CTB NEWS

Welcome to the latest edition of the Challenge TB Newsletter which brings you a snapshot of Challenge TB work, with stories from Afghanistan, Burma, Cambodia, Ethiopia, Kyrgyzstan and Namibia.

USAID
FROM THE AMERICAN PEOPLE

CHALLENGE TB

Above - Children, Nigeria - Photo: Tristan Bayly
Below - Screening elderly people for TB, Cambodia - Photo: Ngo Menghak

CHILDHOOD TB

ETHIOPIA

Three years ago Sister Danawit Berhanu, was assigned to work in a children's clinic, in a health center in Addis Ababa. She cared for and treated children with pneumonia, upper respiratory tract infections, diarrhea and other common illnesses. When she was trained, the problem of TB in children wasn't really covered.

She thought that TB was not such a big problem in children, and therefore she rarely looked for it. When the children did not respond to treatment with common medicines, the children were referred to higher level treatment centers and she never learnt their final outcome. Even though she treated thousands of children, she never identified a child with TB, but this changed when in August 2016 she was trained on childhood TB in a program supported by the Challenge TB project in Ethiopia.

In countries with a high burden of TB, children account for an estimated 15-20% of TB cases, but confirming the diagnosis of TB disease in children can be challenging as they often have no obvious symptoms of the disease and it is difficult for young children to produce a sputum sample for testing.

Challenge TB trained health care providers from pilot health centers to increase case finding of TB in children through the integration of TB in the management of neonatal and childhood illnesses (IMNCI) and included demonstrations on how to perform gastric aspiration, a technique that can be used to collect a sample that can then be tested for TB.

Despite receiving training on the symptoms of TB in children, it is not always easy for health care workers to translate what is learned in the classroom into real practice. As TB symptoms are similar to the symptoms of other common childhood diseases, staff can easily be overwhelmed by the number of children with symptoms which look like TB. To overcome this problem, the training also used on-the-job coaching and mentoring by experts from the Challenge TB project to help staff consolidate and hone their clinical skills.

Sister Danawit is now actively looking for and can confidently identify children with presumptive TB. She can take samples and has so far performed the procedure on eleven children. This has reduced both the need for referrals and the number of children lost to follow-up. As a health care provider this is very rewarding and motivating for Sister Danawit, and from a broader perspective, it is an opportunity to incorporate TB into the management of neonatal and childhood illnesses.

Before the pilot only 23 percent of children visiting the clinic were screened for TB, and after the training and on-site coaching, this had risen to over 96 percent. As a result, 48 presumptive TB cases were found and tested, resulting in six confirmed TB cases. This may seem small, but this is one pilot in one healthcare center, and every day, up to 200 children lose their lives to TB – a preventable and curable disease.

Sister Danawit performing gastric aspiration on a child, Ethiopia - Photo: Berhan Teklehaimanot

TB Billboards in Kabul, Afghanistan - Photo: MSH

INCREASING TB AWARENESS

AFGHANISTAN

Until the end of 2015, Afghanistan was among the 22 countries with the highest burden of TB. Despite the efforts of the National TB Program (NTP), only 41,800 new TB cases were detected in 2016, while the estimated number of annual cases is actually around 61,000 cases. This means that nearly 20,000 people are unaware that they have the disease, and are in the community, infecting those around them.

Led by MSH, the Challenge TB project in Afghanistan supports the NTP in meeting its target of detecting more TB cases and treating TB effectively.

The problem of finding and treating TB patients in Afghanistan has always been hampered by the fact that people have little knowledge about the disease, illness is stigmatized (many believe sick people are cursed), and many people use local healers who have little knowledge of the disease.

To increase community awareness of TB, the Challenge TB project conducted regular community and school events, and provided education for mullahs, teachers, and community elders. Over 14,000 community health workers and 2,000 family health group members have been trained on TB, and 150 TB patient associations have been established, each with 15 cured TB patients as members. The Challenge TB project funded TB infomercials which were broadcast regularly on both television and local radio stations, and billboards with TB messages that were installed in 160 busy areas.

