STREAM Update

To address the enormous burden of multidrug-resistant tuberculosis (MDR-TB), The Union, the Medical Research Council (MRC-UK at UCL) and other global partners initiated the STREAM Clinical Trial (Standardised Treatment Regimen of Anti-tuberculosis Drugs for Patients with Multiple Drug-resistant Tuberculosis) in July, 2012.

STREAM Stage 1
Stage 1 of the STREAM Trial sought to determine whether a 9-month treatment regimen that demonstrated cure rates exceeding 80% during a pilot programme in Bangladesh could achieve similar success in other settings. The objectives are to determine whether the proportion of patients with a successful outcome on the shorter treatment regimen is at least as good as that observed in the longer control regimen.

Ethiopia, Mongolia, South Africa and Viet Nam participated in Stage 1 of the trial. On 30 June 2015, the trial enrolled its 424th and last patient for Stage 1. Stage 1 was funded through the TREAT TB cooperative agreement with the U.S. Agency for International Development (US-AID). Additional funding came from the UK Medical Research Council and the UK Department for International Development (DFID) under the MRC/DFID Concordat agreement. Stage 1 results are expected in early 2018.

STREAM Stage 2
The success of Stage 1 implementation has led to the opportunity to test two other regimens of particular public health interest and relevance. In STREAM Stage 2, the randomization includes two additional regimens, both of which will be compared to the 9-month regimen from Stage 1. The 24-month WHO regimen is also continued in Stage 2. Both of the new regimens will include the new anti-tuberculosis drug called bedaquiline.

The first of the new regimens will be completely oral. The injectable medicine used in Stage I, kanamycin, will be replaced with bedaquiline in Stage 2. The second new regimen will be 6 months in duration and kanamycin will be given for only 2 months. On 28 March 2016, Stage 2 recruited its first patient in Mongolia. As of 30 September 2016, 22 patients have been randomized and recruited for Stage 2: 14 in Mongolia, 6 in Ethiopia, and 2 in South Africa. The enrollment goal is 1155 patients and a total of 10 countries are expected to participate.

In partnership with The Brazilian Network of Tuberculosis Research (REDE-TB) and EnCompass, TREAT TB released a Community Engagement Plan in July 2016 in Durban, which is designed to support global communities undertaking clinical trials and research in TB, particularly for STREAM Stage 2. A YouTube video was also created to share the purpose and steps for successful community engagement. Both the Plan and the video can be found on treattb.org. As of September 2016, community engagement activities have been initiated in Mongolia, South Africa, and Ethiopia, and will be rolled out in all STREAM Stage 2 sites.

The 4th annual STREAM Investigators Meeting, which was held on 27-28 July in New York, gathered 28 investigators from STREAM sites across the world, along with the STREAM Trial Management Group and representatives from USAID, Janssen, ITM (laboratory technical assistance), Quintiles (trial monitoring), Liverpool School of Tropical Medicine (health economics), and Clearwater Clinical (audiometry device supplier). The meeting yielded useful discussions which allowed sites to share and learn from each other’s experiences in preparation for Stage 2.

The STREAM Stage 2 Protocol has been approved by the US Federal Drug Administration (FDA) and the European Medicines Agency (EMA) for bedaquiline regulatory purposes, as well as The Union’s Ethics Advisory Group and relevant local regulatory and ethics review committees. STREAM Stage 2 is the result of a unique collaboration between USAID, Janssen Pharmaceuticals and The Union/Vital Strategies. The results of Stage 2 are expected to be available in 2020/2021.