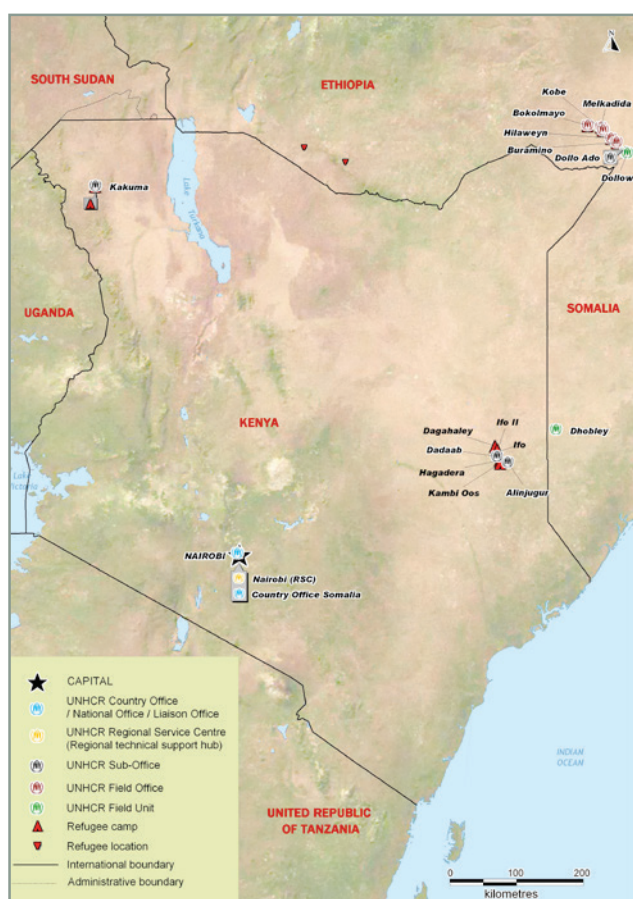


Access to Multi-Drug Resistant Tuberculosis Treatment in Dadaab Refugee Camps, Kenya

BACKGROUND

Kenya hosts over 630,000 refugees in Dadaab and Kakuma refugee camps, and in urban Nairobi, some of whom have lived there for over two decades. However, most have arrived in the last 5 years largely from Somalia where large displacement has taken place due to Al Shabaab insurgency and severe drought/famine of 2011. Dadaab refugee camps are one of the largest in the world, hosting over half a million refugees.



Health care services in Somalia have been severely disrupted by the long civil war and ongoing conflicts. Although reliable data is not available, the incidence of multidrug-resistant TB (MDR-TB) in Somalia is believed to be high because of a weak TB control programme. MDR-TB is a form of TB caused by bacteria that do not respond to at least isoniazid and rifampicin, the two most potent first-line (or standard) anti-TB drugs.

The treatment of MDR-TB is expensive, medicine side-effects can be serious, and treatment takes approximately 2 years. Daily observed therapy and dedicated patient support to ensure cure, and to minimize the risk of emergence of

extensively drug-resistant TB (XDR-TB) are essential. The XDR-TB is MDR-TB plus it is also resistant to any second-line anti-TB injectable drugs, and responds to even fewer of the anti-TB medicines available.

The Kenyan Ministry of Health (MoH) estimates the cost of treating one case to be close to US\$20,000. In addition around US\$7,000 is needed towards patient care and support.

ACTION FOR CHANGE

In order to address multi-drug resistance tuberculosis, the X-per MTB/RIF (also called the GeneXpert MTB/RIF) technology endorsed by the World Health Organization (WHO) is being employed worldwide to combating tuberculosis. The GeneXpert MTB/RIF simultaneously detects *Mycobacterium tuberculosis* and tests for rifampicin (one of the TB treatment medicines) drug resistance in less than two hours. In Dadaab, the International Organization for Migration (IOM) with support from the Centers for Disease Control and Prevention (CDC) is setting up GeneXpert MTB/RIF equipped laboratory to enhance MDR-TB screening.

The surveillance for drug resistance tuberculosis follows the MOH national protocol that targets the following groups:

- All re-treatment case, which includes treatment failures, relapses and return after default
- Patients on treatment but still smear positive at 3, 4, and 5 months after initiation of treatment
- Contacts of patients with drug resistant tuberculosis
- All smear positive cases, and
- Health care workers

Persons found to have drug resistant tuberculosis are put on treatment for MDR-TB under one of the following Kenyan MoH approaches:

- a) Ambulatory: where the patient has daily support to reach the facility where treatment is administered by health personnel;
- b) Community based approach: where a health worker is supported to provide MDR-TB medicines to the patient in the community; and
- c) Isolation: where the patient is isolated either for part or for the full duration of the treatment.

