

## Abstract

**Introduction:** This study was assessment of program reach and cost effectiveness of Community Directed Treatment of Ivermectin that was carried out in three Onchocerciasis endemic sub-counties of Busano, Bukonde and Bufumbo in Mbale District, Eastern Uganda. The specific objectives were; i) to establish the level of CDTI programme coverage, ii) to determine the average cost of providing Ivermectin and cost saved, iii) to determine the cost effectiveness of CDTI using ACER model and iv) To assess the level of clients' and providers' satisfaction with CDTI model. Methodology: A cross sectional retrospective cost and benefit analysis survey was used with quantitative data adduced from the records in terms of quantity, unit costs of inputs and total costs. This was done using a STEP DOWN COSTING METHODOLOGY (Sheppard et al. 1998). Clients' satisfaction information was adduced using FGD and key informant interviews Results. To establish the level of CDTI programme coverage. The assessment found out that the geographical coverage in terms of treatment was 76.2% in CDTI, whereas 70.4% coverage was observed in outreach model. In terms of distance covered to seek treatment with Ivermectin, the finding of this study revealed that 60% of the beneficiaries had to travel for 1km to access Ivermectin and the remaining 40% were within the radius of 0.5km of distribution point, however, where as CDTI model beneficiaries had no distance travelled as Ivermectin were brought to them at household by the service providers (CDDs). The burden of long distance was shifted from the service beneficiaries to the service providers. To determine the average cost of providing Ivermectin and cost saved: The average estimated cost incurred by beneficiaries receiving Ivermectin at distribution centres (located between 0.5-1km) was 5,500 UGX (\$2.5) Compared to UGX 2,500 (\$1) that would have been incurred by the same beneficiaries in CDTI model. This translated into 60% of the cost that would have been incurred in seeking treatment with Ivermectin under outreach model was saved by the beneficiaries through introduction of CDTI model.

To determine the cost effectiveness of CDTI using ACER model: The assessment established that the full cost of CDTI model was 589,911,301.1 UGX Compared to 483,121,496.7UGX in outreach model. This translated into 20,426.3UGX per capita/year compare to 24,062.2UGX under outreach model. Thus CDTI was cost-effective intervention than outreach model. It was further found out that CDTI model treated extra 1.4 eligible persons per year relative to outreach model at an extra cost of 12,985UGX per eligible beneficiary per year. Therefore, the CDTI model incurred an additional of 106,788,640 UGX to treat an additional 8224 eligible population.

To assess the level of clients' and providers' satisfaction with CDTI strategy. Both providers and beneficiaries agreed that CDTI delivery model was liked as every person was reached treated hence giving high treatment coverage and were satisfied with the model.

**Conclusions and Recommendations.** Wider Health education taking precedence to treatment and the presence of the network of CORPs (CDDs, CDHs, Parish and Sub-county focal persons), and the linkage of these CORPs with health system increased success of CDTI model in both coverage and reduction in signs and symptoms of Onchocerciasis in the community.

Therefore, the study recommended that;

- The non Oncho-endemic districts where CDTI model was nonexistent should replicate this CDTI model in implementing similar community health interventions for maximum outcome in a cost-effective manner.
- The district should consider mainstreaming and maintaining the CDTI Ivermectin distribution model since it is cost effective.
- The well established Onchocerciasis community structure could be used by the district for implementing similar community health projects in an integrated approach.
- Further studies should be done to determine the feasibility of adoption of the strategy on related interventions