneezing, spitting or speaking.

In instances where the disease has reached an advanced stage, patients may cough up blood. Other symptoms of this highly contagious and potentially deadly condition include loss of weight and appetite, fatigue, and the development of a fever.

Tuberculosis bacteria can remain dormant in a patient, who is then unable to pass on the disease. TB becomes reactivated if a person's immune system is compromised, as occurs with HIV infection.

"People who are HIV negative and have dormant TB have a 10 percent (chance) of developing active TB during their lifetime," said Stephen Lawn, a medical researcher at the University of Cape Town in South Africa. "When HIV is in an advanced stage, this can be as high as 30 percent."

Lawn has done extensive work on HIV-TB, and is active in townships -- mainly poor areas set aside for blacks under apartheid -- where the rates of HIV-TB are among the highest in the world.

Those HIV positive persons who do develop TB face slim chances of survival: 90 percent of people living with HIV/AIDS die within months of contracting the disease. "Their immune systems are too weak to fight both HIV and TB," Lawn explained.

TB can usually be cured with a six-month course of antibiotics to which patients must rigorously adhere. Treatment can also be used to prevent the dormant bacteria from becoming active.

"We need to take into account both diseases (HIV and TB) at every single opportunity. Every time someone is tested for one, they should be tested for the other," said Miller.

Diagnosing TB in HIV patients can prove difficult, however.
One method of detecting the illness involves injecting a protein from TB bacteria into the skin of the arm. If this causes swelling, it may be a sign that the person has dormant or active TB.

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TB control to strengthen health systems

By Henry Neondo

Speakers at a session held during the 38th Union World Conference on Lung Health in Cape Town on Saturday explored the role tuberculosis (TB) control could play in bolstering health systems worldwide.

Global drug treatment targets and the TB-related targets included in the United Nations' Millennium Development Goals will not be met until health systems are strengthened, according to Diana Weil of the World Health Organization (WHO) Stop TB Department.

Weil said that national TB control programmes need better tools to improve health-care systems, optimize the use of shared resources and expertise and adopt system innovations.

She also said that organizations working to prevent and treat TB should look for better ways to engage with organizations such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, the International Health Partnership, the Global Health Workforce Alliance and the Health Metrics Network.

Also during the session, Knut Lonroth, also of WHO's Stop TB Department, examined elements of the Stop TB Strategy and directly observed treatment – short course (DOTS) programme that could help improve health infrastructures.

According to Lonroth, one of the goals of the Stop TB Strategy is to strengthen health systems, and DOTS programmes focus on such efforts. But the health-infrastructure components of DOTS are undermined by certain conditions, such as possible competition for existing resources and a lack of coordination in training for health-care workers, Lonroth added.

Lee Richardson, a Canadian MP said that new investment was needed to support the fight against TB.

"We cannot escape the role of increased investment in the fight against TB as current drugs are old, and new diagnostic tools are needed . . . Investment because we are being confronted by [multi-drug resistant and extensively drug resistant TB] on a significant scale in the developed world," he said.

In developing countries such as Zimbabwe , the prevalence of HIV has undermined the government's response to TB in several ways. According to Zimbabwe 's Minister of Health and Child Welfare, David Parirenyatwa, not enough has been done to tackle the growing threat.

"I have to admit, as a government, we have not done enough to address the issue of tuberculosis, and this is something that I have stated publicly," he said during an interview with Partners Zimbabwe. "The focus on HIV has largely driven our attention from TB, and this is something we have to redress as a matter of urgency."

"We recently launched the fixed-dose combination for TB treatment, which will make it easier for the uptake of drugs and adherence," he added. "But much more work needs to be done to integrate TB and HIV. My ministry needs to push up the management systems in order to have appropriate advocacy on TB."

According to the latest WHO data, Zimbabwe has the lowest treatment success rate among all TB high-burden countries, with just over half of all cases successfully treated.

Without a complete course of antibiotics, patients risk TB re-emerging in a drug-resistant form, which further challenges attempts to tackle the disease.

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But, because people with HIV have a weaker immune system, this swelling does not always appear. As a result, "These people will receive their treatment too late, which increases their chances of developing active TB and infecting others," Lawn told IPS.

"On average, someone who suffers from HIV-TB infects 20 to 30 people in the course of his or her illness."

In its recommendations for addressing the co-epidemic, 'HIV-TB Co-Infection: Meeting the Challenge' calls for more funds to research TB and HIV drug interactions in adults and children. Additionally, new studies should be done on HIV-TB co-infection in children. In South Africa, for instance, almost 25 percent of HIV-infected children contract TB annually.

http://allafrica.com/stories/200711030001.html

Tuberculosis is curable - more still needs to be done

The 38th World Conference on Lung Health, was held in Cape Town, South Africa from 6 to 12 November, 2007.

The conference was held with a special focus on the growing problem of drug-resistant forms of TB and the increasing number of people who are co-infected with HIV and TB.

The conference brought together more than 3000 delegates including scientists and researchers from all over the world.

TB has become the leading cause of death among 40 million people living with HIV in the world despite the fact that it is curable.

In Sub-Saharan Africa, 70 to 80% of people with TB are co-infected with HIV.

While much has been done with regards to HIV prevention, treatment, care and support as well as the dissemination of information on HIV and AIDS, nothing much has been done to fight the battle against TB.

The Conference however highlighted the basic steps to prevent the spread of TB in healthcare settings which included opening windows, reducing the number of TB patients in a ward and even separating coughing and potentially infectious TB patients from others.

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For more information please contact :
Beatrice Tonhodzayi
SAfAIDS
Media Resource Desk
17 Beveridge road
Avondale, Harare
Zimbabwe
Phone: +263 4 336193/4 307098
Fax: +263 4 336195
Email:
mediadesk@safaids.org.zw
Website :
www. mediaresourcedesk.org

Scientists Announce Creation of Gel-Based Biochip To Diagnose TB

16 Nov, 2007 -Scientists from the Engelhardt Institute of Molecular Biology in Moscow on Thursday announced the development of a new technology that uses gel-based biochips to identify different strains of tuberculosis, the Moscow Times reports. The technology takes fluid from a person believed to have TB and places it on a biochip that is analyzed by a computer. The process then generates a series of fluorescent patterns that can be used to determine the specific strain of TB. The test also can be used to determine whether the strain of TB is drug-resistant and to which drugs it is resistant, according to researchers. The technology could reduce the cost of treatment because it would enable doctors to prescribe specific drugs to target the identified TB strain, the *Times* reports.

"We have a lot of international competitors working with biochips, but ours are the first in the world to have been certified by the Health and Social Development Ministry for medical use," Dmitry Gryadunov, head of the office of pathogen analysis at the institute, said. He added that the tests each would cost about 600 rubles, or about $25. There were 83 cases of TB per 100,000 people in Russia in 2004, which is approximately double the rate in Europe, according to the World Health Organisation (*Moscow Times*, 11/16).

Kaiser GlobalHealthReporting.org