

Case study: development of new TB diagnostics



An MSF staff member using a GeneXpert machine in Primeiro de Maio Health Centre, Mozambique. Photo credit: Andre Francois.

The European & Developing Countries Clinical Trials Partnership (EDCTP) has made considerable investment in research into TB diagnostics, through a diverse portfolio of research studies.

For example, EDCTP funding for programmes at the University of Capetown, South Africa provided supporting data that led to the WHO endorsement of the GeneXpert test for multidrug-resistant TB in December 2010. Following on from the WHO endorsement, a rapid roll-out of GeneXpert has occurred. Prior to GeneXpert's launch, it took weeks to diagnose drug-resistant TB, but thanks to this new innovation, doctors are able to diagnose patients in a matter of hours. This is also a great example of UK and EU investments working together, with the Department for International Development also supporting the [Product Development Partnership FIND](#) that helped develop the test.

The EDCTP-funded TB-CHILD consortium has explored the performance of several diagnostic tests in children. Diagnosis of TB in children is challenging because children tend to have lower levels of infectious bacteria, making it harder to detect by microscopes and to grow in culture. Limited data exist on the performance of GeneXpert in diagnosing TB in children. The TB-CHILD consortium has also assessed the diagnostic accuracy of GeneXpert. In a study of 451 children in Tanzania and Uganda, they found that GeneXpert provided timely results, detecting 1.7 times more cases than the previous test.

All these trials would not have been possible without EU funding and the structures that EDCTP provides to support research collaboration. Because of the current lack of effective diagnostics for paediatric TB, over 50% of the 1 million children estimated to develop TB each year are never diagnosed. As a result, trials like those run by the TB-CHILD consortium will have a tangible impact on the individual lives of children affected by TB as well as the course of the epidemic as a whole.