Economic Evaluation of a community delivered project for leprosy case detection in Northern Nigeria

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Background: High cost of detection in the declining phase of leprosy endemicity and dwindling funding has become a major concern in efforts at containing and eliminating the disease which has continued to spread. Evidenced-based information on the efficiency of strategies in leprosy case detection is needed to convince donors for continued funding support for the programme.

Objectives: This study evaluated the cost-effectiveness of an innovative community delivered legacy project designed to improve leprosy case detection in northern Nigeria, utilizing volunteers from selected communities.

Methods: Data was collected from 18 LGAs of the three states where the project was implemented to compare the costs and outcome of the innovative project with routine health system method or usual care in leprosy case detection and control. Primary and secondary data were collected from the project and routine practice records and the NTBLCP 2015-2016 annual reports. All costs and effects were measured from both providers’ as well as patients’ perspectives. Effectiveness of the study was measured as the number of new leprosy cases detected and outcome expressed as cost per case detected, as improvement in leprosy case detection. Cost-effectiveness was calculated as the incremental cost per case detected. All costs were converted to the US Dollar (US$) at the 2018 exchange rate of N350 to $1.00. Univariate sensitivity analysis was carried out to evaluate uncertainties around the ICER

Results: Overall, the project detected a total of 373 new leprosy cases at a total annual cost of N17,268,016 ($49,337,19), averaging N46,295 ($132.27) per new case detected. Key cost drivers include routine meeting expenses which accounted for the highest proportion (28%) of the total expenditure. Social mobilization and training/workshop expenses followed at 17% respectively. Compared to routine practice , the legacy project generated ICER of N-4,917.48 ($-14.05) per additional new case detected, indicating a dominance over the routine care by detecting more cases at even lower cost, as a very efficient alternative method.

Conclusion: Evidence indicates that the legacy project is a very efficient and indeed cost saving strategy in leprosy case detection. It will surely boost leprosy case finding when complemented with routine practice and greater when combined with related community based health care services such as tuberculosis control for more cost savings and greater efficiency.