

placement may be critical to their success. These results suggest that the optimized EWT might be capable of reducing local vector black fly biting in areas commonly frequented by residents. Together with other recently developed methods of community directed vector control, the traps may augment ivermectin MDA, bringing the goal of onchocerciasis elimination within reach in much of Africa.

1154

TESTING STRATEGIES TO BETTER INFORM PARTICIPANTS OF AN ANTHELMINTHIC CLINICAL TRIAL

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Obtaining informed consent from participants is an ethical and legal requirement in clinical research. This step commonly relies on the informed consent form alone, yet this may not guarantee the participant's true understanding. Therefore, new methods of conveying information should be tested. We aimed at comparing the impact of different methods of conveying this information on the knowledge of caregivers of participants of a double-blind, randomized clinical trial on Pemba Island, Tanzania. This trial compared the safety and efficacy of two different regimens of mebendazole (3 days 100 mg bid vs 500 mg) against hookworm infections in school-aged children. A total of 252 caregivers were assigned to receiving (i) a pamphlet (n=63), (ii) an oral information session (n=61), or (iii) both the pamphlet and the oral information session (n=63) all covering the clinical trial procedures, their rights, benefits and potential risks. Before consenting to their child's participation in this trial, 252 caregivers responded to a knowledge assessment questionnaire about the study. One group of caregivers (n=65) did not receive any information before they responded to the questionnaire, serving as control. Cure rates of mebendazole against hookworm were significantly higher in the multiple dose arm (98%) than in the single dose arm (13%). Although the pamphlet did not have any effect on caregivers' understanding, attending an information session significantly increased caregivers' knowledge for some questions, mostly concerning the parasite and trial procedures. However, because this method did not properly convey all the important messages, we will explore new methods such as a theatre and slideshow during the information sessions of an upcoming clinical trial evaluating the efficacy, safety and acceptance of chewable mebendazole. The results of the latter will also be discussed in this presentation.

1155

FORECASTING THE IMPACT OF MASS DRUG ADMINISTRATION IN A HETEROGENEOUS ENVIRONMENT WITHIN THE DEWORM3 TRIAL IN BENIN, MALAWI AND INDIA

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Soil-transmitted helminths (STH) affect 1.45 billion people worldwide, and high intensity infections are associated with morbidity especially in children. Annual mass-drug administration targeting children has some impact on morbidity but fails to break the parasite transmission cycle. The DeWorm3 project is a cluster-randomized trial to test the feasibility of interrupting the transmission of soil-transmitted helminths through twice-yearly community-wide MDA at a high coverage level in arms that treat just children or the whole community. The project has study sites in India, Benin and Malawi. We fit epidemiological parameters to the study baseline data using Bayesian techniques and a dynamic model of parasite transmission and MDA impact. We then use the fitted parameters to forecast by forward projection the impact of the MDA coverage achieved in the first round on parasite burdens at the study end point and beyond,

when interventions have ceased or returned to standard annual school-based MDA programmes. We examine various assumptions concerning MDA coverage at rounds post the first round, and individual compliance to treatment on these projections. The ability to predict whether the project's goals have been met depends on the uncertainty in the values of the fitted parameters which reflect the diagnostic techniques used to collect the data. We examine the effect of more sensitive diagnostic techniques (e.g. qPCR) on the degree of confidence in the forecasts. The considerable variability in the prevalence and intensity of parasite burden between study sites and across the clusters in a given site means that the impact of MDA will vary between clusters by the end of the project. We investigate the relationship between MDA coverage, prevalence heterogeneity at baseline and the site level effect on the likelihood of interrupting transmission and the achievement of the WHO elimination of morbidity goals. We discuss how baseline information on heterogeneity can be used to optimize MDA public health interventions to achieve a given target.

1156

STATUS OF SOIL TRANSMITTED HELMINTH INFECTIONS IN SEMARANG, CENTRAL JAVA, INDONESIA

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Indonesia carries the heaviest burden of soil-transmitted helminth (STH) infection in Southeast Asia with more than 62 million children requiring preventative chemotherapy in 2017 alone. Prevalence data for many parts of the country are out-dated and knowledge of the risk factors involved in transmission are not clearly understood. The aim of this study was to determine human STH prevalence and knowledge and practices relating to hygiene behaviour in rural communities in Central Java. A cross-sectional survey of 16 villages was conducted in Semarang, Central Java in 2015. Data on demographic, household and knowledge and practices were elicited through face-to-face interviews. Stool samples were collected and examined using the flotation method. Children (2-12 years) also had their haemoglobin (Hb) levels, height and weight data collected, and BMI computed. A total of 6466 individuals from 2195 households were interviewed. One-third of the cohort were infected with at least one species of STH, with differing burdens of the four species identified. Risk of infection was significantly associated with several demographic and household factors. Infection with STH was not associated with negative health impacts (e.g. diarrhoea, low BMI or Hb levels); however rates of anaemia among surveyed 2-12 year olds were high (33%) especially in school-age children. Knowledge of and behaviour related to hygiene and gastrointestinal diseases varied widely and were generally not associated with STH infection. The limited number of associations identified in this study suggests other undetermined risk factors may play a role in STH infection. The study also revealed that STH infection still persists in Central Java despite ongoing deworming programs. Therefore, current control efforts would benefit from being re-evaluated to determine the best way forward.