

AI-POWERED TB SCREENING ACROSS 15 HIGH TB BURDEN REGIONS OF AZERBAIJAN



PROJECT OVERVIEW



High TB
Burden
Regions of
Azerbaijan



February 2022 -
September 2023



Fujifilm XAIR X-
ray with qXR
(Qure.AI)



Saglamliqa Khidmat PU
Fujifilm

AI INTERVENTION

A TOTAL OF 3,500 INDIVIDUALS UNDERWENT SCREENING



*Saglamliqa Khidmat Public Union (SKPU) achieved remarkable success in reaching remote communities, thanks to the support of international partners, particularly the Advocacy Team of Stop TB Partnership, Geneva, whose **efforts bridged collaboration between Azerbaijani civil society and Fujifilm.***

With deep appreciation, the team acknowledges the vital support of the Embassy of Japan in the Republic of Azerbaijan to the TB screening project. Through its “Grant Assistance for Grassroots Human Security Projects” programme, the Embassy provided a grant that enabled the purchase of a portable X-ray system, significantly enhancing the project's ability to reach underserved populations. As part of this initiative, grant contracts for two projects were signed on 15 February 2022, including the one supporting the TB screening efforts. The team is grateful for the Embassy’s continued commitment to strengthening Azerbaijan’s healthcare system.

During the COVID-19 pandemic, when patients were unable to access diagnostic facilities, SKPU, with the support of the Stop TB Partnership, procured Fujifilm's XAIR ultra-portable X-ray device equipped with AI powered computer aided-detection (CAD) by Qure.AI. This allowed home-based TB screening at a critical time.

The Advocacy Team of Stop TB Partnership, Geneva supported Saglamliga Khidmat PU to deploy innovative screening tools – an ultra-portable X-ray machine (Fujifilm Xair) with qXR AI software by Qure.AI– to aid in the scale-up and accelerate screening efforts in Azerbaijan.

Progress of the Project

The Fujifilm XAIR ultra-portable X-ray machine and qXR software were procured by SKPU on March 28, 2022, and imported on May 18, 2022. The import process was conducted via land transport, which took several days for the device to arrive and be handed over.

Screening activities were conducted in **15 high-TB burden regions of Azerbaijan**, including Xachmaz, Siyazan, Khizi, Shaki, Oguz, Zagatala, Bilasuvar, Jalilabad, Lankaran, Tovuz, Qazakh, Agstafa, Barda, Agdam, and Hajiqabul.

A total of 3,500 individuals underwent screening. Additionally, screenings were conducted for **labour migrants and individuals living under the auspices** of UNHCR Azerbaijan.

Four mass screening events were organized, during which **440 people** were examined. Screening efforts also targeted household contacts of **prisoners and ex-prisoners with TB**, with **1,572 people** screened, including family members of ex-prisoners. Furthermore, screening initiatives focused on individuals with a history of TB or chronic lung diseases were carried out in Agsu, Lerik, and Sumgayit. Four screening events were organized in these regions, covering **500 individuals**.



Saglamliga Khidmat Public Union, Azerbaijan National NGO held TB screening among refugee communities settled in remote areas. Accessing these locations would not have been possible without the ultra-portable X-ray system, which is **smaller, lighter weight, battery-powered, and emits less radiation** than its predecessors. Three camps for displaced people located in different part of the country were provided with TB screening: using ultra-portable X-ray and AI.

PROJECT IMPACT

- ✓ **3,500** people were screened for TB in total
- ✓ **15** regions; Khachmaz, Siyazan, Khizi, Shaki, Oguz, Zagatala, Bilasuvar, Jalilabad, Lankaran, Tovuz, Qazakh, Agstafa, Barda, Agdam, and Hajiqabul.
- ✓ **1,572** prisoners and ex-prisoners with TB and their household contacts screened using ultra-portable X-ray with AI
- ✓ **440** people were examined for TB during four mass screening among labour migrants
- ✓ **100** people screened in one day at a mega-screening camp



Sustainability and Future Plans

The Research Institute of Lung Diseases has taken over the project from SKPU in September 2023.

Currently X-ray device with AI-powered CAD is in a mutual utilisation scheme and [both project participants are using the devices](#) for screening purposes that aligns with the National Screening protocols and plans.

So far, since the National TB Program (NTP) took over the project, more than 2500 screening scans have been conducted. NTP has also screened approximately 3200 medical personnel and medical students.

NTP and “Tebib”, Medical Agency under State Health Insurance Scheme have expressed strong intentions to obtain additional devices, particularly mobile units mounted on vehicles. These units will

enhance mobility and expand screening efforts to remote areas with limited transportation access and unreliable electricity. As such they will be inevitable in new territories.

To sustain the project's impact and ensure the continued effectiveness of the portable X-ray device, ongoing maintenance and operation responsibilities have been transferred to the Research Institute of Lung Diseases.

The institute is managing the device's insurance and cover maintenance costs through state funding. Additionally, the trained personnel is continuing to utilize the device for TB screening interventions, ensuring that vulnerable populations receive early diagnosis and appropriate medical interventions.



Saglamliga Khidmat Public Union (SKPU) is committed to contributing to the elimination of tuberculosis in Azerbaijan by expanding access to comprehensive screening services across the country. This mission is driven by the SKPU's strong and ongoing collaboration with the Stop TB Partnership in Geneva, as well as the invaluable support of the Government of Japan.

SKPU recognizes that the path to ending TB requires not only sustained local efforts but also strategic international partnerships that bring innovation, resources, and expertise. By leveraging these partnerships, SKPU aims to ensure that all TB cases—particularly in remote and high-risk populations—are effectively screened and treated, moving Azerbaijan closer to the goal of a TB-free future.