As a result of these efforts, the most recent 'Afghanistan Demographic and Health Survey' found that 80% of those surveyed had heard of TB, 68% knew that TB is spread through coughing, and the majority know that the disease is curable.

Increasing knowledge is just one part of Challenge TB's wider strategy of strengthening health systems to end the TB epidemic in Afghanistan.

TB/HIV

NAMIBIA

Johannes Levy from Freedom Land in Windhoek, was diagnosed with TB in September 2016. At first, when he started getting sick he thought it was just a cold and that it would pass, but as time went on, he didn't get better, he lost his appetite and with it, a lot of weight. He finally went to the Katutura Intermediate Hospital for tests after his family encouraged him to go. He said "When they told me I had TB, I was shocked, I thought I was going to die, just like my grandfather who also had TB." He spent a week in hospital where he met a friend who was also suffering from TB, who encouraged him to stop drinking alcohol and to take his medication on time.

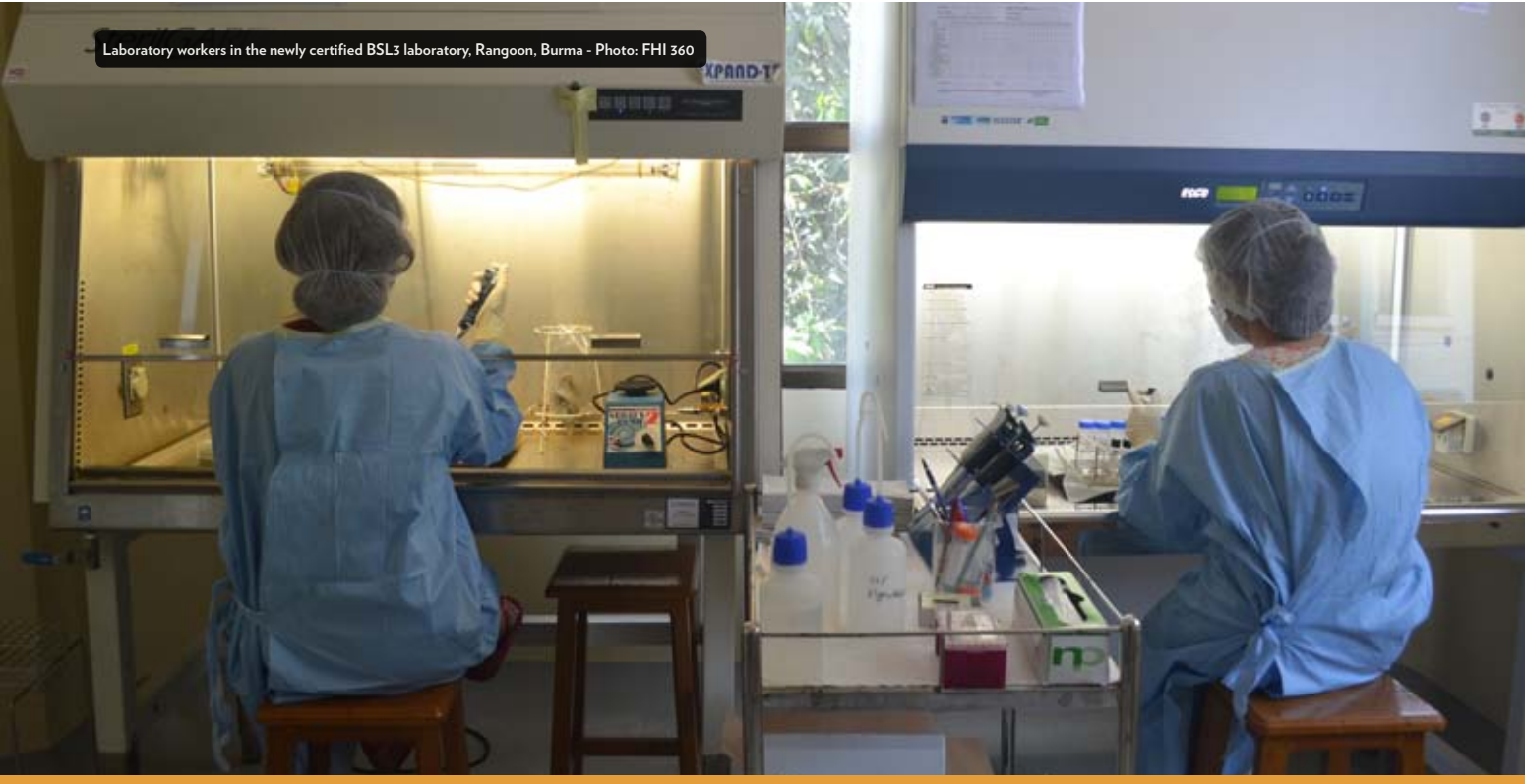
After a week he was released and had to visit the Challenge TB-funded Okuryangava Clinic to receive his medication in the community, and close to his home. Sticking to the treatment was hard, but with the support of those around him he has done it, and now he is cured.

