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Fuad Mirzayev has received his Medical Degree from the State Medical University of Azerbaijan and his MPH from the School of Public Health and Tropical Medicine at Tulane University, USA.

For more than eight years he has worked for the International Committee of the Red Cross with its pioneer TB Control program in Prisons of Azerbaijan. This program was the first to introduce the WHO recommended Directly Observed Treatment Short-course strategy (DOTS) in prisons which faced and documented a serious problem of the Multi-drug resistant disease.

## ISID Fellowship Program Final Report

by Fuad Mirzayev, MD, MPH • Azerbaijan

### Multi-drug Resistant Tuberculosis / Azerbaijan

During the Soviet period, tuberculosis case notification rates in Azerbaijan were among the highest in the former USSR. Though they declined between 1965 and 1990, this trend was reversed after Azerbaijan gained independence and began a very difficult transitional period. Increasing socio-economic difficulties among large sectors of the population as well as crowded living conditions among internally displaced people and refugees contributed to the level of risk.

Tuberculosis rates have risen among all sectors of the society. However, in the prisons of Azerbaijan the disease staged a more dramatic comeback and by 1995 had become an enormous problem: approximately 20% of all inmates were sick or suffering from TB. This was considered an emergency by the Ministry of Justice (MOJ) and the International Committee of the Red Cross (ICRC), which was actively involved with the health care in prisons of Azerbaijan, and led to an active collaboration to treat TB within the Azerbaijani penitentiary system. A pilot project was initiated with a treatment program based on the DOTS (Directly Observed Treatment Short-course) protocols recommended by the WHO.

This successful small cooperative project developed into a full-fledged TB control program. Consequently, the TB-related death rate in the penitentiary system is now less than one-third the 1997 rate, and the number of cases is half what it was in 1997. Since 2002, the DOTS program has expanded into the civilian sector, with the financial and technical assistance of the German government and German Technical Cooperation agency (GTZ).

However, despite these achievements, there is a problem more difficult to control. More than 100 patients with multi-drug resistant tuberculosis (MDR TB) are in respiratory isolation in prisons, and more cases continue to be diagnosed. The death rate among such cases remains very high; 50% of all TB deaths in the penitentiary system are prisoners with MDR TB.

MDR TB cases are not being treated with second-line drugs, mainly because of their high cost; patients are merely waiting to die while receiving better food rations and symptomatic treatments. This most deadly form of TB is not being addressed, and it will not remain confined to the penal system, as prisoners are eventually released. A well-structured and strictly organized DOTS-Plus program can address this problem and is the only way to prevent misuse of second-line drugs.

During recent months, I have used my ISID Fellowship award to participate in a project called "Development of the strategy and elaboration of the detailed project for treatment of patients with Multi-Drug Resistant Tuberculosis (MDR-TB) in the specific context of Azerbaijan," at Partners in Health, Harvard Medical School. This project was designed in response to a request from the

authorities of the Republic of Azerbaijan for assistance in the preparation of an application to the Green Light Committee (GLC) of the World Health Organization (WHO). The GLC is a mechanism for reducing treatment costs through which established DOTS programs have better access to second-line anti-tuberculosis drugs.

Dr. Paul Farmer, an infectious disease physician with more than 20 years of experience developing and managing complex health interventions in resource-poor settings, has sponsored this project. Dr. Farmer and his team at Partners in Health/Program in Infectious Disease and Social Change at Harvard Medical School (PIH/HMS)—including experienced members of the GLC—strongly supported this research. Their assistance facilitated the transfer of essential technology to a setting where it is most needed. The comprehensive DOTS-Plus project tailored to this particular context encompasses treatment schemes, diagnostic procedures, and many other aspects of effective healthcare intervention. A report entitled "Integrated control of the Multi-Drug Resistant Tuberculosis with the focus on the Penitentiary system of the Republic of Azerbaijan" was submitted for the consideration and approval of the GLC.

The project and the treatment program it outlines will help to overcome the current upsurge in cases of MDR TB and foster cooperation between different sectors of the society, therefore benefiting an even higher number of existing and future patients. The project involved not only analyzing the data provided by the TB program in Azerbaijan and writing the proposal; it also included the concerted work of all partners in the ensuing treatment project. The partners in Azerbaijan include governmental agencies such as the Ministry of Health, the National TB control program, and the Ministry of Justice; and international organizations including the ICRC and the GTZ.

TB is the greatest single threat to the health of both prisoners and the civilian population in Azerbaijan. MDR-TB is the most striking aspect of the problem, and it will not remain confined to the penal system. Steps need to be taken to address the MDR-TB epidemic, curing prisoners who are ill, protecting those who are not, and ultimately benefiting society as a whole. My ISID fellowship contributed to the success of a project that will help eliminate the obstacles preventing seriously ill patients from receiving appropriate treatment. ❖

*I would like to thank ISID for supporting this work and facilitating the technical cooperation that will help to fight a very dangerous infectious disease. I am also grateful to Dr. Paul Farmer and his colleagues from Partners in Health for their thoughtful advice and vast experience, which they generously shared to support this project.*