



Adaptation of Tuberculosis Control Strategies to Serve Populations Living in Special Circumstances

In the Americas, Peru is the country with the highest rate of multidrug-resistant tuberculosis (MDR-TB). Living within its borders are population groups bearing a burden considerably heavier than the national average. Madre de Dios, a department located in the Peruvian Amazon, is a settlement site for artisan gold miners. Members of this population group, consisting primarily of males who have emigrated from surrounding departments, live and work in precarious circumstances, which leads to high incidence rates of both primary tuberculosis (TB) and MDR-TB. These miners work in mobile camps set up in remote areas devoid of public health facilities or other agencies providing health care. Prevalence rates in those districts where mining is a predominant activity (Inambari, Laberinto, Madre de Dios, Huepetuhe, and Tambopata) are the highest recorded in the department and are double those for the country as a whole (table 1). In these districts, the identification of respiratory symptomatic individuals is less than 65 percent, with treatment default near 10 percent.

Table 1. TB Mortality Rate

| Year | Peru | Madre de Dios | Mining activity micronetwork |
|------|-------|---------------|------------------------------|
| 2008 | 120.2 | 225.1 | 362.4 |
| 2009 | 118.1 | 173.8 | 198.8 |
| 2010 | 115.6 | 147.7 | 203.0 |

Source: E. Alarcón. 2012. *Informe técnico: Propuesta para la atención de personas afectadas por TB y TB-MDR en POBLACIONES ESPECIALES en Madre de Dios*. Submitted to the US Agency for International Development by the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program. Arlington, VA: Management Sciences for Health.

Based on the accumulated experiences in other South American countries, partners of the South American Infectious Disease Initiative (SAIDI), an activity funded by the US Agency for International Development (USAID), proposed to local health authorities a participative approach to address this problem.

In March 2011, a multisectoral meeting to analyze the problem was held in Puerto Maldonado, the capital city of the department of Madre de Dios. Local health authorities, representatives of civil society, patients, and consultants from cooperation agencies all concluded that the high departmental rates of TB and MDR-TB should be addressed by strengthening standard control strategies, but that the most affected populations (particularly miners) merited a different approach, adapted to the particular living conditions of its members.



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As part of USAID-provided technical assistance, the Strengthening Pharmaceutical Systems (SPS) Program, implemented by Management Sciences for Health (MSH), working in collaboration with the Union against Tuberculosis and Lung Disease (UNION), conducted a study of the health status of at-risk population groups in Madre de Dios and, based on that analysis, proposed an alternative strategy for diagnosing and treating TB among these groups.¹

For operating purposes, the target population for this differentiated strategy was defined as: “Residents of the districts of Inambari, Laberinto, Huetpetuhe, and Madre de Dios engaged in mining activities, and the indigenous communities located in the immediate vicinity of the mining camps. [The target population] ... is estimated at 18,000.”²

The proposed care provision strategy involves moving diagnostic and treatment services closer to the camps where the miners live and work, combined with assistance provided by community volunteers. Because improved access will increase the demand for health care services, implementation of the proposed strategy considered concurrent measures aimed at improving the response capacity of the Regional Strategy for the Prevention and Control of TB.



Their work typically includes, among other activities, giving educational talks, identifying respiratory symptomatic individuals, and taking sputum smears, which are subsequently read in the nearest laboratory. When a positive case is identified, the TAPS take the necessary treatment to the camps. When a patient cannot travel

Alluvial gold extraction



Small-scale miners in Huetpetuhe
Source: Asociación Huarayo

¹ Alarcón, E. 2012. *Informe técnico: Propuesta para la atención de personas afectadas por TB y TB-MDR en poblaciones especiales en Madre de Dios*. Submitted to the United States Agency for International Development by the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) program. Arlington, VA: Management Sciences for Health.

² Ibid.

daily to a health care facility because of the distance involved, supervision of daily treatment is ensured through support provided by a previously trained volunteer within the mining camp. Since this intervention began operating, 70 visits have been made to mining communities, and 639 respiratory symptomatic individuals and 12 patients with active TB have been identified.

At the same time, institutional support services have been strengthened. Since mid-2012, DIRESA, the municipalities, and the Miners' Association have developed units for providing care to TB patients and for collecting smears. In addition, laboratories have been properly fitted out and educational materials have been distributed.

It will take some time before the impact of this intervention on the incidence rate can be seen. However, the extension of coverage to unserved population groups augurs well for future success. In addition, implementation of strategies that differ from *traditional* institutional strategies will generate lessons learned for other population groups living and working in special circumstances.