Around 3500 patients have accessed TB treatment and referral services for HIV care at the TB DOT centre in Okuryangava since it opened in 2015. Speaking at the Challenge TB Milestone event in the run up to World TB Day, the US Ambassador to Namibia, Thomas Daughton said: "The Okuryangava clinic is a crucial health site in our combined effort alongside the Namibian government to fight TB and HIV."

In the whole Windhoek district, Challenge TB has supported access to comprehensive TB and HIV services for more than 1,000 people. Every one of those lives is important, and providing comprehensive care to those who didn't have it before, ensures they can continue to enjoy full and productive lives.

Current data indicates that there is a downward trend in TB cases, thanks to a heightened awareness of TB and the provision of comprehensive TB and HIV services in Namibia. The ambassador said: "The US government, through PEPFAR, has established strong collaborative relationships in the health sector over the years and one area that we have long recognized as key to the health of Namibians is TB. That's why USAID has been a strong supporter of the Challenge TB project."

Former TB patients Ndilimeke Gebart and her son Gabriel Nicodemus, Challenge TB Milestone Event, Namibia - Photo: KNCV



Laboratory workers in the newly certified BSL3 laboratory, Rangoon, Burma - Photo: FHI 360

SAFE, EFFICIENT & EFFECTIVE

BURMA

In 2015, there were 2,793 laboratory confirmed multidrug-resistant tuberculosis (MDR-TB) cases in Burma, over half of which were found in Rangoon, a region in lower Burma. In contrast, there are only three biosafety level 3 (BSL3) laboratories located in Rangoon, Mandalay and Taunggyi. BSL3 laboratories play a critical role in the diagnosis of TB and the monitoring of drug-resistant TB patients. This means the National TB Reference Laboratory (NTRL) situated in Rangoon, needs to handle an average of 150-200 sputum samples per day from seven states and regions in lower Burma and two states from northern and eastern Burma. Definitive laboratory results from the NTRL are crucial for getting fast and appropriate care for MDR-TB patients, and for monitoring their ongoing treatment. To get these results, laboratories must be able to run tests effectively, prevent specimen contamination, all the while keeping laboratory personnel and the environment safe.

The hub of laboratory safety is the biosafety cabinet (BSC) - an enclosed space that uses a system of airflow and filters to keep workers from breathing in dangerous biological and chemical substances, and preventing the samples from becoming cross-contaminated. In the NTRL, getting BSCs into the laboratory was an important step in being able to properly conduct the necessary procedures for the diagnosis of MDR-TB in patients. However, simply equipping laboratories with BSCs is not enough, every year they must be certified as working properly, and they need to be regularly maintained by certified technicians.

When the NTRL was upgraded to BSL3 in 2012, a local company was employed by the NTRL to provide annual maintenance. However, in 2015 when a Challenge TB laboratory specialist visited, it was found that the maintenance of BSCs was not being done properly and that the airflow was insufficient. To address this situation two technicians from the Supranational Reference Laboratory in Gauting, Germany, were employed to provide BSC certification and maintenance training to the staff of the TB laboratories in Rangoon, Mandalay and Taunggyi. The technicians also checked, calibrated and certified the existing BSCs.

