



## U.S. President's Emergency Plan For AIDS Relief



### Tuberculosis Infection Control

Individuals infected with HIV and tuberculosis (TB) are highly susceptible to developing active tuberculosis. The transmission of multi drug-resistant tuberculosis (MDR-TB) and extensively drug-resistant TB (XDR-TB) among HIV-infected individuals in hospitals has been documented in sub-Saharan Africa, with extremely high case-fatality rates. TB's impact on morbidity and mortality among people living with HIV and drug-resistant TB is increasing in many countries supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). Therefore, it is critical that countries scale-up TB infection control (TB IC) programs in health care facilities and other congregate settings, including HIV care and treatment sites.

The 2009 *World Health Organization Policy on TB Infection Control in Health-Care Facilities, Congregate Settings and Households* is available to inform country guidelines and strategic plans.

#### **PEPFAR supports TB Infection Control Activities:**

TB infection control activities supported by PEPFAR include:

- Supporting the development and application of new strategies, including a facility-level TB infection control implementation approach with training video and job aids to rapidly increase TB IC knowledge and practices.
- Training and technical collaboration, including:
  - Supporting infection control experts to provide assistance to countries, such as facility risk assessments and engineering consultations
  - Expanding the pool of national and international consultants, including engineers, architects, and physicians, who are able to provide technical assistance
  - Supporting international training courses for individuals at national level or in national referral facilities, building assessment capacity and developing TB IC actions plans
- Disseminating technical recommendations on “Applying TB Infection Control Strategies to Renovation/Construction Projects” to increase knowledge of managerial, administrative, and environmental controls for infrastructure projects supported by PEPFAR.
- Participating in the development of WHO TB IC Guidelines, and serving as chair of the STOP-TB Partnership Infection Control Subgroup
- Collaborating with USAID, the KNCV Tuberculosis Foundation, and the Rwanda Ministry of Health in establishing a Center of Excellence for the Programmatic Management of Drug Resistant TB and Infection Control for East and Central Africa
- Implementing surveys to measure the burden of TB among healthcare workers
- Developing research study templates to evaluate the outcome and impact of TB IC measures

**PEPFAR at work:**

The United States is supporting countries around the world as they take a leadership role in responding to TB and HIV.

**In Kenya**, the 2009 National Guidelines for Tuberculosis Infection Prevention were developed and 30 Ministry of Health staff were trained in TB IC procedures. Forty-nine staff were trained through two provincial IC trainings to conduct local facility risk assessments and develop policy for administrative, environmental, and personal protection measures applicable to all levels of health care facilities. An IC workshop was held to strengthen coordination of TB IC with other IC activities, including waste management, blood safety, injection safety and respiratory infection control.

**In Rwanda**, TB infection control assessments and training initiated in 2009 continue at district hospitals, and they are being expanded to include health centers. In 2010, the most in-need health facilities continued to receive renovations to improve infection control. Routine supervision of TB infection control practices are being implemented and integrated into existing supervision frameworks.

**In Botswana**, PEPFAR provided technical support for the development of Botswana's action plans for the Three I's. The national TB case management curriculum has a TB IC module, developed with U.S. Government support. Newly developed national TB infection control guidelines are being rolled out to districts through training-of-trainers sessions. Hospitals expanding MDR-TB services have received technical assistance to strengthen TB infection control. A 17-bed TB isolation ward at the previous BOTUSA site was renovated, and additional support was provided for a modular clinic to function as an out-patient facility for MDR-TB patients from the main referral hospital.

**In South Africa**, TB IC seminars for health care workers have continued to draw hundreds of participants to learn practical and effective ways to implement infection control practices at facility-level. The new cadre of mid-level practitioners, called Clinical Associates, has participated in the seminars. In 2010 and 2011, PEPFAR and the University of Pretoria hosted trainings of clinicians on updated diagnosis, treatment and care of TB, MDR-TB and XDR-TB. These trainings also highlighted TB IC. An electronic hospital risk infection control assessment tool was developed and implemented in hospitals in two provinces, and it will be rolled out to all other provinces. Minimum standards for the implementation of UVGI lights, including sustainability plans, were developed and distributed.

**In Uganda**, national TB infection control guidelines were developed and the guidelines are being disseminated with the assistance of PEPFAR partners. Health care workers in 12 Tuberculosis Control Assistance Program (TBCAP)-supported districts were trained to conduct facility risk assessments, develop individualized TB-IC plans, and implement TB-IC. PEPFAR-supported interventions included reorganization of patient flow within facilities, patient triage, and employing cough etiquette to minimize nosocomial transmission. After one year, a review of TB-IC measures in place in 105 healthcare facilities in the 12 districts documented significant progress. Seventy percent of facilities had TB-IC plans, 95% had a TB-IC officer in place, and 85% were separating coughers. Additionally, 81% were conducting health education on cough etiquette, and 90% were using the intensified case finding tools for TB assessment of PLHIV.

**In Ethiopia**, since the start of TB IC scale-up activities in 2008, national TB IC Guidelines have been developed and distributed. With TBCAP support, more than 700 health care managers, coordinators, and health care workers were trained in TB IC through a national training of training of trainers held in five regions. Two hospitals with MDR treatment centers were renovated with design and engineering features to reduce transmission. Five laboratories were upgraded to BSL-2 level including mechanical air-handling systems.

**In Zambia**, a national TB-IC strategy was developed that included training modules on facility risk assessment and the implementation of infection control measures. With TBCAP assistance, 77 doctors, nurses, clinical officers, environmental and laboratory specialists were trained, as well as building professionals from all nine provinces.

**In Nigeria**, TBCAP and the National TB and Leprosy Training Centre in Zaria organized a 2010 training course for 30 participants to accelerate implementation of the Three Is. A major outcome of the training was facility-based IC plans and field visits by the Nigeria-based facilitators to provide hands-on mentoring to the trainees and on-the-job training to hospital staff.