Since 2009, refugees living in Dadaab refugee camps have access to the MDR-TB programme. The Kenya MoH Department of TB and Leprosy Control and World Health Organization (WHO) are currently supporting

the care and treatment of MDR-TB refugees including free second line medicines.

The high risk of default among the refugees and the surrounding pastoralist community led to the decision and agreement between the MoH and UNHCR that all refugees be managed in isolation. The MDR-TB centre in Dadaab was also selected as treatment centre for the larger North Eastern Region of Kenya.



The ward design, adapted from a WHO model, ensures good airflow and isolation of patients to prevent mixed infections. Each patient stays in an own room but share common recreation facilities. The ward was designed



to accommodate 20 patients currently has 29 patients. Resources have been identified to construct two additional wards in order to decongest the current ward and to ensure proper separation of patients at different stages of treatment.

The centre is currently managed by UNHCR's partner the International Organization Migration (IOM) and has 6 qualified national staff members who are supported by volunteer refugee workers.

Except for a situation where a mother and child pair has MDR-TB, all individual cases on treatment are isolated in the ward where treatment, nutritional, and psychosocial support are provided.

INTERVENTION AND OUTCOMES

The first diagnosed MDR-TB case started treatment on 20 October, 2009, and since then, 74 cases have been diagnosed and started on treatment. Unlike in the rest of the country where TB (including MDR-TB) is associated with HIV, all the MDR-TB patients among refugees in Dadaab are HIV negative, and over 70% have a history of previous TB treatment prior to joining the programme in the Dadaab.

Among the patients, positive sputum smear/culture converted to negative within three months of treatment except for three cases where the sputum smear/culture converted after 5-6 months. No resistance to the second line medicines has been observed.

Among twenty patients who exited the programme to date, 16 (80%) patients have completed two years and have been confirmed cured and living with their families. Those who have been cured of TB become agents-of-change, and provide psychosocial support to patients still on treatment.

Four (20%) patients have died. At the time of their death, two patient's smear/culture had converted to negative however, and they may have died from secondary infections.

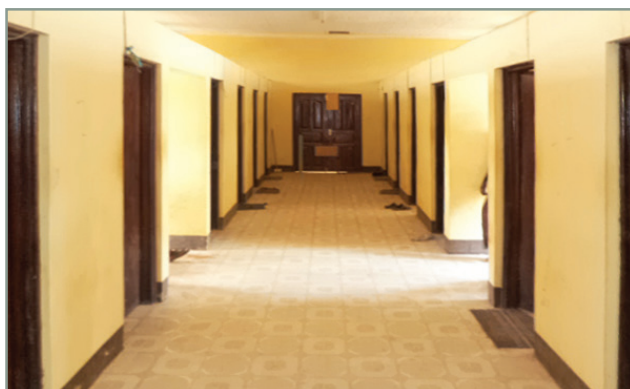
Two patients have defaulted. Efforts to trace the defaulting patient did not succeed but it is believed that both have returned to their country of origin. This is one of the reasons that guided the adoption of isolation approach to treatment for refugees.

OUTCOMES AND CHALLENGES

The success rate of 57% and overall performance of the programme are both satisfactory compared to the global experiences (25-82% success rate in 13 countries with outcome data). This programme shows successful treatment of MDT-TB is possible in difficult settings such as in isolated refugee situations.

Although in Dadaab the recent deterioration in insecurity is limiting access, a joint initiative from MoH, the Centers for Disease Control and Prevention (CDC), IOM and UNHCR has established a laboratory with the capacity to process sputum culture using GeneXpert technology. This technology is used for all patients that fall in any of the following categories:

- a) All retreatment cases (e.g. treatment failures, relapses, and returnees after default).
- b) Health care workers with TB.
- c) Drug resistant TB contacts.
- d) All smear positive refugees and migrants.
- e) Smear positive after 3 months of treatment.



It is projected that the GeneXpert MTB/RIF equipment laboratory will increase MDR-TB surveillance and diagnostic capability for timely treatment and follow. In preparation, UNHCR has identified funds to increase isolation facilities. In addition, joint discussions with the MoH are ongoing in order to locate more funds for the management of the expected higher number of cases. The main challenge remains insecurity that results in the disruption of services and lack of access to patients. Given that a significant number of patients

came for treatment from, or developed MDR-TB in Somalia, discussions are underway between the MoH, WHO, and UNHCR to hold a workshop for a strategy on cross-border MDR-TB surveillance, control, and treatment.