

PS-71342-10 Cost-effectiveness analysis of TB cultures using LJ compared to MGIT liquid media to diagnose TB in Zambia

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Background: This study was prepared as part of a demonstration project of Mycobacterium Growth Indicator Tube (MGIT) liquid culture technique in resource-poor settings (sponsored by FIND).

Methods: Economic costing using an ingredients approach was performed on homemade and commercial Löwestein-Jensen (LJ) media, manually read and automated MGIT. Costs were collated from detailed observations, expenditure records and interviews. All capital costs were annualized over their estimated lifetime. For MGIT equipment and consumables, preferential costs obtained by FIND for resource-poor settings were obtained. Effects were compared for all 4 techniques done in parallel on 890 clinical samples.

Results: With average throughput between January 2005 and July 2006, costs per processed culture range between US\$ 26–30 for all 4 techniques and US\$ 170–300 per identified *M. tuberculosis* case (precise figures will be presented). Between 50–60% of the cost relate to overhead costs. When maximum possible throughput is modeled, costs per identified *M. tuberculosis* case still remain above US\$ 70. Both MGIT techniques are more cost effective than the LJ techniques.

Conclusion: Mycobacterial culture is expensive under routine conditions in resource-poor settings even for the most cost-effective technique (manually read MGIT).