Now the three TB laboratories in Burma not only have staff trained on how to conduct proper maintenance and certification of BSCs, but have also ensured that they are working in a safe environment. In this way, Challenge TB has brought safety systems into laboratories that are essential for quick and appropriate management for both drug-sensitive and drug-resistant TB patients in Burma. This ensures that patients are put on appropriate and effective medication, and are ultimately treated successfully.

NEW DRUGS BRING NEW HOPE

KYRGYZSTAN

Kyzylgul is a 38 year-old mother of two, whose life has been blighted by TB. Not only did she lose both her parents to the disease, but her younger brother as well. She lives in Issyk-Kul region, in the east of Kyrgyzstan.

Kyzylgul was diagnosed with extensively drug-resistant TB (XDR-TB) which is caused by bacteria that are resistant to isoniazid and rifampicin as well as any fluoroquinolone and any of the second-line anti-TB injectable drugs, which means her treatment options are severely limited.

Kyrgyzstan is among the 30 high multidrug-resistant TB (MDR-TB) burden countries in the world and according to the latest data, MDR-TB is now at 32 percent among new cases, compared to three percent of new TB cases worldwide. MDR-TB patients normally face two years of treatment that is toxic, complicated, involves hundreds of pills and injections, and carries severe side effects such as hearing loss. Until the end of 2016, there were no treatment options for XDR-TB in Kyrgyzstan, making the disease a death sentence.

Kyzylgul with a photo of her children - Photo: Olivier Le Blanc

Bedaquiline (Bdq) is a new drug that has recently been released specifically to treat patients like Kyzylgul, but its cost makes it difficult to access, especially for low- and middle-income countries. To solve this problem and get the drugs to those who need them most, USAID's Bdq donation program is providing 30,000 6-month courses of Bdq over the next four years.

In Kyrgyzstan, the USAID-funded Challenge TB project has collaborated with the Ministry of Health, the national TB program, the department of drug provision and the United Nations Development Programme (UNDP) to do all the necessary preparatory work for the introduction of Bdq through improved services, new databases, new clinical guidelines, training, and the customs clearance to allow importation of the new drugs.

On February 6, 2017, Kyzylgul was one of the first 26 patients who started being treated with Bdq. She is on treatment that is specifically designed for her, and consists of two injections and ten pills each and every day. The fact that this treatment involves painful injections, many pills and will take until December 2018 to be completed, highlights just how hard this disease is to cure.

The Challenge TB team is monitoring her treatment closely and has provided psychological support to ensure that she sticks to and completes her treatment. She is one of the first 16 patients on a regimen containing Bdq who became non-infectious just after two months of treatment.

Kyzylgul had to give up her job as an accountant because of her illness, and her husband left her when she contracted TB. The children, who were tested for TB and fortunately found to be uninfected, are currently being housed in a children's home until it is safe for them to return to their mother. Kyzylgul is desperate to be with them again and can't wait to hug them.

In 2015, an estimated 300,000 people developed MDR-TB worldwide. Through the USAID-funded Challenge TB project 50,990 cases of MDR-TB were successfully treated, meaning thousands of people like Kyzylgul now have the chance to live full and productive lives.

Mr. Kin back at work, Cambodia - Photo: Sam Sophan

CUT & DRIED

CAMBODIA

Mr. Ven Sok Kin is a barber, who lives with his wife and two sons in Prey Kuy, in Kampong Thom province. In 2007, Mr. Kin started suffering from classic TB symptoms including fever, night sweats, chest pain and a cough, so he decided to seek help at a private clinic. It is common for people in Cambodia to seek care outside of the public health facilities; because of easier access and the perception that there is a more friendly and higher quality of care in the private sector.

As he had no health insurance, he was forced to sell his wife's necklace so he could afford the cost of health services and treatment at the clinic. A sputum sample test confirmed that he had TB and he was put on treatment for six months.

