Patient-centered treatment of tuberculosis in Tanzania

Tuberculosis (TB) still claims 1.7 million victims per year worldwide, mostly in developing countries. To improve access to effective TB treatment, the Novartis Foundation for Sustainable Development (NFSD) and its partners developed a Patient-Centered Treatment (PCT) approach in Tanzania. This innovative approach not only facilitates treatment for patients, it also helps relieve overburdened health workers.

Project telegram

Country/region
Now across Tanzania, before pilot program in three districts: Arusha municipality, Mufindi and Kahama

Project objective
The initiative aims to improve access to effective TB treatment through a Patient-Centered Treatment (PCT) approach, accompanying a country-wide drug donation of Novartis.

Target groups
TB patients, treatment supporters in the family or community, healthcare personnel at primary and secondary level

Partners
National TB and Leprosy Programme, Ministry of Health and Social Welfare, Tanzania
National Institute for Medical Research (NIMR), Ifakara Health Institute (IHI), KNCV Tuberculosis Foundation

Technical support
National Institute for Medical Research (NIMR), Ifakara Health Institute (IHI), KNCV Tuberculosis Foundation

Project duration
Pilot program in three districts: 2004-2009
Scaling up: 2009-2012
Ensuring patient’s adherence during the long treatment period

Overall, one-third of the world’s population carries the TB bacterium but only around one in ten latent infections will progress to the active disease. HIV/AIDS patients are much more likely to develop active TB than people who are HIV-negative. In sub-Saharan Africa, HIV is the single most important factor contributing to the increase in the incidence of TB since 1990.

Tanzania is a high-burden country with about 60,000 new TB cases annually. Since 2005, Novartis donates gold standard TB medicines for the treatment of all adult patients in the country. The fixed-dose combination therapy shortens the treatment period from eight to six months. The donation is made available through the Global Drug Facility (GDF) of the Stop TB Partnership, which is hosted by the World Health Organization (WHO).

TB is very complex to treat, requiring a combination of daily drugs over a half-year treatment period. In order to avoid resistances over the long treatment period, the WHO recommends Directly Observed Treatment Short-course (DOTS), requiring patients to take their drugs under daily observation of a healthcare professional. Although DOTS ensures better patient adherence, it poses a burden on both providers and patients: Already overstrained healthcare personnel face an increased work load, and patients have to walk long distances every day to receive their medication. This often results in treatment drop outs among patients.

Introducing a patient-centered approach

In order to improve access to treatment for patients and relieve healthcare providers, the Novartis Foundation for Sustainable Development (NFSD) in collaboration with the National TB and Leprosy Programme of the Tanzanian Ministry of Health and Social Welfare developed the Patient-Centered TB Treatment (PCT) approach.

PCT gives patients the choice to either take the daily treatment at a health facility, supervised by a medical professional as under traditional DOTS, or at home, supported by a family or community member. PCT therefore takes the DOTS strategy one step further as it gives patients the possibility to choose their treatment supporter.

In the case of home-based treatment, the patient and treatment supporter are required to visit the health facility once a week during the 2-month intensive phase to collect a new blister pack. During the continuation phase which lasts 4 months, they are required to visit the health facility once every two weeks. Patients can therefore skip the daily walks to health facilities and avoid transport costs, and health workers can allocate the gain in time to other patients.
Training, monitoring and sensitization are key

Such an approach not only demands proper information and instruction of patients and treatment supporters, but also regular supportive supervision to monitor potential side effects or resistances and to make sure the patient adheres correctly.

PCT was therefore first introduced and tested in three pilot districts – one urban and two rural (Arusha municipality, Mufindi and Kahama). The project team supported the training of all health-care personnel in the new treatment approach and developed a monitoring system. Sensitization and social-marketing campaigns were conducted in 2007 to inform people about the causes and symptoms of TB as well as the new treatment option under PCT. The ultimate goal was to create demand for TB treatment and make people with TB symptoms come forward for early diagnosis and treatment.
Results so far and next steps

A survey revealed that **88% of the TB patients chose home-based treatment**, indicating the huge demand for the new treatment option. Patient adherence during the treatment period at home is very high (95%), and in the pilot districts the rate of successful treatment outcomes increased under the PCT approach from 72% in 2005 to 77.5% in 2007. In September 2010, the Novartis Foundation and its partners organized a Dissemination Conference in Bagamoyo, Tanzania, to share the results with TB stakeholders.

Already by the end of 2006, after first encouraging results in the pilot districts, the National Tuberculosis and Leprosy Programme decided to scale up PCT to the whole country. PCT guidelines and booklets for patients and treatment supporters under home-based treatment were produced as well as training of trainers and health workers conducted. National routine data showed for 2007 cure rates of 83.2% against 79.1% in 2004.

Preventing resistances is one of the major challenges that remains. Healthcare staff and treatment supporters must make sure patients adhere to the daily medicine intake. Instructions given by the health workers to patient and treatment supporter still need to be strengthened. For that reason, the Novartis Foundation produced a **training video explaining PCT** step by step to healthcare workers, patients and treatment supporters. The video will be rolled out to all Regional and District TB and Leprosy Coordinators in Tanzania to ensure that health workers, treatment supporters and TB patients better understand the diseases and treatment options under PCT.

Moreover, a tool to monitor the performance of health services with regard to TB diagnosis and treatment is being developed to strengthen supportive supervision at regional and district level. Finally, an economic evaluation will estimate cost savings realized by PCT in comparison with the conventional DOTS approach. This will inform countries which are currently considering the introduction of such an approach.

**Useful links:**
- www.novartisfoundation.org/projects
- www.youtube.com/novartisfoundation

Scene of the new training video explaining the steps of PCT to health workers