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KYRGYZ REPUBLIC

SUCCESS STORY

Putting Patients First: Central Asia's First Accredited TB Laboratory in Kyrgyzstan

USAID-facilitated accreditation of the NRL by ISO 15189 allows continuous improvement of quality and safety of internal processes and services



NRL staff with its certificate from the Kyrgyz Accreditation Center, a member of the International Laboratory Accreditation Cooperation. *Photo: Cure Tuberculosis*

"Accreditation of the NRL is a result of excellent teamwork and cooperation with national and international partners," says Gulmira Kalmambetova, former head of the NRL.

"The key goal of accreditation is for the laboratory to establish a functioning system of quality management so that patients get accurate and timely test results," says Gulmira Kalmambetova, deputy director of Kyrgyzstan's National Tuberculosis Center.

When it received ISO 15189 accreditation in late 2022, the Kyrgyz National Reference Laboratory (NRL) became the first internationally certified TB laboratory in Central Asia. This elevates its credibility and guarantees more accurate and timely test results for patients.

It all started with a simple wish to provide quick and high-quality TB sample testing so that patients could be put on effective treatment as soon as possible. Gulmira, who as then-head of the NRL was at the origins of the nine-year process, says she was lucky to work with people who understood why accreditation was critical.

The NRL team received regular training and mentoring and external quality assurance from the Supranational TB Reference Laboratory in Gauting, Germany, and technical support from USAID and the WHO Regional Office for Europe. Thanks to regular encouragement and training, including on quality management system (QMS) elements, the team remained motivated and dedicated throughout the long and demanding accreditation process.

Through its Cure Tuberculosis initiative, USAID organized training and study tours to advance lab personnel competencies. The NRL participated in regular profile testing programs, inter-laboratory comparisons, and an external quality assessment. In line with QMS implementation, Cure Tuberculosis helped develop and implement standard operating procedures to streamline work processes and safety procedures; enhance the laboratory data management information system (LDMIS) to reduce human errors in lab tests; and improve data management.

USAID, long a supporter of the National Tuberculosis Program and NRL, helped optimize the TB laboratory network by prioritizing labs with modern rapid molecular testing to improve the speed and accuracy of diagnosis. The LDMIS allowed lab results to be entered and delivered in real-time so that physicians could make prompt and efficient treatment decisions. USAID also supported development of a biological materials transportation system to ensure safe sample delivery and prompt turnaround of molecular-based test.

Gulmira says that continuous support from and collaboration with the USAID Cure Tuberculosis project was vital to accreditation. *"First, due to COVID, we lost two years because we planned to get accreditation in 2020. Then, we got stuck because of a lack of financing. The project helped us in a critical moment."*

One of the specifics of ISO 15189 is that it covers the whole diagnostic and treatment process, from the selection of tests by a clinician, to testing, to treatment prescription. With project support, the NRL trained oblast laboratory specialists and started teaching and communicating with clinicians to streamline the coordination process and ensure high-quality samples and their safe delivery. Nationwide implementation of LDMIS, with real-time delivery of test results to physicians ensured prompt and effective treatment decisions for patients, despite the pandemic. *"We would not have received accreditation if it were not for LDMIS,"* Gulmira said.

The NRL says that five key factors leading to accreditation were teamwork; collaboration with national and international partners; high staff motivation; support from the NTC leadership; and all parties' desire to treat and cure TB patients.

Thanks to these efforts, the NRL has low staff turnover and can stay focused on improving the quality and integrity of lab results, which contributes to improving treatment success rates and reducing drug-resistant TB in Kyrgyzstan.