A few months after he completed his TB treatment, the symptoms came back and he had to sell his cows and some farmland in order to pay for the treatment. When his symptoms did not improve, he finally decided to go to the public Kampong Thom hospital, where he was told that the TB was back again. He was started on a retreatment regimen which lasted for eight months and included painful daily injections. His previous TB history meant that this time he had to stay in the hospital for the first two months, during which time his wife had to care for him and their two children moved into his mother-in-law's house.

In late 2014 he began to feel sick once more and again sought care at Kampong Thom hospital.

His sputum smear was negative for TB, so he was admitted to the hospital for two weeks and treated for suspected pneumonia, but his illness did not improve. At this point the doctor decided to test him using GeneXpert. GeneXpert testing has become an essential part of diagnosing drug-resistant forms of TB. Not only can the test identify the bacteria which cause TB, it can rapidly test for resistance to the TB drug rifampicin.

At the time there were no GeneXpert machines at Kampong Thom hospital, so his sample was sent to Phnom Penh where the test revealed that he had drug-resistant TB. He was immediately referred to the MDR-TB ward in Phnom Penh for treatment.

The full 20 month treatment course is nearly complete and he is much better, so much so that he has returned to work and is once more able to provide for his family. This time he is confident that he will be fully cured.

The support Challenge TB provided during his treatment, from daily medical treatment via directly observed treatment, follow-up care at the local hospital, money for transport to the health facility, counseling, and food support were all vital to Mr. Kin's recovery, something he is very grateful for. Mr. Kin's story highlights how Challenge TB's expansion of GeneXpert testing to 64 sites across the country (and now Kampong Thom Hospital as well), is reaching those in greatest need.

PUBLICATIONS

Audiometry in the Management of Drug-Resistant TB
This guide is intended to help health providers use audiometry to make informed and patient- centered decisions to prevent and manage ototoxicity resulting from second-line anti-TB injectables.

Bedaquiline Dosage Charts (zipped package)
This is simple job aid for nurses and also visual information for patients. As the use of Bedaquiline is completely new, and there are changes in administration of the drug during the treatment course, this visual material will help healthcare workers to learn the changes and ensure patients receive the right dosage. (Available in English/Ukrainian/Russian).

Guidance on requirements for QTc measurement in ECG monitoring when introducing new drugs and shorter regimens for the treatment of Drug-Resistant TB
This document describes the steps necessary to measure the corrected QT interval from ECG monitoring for patients being treated either with the shorter treatment regimen or the new drugs for drug-resistant TB treatment. In addition, guidance is provided in regard to the requirements that should be considered when procuring ECG machines for monitoring of patients. (Available in English/Ukrainian/Russian).

Articles:

Economic support intervention improves tuberculosis treatment outcomes in rural Nigeria

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What is Challenge TB?

Challenge TB is the flagship global mechanism for implementing USAID's TB strategy as well as contributing to TB/HIV activities under the U.S. President's Emergency Plan for AIDS Relief (PEPFAR).

KNCV TUBERCULOSIS FOUNDATION

Challenge TB is led by KNCV Tuberculosis Foundation and implemented by a unique coalition of nine organizations:
American Thoracic Society (ATS), FHI 360, International Union Against Tuberculosis and Lung Disease (The Union), Interactive Research & Development (IRD), Japan Anti-Tuberculosis Association (JATA), Management Sciences for Health (MSH), PATH and the World Health Organization (WHO).

Challenge TB contributes to the WHO End TB Strategy targets:

Vision: A world free of TB
Goal: To end the global TB epidemic
By 2025: A 75% reduction in TB deaths (compared with 2015) and less than 50 cases per 100,000 population.

Global Fund:

Challenge TB assists countries with the full Global Fund life cycle, from epi-analysis and national strategic plans to concept notes and full implementation.

Overarching:

Challenge TB is a cost-effective and efficient mechanism with a particular emphasis on reaching out to vulnerable communities. It assists countries to move towards universal access through a patient-centered approach that identifies and addresses the needs of all patients including women and children.

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