



Multi-Drug Resistant Tuberculosis in Artisanal Gold Miners: A Policy Analysis of Prevalence and Risk Factors in Ituri Province, Democratic Republic of Congo, 2006

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Abstract

Artisanal gold mining in the Democratic Republic of Congo (DRC) is linked to numerous health hazards. Ituri Province, a significant mining region, carries a high tuberculosis (TB) burden. The intersection of mining, population displacement, and a weak health system fosters conditions for multi-drug resistant tuberculosis (MDR-TB), representing a serious public health concern. This policy analysis critically examines the prevalence and key risk factors for MDR-TB among artisanal gold miners in Ituri Province, DRC. It assesses the adequacy of existing national and provincial TB control policies in addressing this occupational health challenge and identifies gaps in the policy framework. The analysis used a desk-based review of pertinent policy documents, including DRC National TB Programme guidelines. This was synthesised with a systematic review of available epidemiological studies and grey literature on TB and MDR-TB in Ituri's mining communities to inform the policy critique. The analysis found a significantly higher prevalence of MDR-TB among artisanal miners compared to the general Ituri population. Approximately one-third of TB cases in mining zones showed resistance to first-line drugs. Key risk factors included overcrowded living conditions, occupational silica dust exposure, migratory work patterns disrupting treatment adherence, and poor access to diagnostic and treatment services. Existing TB policies lack specific interventions for the mining sector. Artisanal gold miners in Ituri Province constitute a high-risk group for MDR-TB, with risk amplified by occupational and structural factors. Current TB control policies are inadequately targeted to address the specific vulnerabilities of this mobile population, representing a critical policy gap. Policy recommendations include: integrating occupational health screening for TB within mining areas; developing tailored education and treatment adherence programmes for migratory miners; strengthening diagnostic capacity in mining zones; and explicitly incorporating artisanal mining communities into national and provincial TB control

strategies. Multi-drug resistant tuberculosis, artisanal mining, occupational health, health policy, Democratic Republic of Congo, Ituri Province. This analysis provides evidence to guide the development of targeted TB control policies for a neglected high-risk group, highlighting the necessity of sector-specific interventions within national public health strategies.

Keywords: *Multi-drug resistant tuberculosis, artisanal mining, Democratic Republic of Congo, health policy analysis, prevalence, occupational health, sub-Saharan Africa*

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