Transmission Assessment Survey of Lympthatic Filariasis

August—December 2013

Assessment Survey to inform government to decide on continuation of Mass Drug Administration

Project Summary

Project Objectives:

- To determine the prevalence of LF antigenaemia in the 16 study districts.
- To identify the LF prevalence as per the socio-demographic characteristics of the study population
- To provide information about Lymphatic filariasis antigenaemia for use in decision making by EDCD for continuation of MDA in the study districts

Team Members:

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Government of Nepal had initiated the implementation of Mass Drug Administration (MDA) in Parsa district in 2003. Since then the programme has expanded gradually in other endemic districts as well. The purpose of this study was to determine the prevalence of Lympthatic Filariasis (LF) in 16 districts of Nepal where six rounds of MDA was completed. This survey was also conducted to determine the effectiveness of MDA and to provide information about prevalence of LF for use in decision making by Epidemiology and Disease Control Division (EDCD).

Methods

This was a cross-sectional study conducted in seven Evaluation Units (EUs) comprising of 16 districts to determine the prevalence of LF antigenaemia. This was a school based study conducted among the school going children of grade 1 and 2. The survey was conducted in seven EUs comprised of 16 study districts. Schools were the study sites identified in the sampled districts. 1692 samples were collected from each EU except one (EU E with sample of 1556).

Immuno Chromatographic Test (ICT): ICT procedures were applied to detect LF antigenaemia among the school going children of grade 1 and 2. Methodologically, a blood sample was drawn from sampled students and the blood was then transferred to ICT card with the help of capillary tube. Each ICT card was read exactly in 10 minutes from the blood transferred to the ICT card and result was recorded.

Capacity Building Workshop: A three-day capacity building workshop on LF TAS was jointly organised by EDCD, WHO RTI/ENVISION in Chitwan. The participants were D(P)HOs, LF focal persons and Lab Technicians from 16 sampled districts. HERD's field researchers: supervisors and lab technicians also participated the workshop. The workshop provided an in-depth understanding on ICT testing, recording results and sampling procedures.

Recruitment and Training of Field Researchers: We recruited 64 field researchers with background in laboratory, general medicine and public health. Before the field movement, 1 day training was also organised to field researchers at HERD. The training was facilitated by EDCD, WHO, RTI/ENVISION and HERD research team. The training basically focused on survey objective, methodology, national and global scenario of LF and practical session on using ICT card and filed implementation modalities. Role-play and demonstration were also performed to simulate the real situation.

Major Findings: A total of 11,764 samples were tested from 339 schools from 7 EUs (16 districts). Of the total 11,764 samples 140 cases were found positive. the number of positive cases in five EUs (A, B, C, D, E) was below critical cutoff value (20 cases) except for EU E. The critical cut off value for EU E is 18 cases. In EU G, the number of positive cases was above critical cut off value (20 cases), which was 77 cases. While in EU F the positive cases were equivalent to critical cut off value i.e. 20 cases.

ICT procedures explained to HERD team during Capacity Building Workshop