56 journal articles and reports containing original prevalence data were identified including over 512 010 participants. Data were summarised using percentage prevalence estimates and a subset compared using a random effects meta-analysis by country and year. Pooled estimates for microfilaraemia, immunochromatographic card positivity and combined morbidity were 2.64%, 4.48% and 1.34% respectively. Taking into account pooled country estimates, grey literature and the quality of available data, we conclude that North-East India, Lao PDR and Myanmar demonstrate ongoing evidence LF transmission that will require multiple further rounds of MDA. Bangladesh, Malaysia, Thailand and Vietnam appear close to eliminated LF, whilst Cambodia has already achieved elimination status. We estimated that the burden of morbidity is likely high in Bangladesh and Northeast India, moderate in Cambodia, Myanmar and Thailand and low in Vietnam. There was insufficient evidence to accurately estimate the disease burden in Lao PDR or Malaysia. The results of this study will assist policy makers to advocate and budget for future control programs, and highlights the significant need for further filariasis prevalence studies in the region.

1798

LYMPHATIC FILARIASIS SERO PREVALENCE IN MOMBASA COUNTY

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Background: Lymphatic Filariasis (LF) is a neglected tropical disease targeted for elimination in Kenya. In Kenya's coastal region, LF affects about 3.5 million people. We aimed to determine the sero-prevalence and distribution of LF in Mombasa County. **Methods:** This was a cross-sectional survey involving multistage sampling in which one village was randomly selected from each of the six sub-counties. In each village, a minimum of 300 individuals were randomly selected from 233 randomly selected households (HHs). Persons aged ≥3 years, a resident of the county between January and December 2016 was included in the study. Persons on anti-filarial chemotherapy were excluded. We collected blood samples from participants and collected demographic information using questionnaires. We used Filarial test strip (sensitivity = 98% and specificity = 99%) for detecting circulating LF antigens in blood. We analyzed data using Microsoft Excel and Epi-Info, calculated proportions for and used chi-square ($\chi 2$) to compare sero-prevalence with demographic characteristics. **Results:** A total of 1,826 individuals from 233 HHs were sampled. The overall sero-prevalence was 1.1% (95% CI: 0.7-1.7). There were 14 (6%) HHs with at-least a positive case. The sero-prevalence in males was 1.4% [(11/772); (95% CI: 0.8-2.5)] compared to females 0.9% [(9/1056); (95% CI: 0.4-1.6)]; [($\chi 2$ =0.87; p-value=0.352)]. The mean age of the sero-positive individuals was 17.4± 9.8 years compared to sero-negative which was 21.8 ± 15.6 years (t Stat=1.28; p-value=0.201). All positive cases were from Jomvu sub-county where 14 (35%) of 40 HHs had at-least one positive case. Clustering was seen in 4 (29%) of 14 HHs; 2 HHs had 3 cases each while 2 HHs had 2 cases each. **Conclusion:** Sero-prevalence estimates show presence of LF in Jomvu Sub-County. We recommend intensification of anti-filarial chemotherapy in Jomvu. The findings provide baseline information for future epidemiologic investigations and response to LF in Mombasa County.

1799

EFFECT OF A SINGLE DOSE OF IVERMECTIN ON LOA LOA MICROFILAREMIA 18 MONTHS AFTER TREATMENT

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Implementation of ivermectin-based community treatment for onchocerciasis or lymphatic filariasis elimination has been delayed in Central Africa because of the severe adverse events (SAEs), including death, in people with high levels of circulating *Loa loa* microfilariae (mf). Between August and October 2015, *L. loa* microfilaremia was measured in 16,205 individuals living in an area of central Cameroon that is also co-endemic for onchocerciasis. This testing was performed as part of a "Test and (not) Treat" (TNT) with ivermectin strategy for onchocerciasis elimination based on excluding from ivermectin treatment those with >20,000 mf/ml deemed at-risk for SAEs. Among those tested in 2015, 342 (2.1%) did not receive ivermectin because of an excessive *L. loa* density, whereas 15,469 persons were safely treated with ivermectin. A second TNT campaign is currently being conducted 18 months after the first TNT campaign in the same population. Interim results based on the >9000 individuals that have already been tested so far show that none of the individuals treated with ivermectin in 2015 (those with <20,000/ml) have *L. loa* mf levels that would preclude safe ivermectin treatment in 2017. Interestingly, mf densities of 21 individuals that were unable to receive ivermectin in 2015 had mf levels that had decreased below the 'at-risk' threshold and were therefore treated with ivermectin in 2017. Finally, mf densities of 24 individuals that could not receive ivermectin in 2015 were still above the threshold in 2017. Results for the entire district of >16,000 people will be available in May, 2017. These interim results suggest that, in onchocerciasis/loiasis co-endemic areas, pretreatment testing for *L. loa* microfilaremia is necessary only before the very first treatment with ivermectin and that ivermectin can be safely administered to all individuals treated within the previous 18 months.

1800

MODELLING ALTERNATIVE STRATEGIES FOR ONCHOCERCIASIS ELIMINATION: THE CASE FOR MOXIDECTIN

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African onchocerciasis control and elimination programmes rely predominantly on annual mass drug administration of ivermectin. Phase II and III clinical trials have indicated that moxidectin, a registered veterinary anthelmintic, is a more efficacious treatment. Both drugs, given as a single oral dose, suppress skin microfilarial (mf) loads, but ivermectin does this for a shorter period and with greater variation among individual responses than moxidectin. The influence of the duration of mf suppression and the distribution of individual pharmacodynamic (PD) responses on the projected impact of community-directed treatment with ivermectin (CDTI)