to identify factors that may influence CHW reporting. We employed CHWs to conduct community-wide treatment (CWT) in 75 villages in western Kenya. A census was done prior to the MDA to collect demographic data, and all the treatments were recorded in treatment booklets to determine the reported treatment coverage. A household survey was carried out to determine the compliance coverage rates. A structured questionnaire was used to determine treatment coverage levels as well as levels of drug-related side effects.Twenty-four villages were randomly selected for the survey where 1479 households covering 6183 persons were visited in 2012, 2013 and 2014. The eligible population was 5551. Up to 62.9% (53.9-71.9%) reported having been treated compared to CHW's reported coverage of 88.9% (84.2-93.7%) in the same villages (P<0.0047). 33.9% reported being absent during the treatment with 51.3% reporting that the CHW did not visit their homes to offer treatment. More females (50.7%) compared to males (49.2%) complied with treatment. Few people declined treatment for fear of side effects (5.0%). About 2.5% of the population surveyed reported having not heard about the program. Only 1.8% felt they were not sick hence didn't need drugs, while 1.6% reported were pregnant, 1.4% did not take drugs for religious reasons, and 0.05% were influenced by rumors. Of the total population surveyed, only 25.9% experienced side effects with abdominal pains being most frequent (46.0%) followed by diarrhea (31.7%) and dizziness (25.0%).We noted a significant difference between CHW-reported and house-hold survey coverage. The CHW coverage (as validated by the household surveys) improved over time probably attributable to the additional training of the CHWs over the years.

## 1186

### MODELING THE WITHIN-HOST DYNAMICS OF *SCHISTOSOMA MANSONI*: THE CONSEQUENCES OF INCONSISTENT TREATMENT EFFICACY FOR DISEASE CONTROL

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Schistosomiasis is a neglected parasitic disease caused by various trematode species of the genus *Schistosoma*, for which 249 million people needed treatment in 2012. Substantial variability in treatment efficacy has been observed despite comparable *Schistosoma mansoni* prevalence between populations prior to treatment. Praziquantel is the most common pharmaceutical used to control schistosomiasis, due to its applicability over several species and its negligible side effects. However, Praziquantel is not very effective against juvenile schistosomes in humans. This limited efficacy on the juvenile life-stage of the parasite may be an important factor in the persistence of the disease, yet when forecasting the impacts of control measures this factor is usually neglected. We developed a stochastic model to investigate the consequences of inconsistent drug efficacy among parasite life-stages and variation in parasite population structure within the human host. These results were used to parameterize a population-level model to explore control options, including alternatives to the prevalent annual treatment strategy. The effects of anti-helminths on schistosome population age and sex composition within the human host may obfuscate the effectiveness of chemoprophylactic control strategies. Furthermore, we found the effectiveness of the treatment to be heavily dependent on the force of infection to humans, the initial schistosome population size and structure, and the frequency at which pharmaceuticals are administered. Ultimately our results can be used to design optimal control treatments under differing risk scenarios.

## 1187

### SYSTEMATIC REVIEW OF ANTISCHISTOSOMAL TREATMENT EFFICACY STUDIES AND THE SIGNIFICANCE OF INDIVIDUAL-LEVEL PARTICIPANT DATA FOR META-ANALYSES

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Schistosomiasis control mainly relies on preventive chemotherapy with praziquantel distributed through mass drug administration. With a target of 260 million treatments a year, reliably monitoring efficacy is all-important. We performed a systematic review of published literature to identify studies that included investigation of antischistosomal drug efficacy, performed since 2000. Out of 914 unique references, we identified 90 studies involving an outcome assessment within 60 days post-treatment, enrolling a total of 20,517 participants infected with *Schistosoma* spp., treated mostly with praziquantel. We extracted study-level characteristics (*Schistosoma* species, treatment, country, methods used for diagnosis and reported estimates of drug efficacy, etc.). This has allowed us to depict the landscape of schistosomiasis research reporting on anthelmintic efficacy assessment, and to highlight the associated diversity in methodological and reporting approaches. We complete this descriptive exercise by meta-analyses, exploring spatial and temporal heterogeneity among estimates of antischistosomal drug efficacy. We will discuss our results in the context of global efforts to control schistosomiasis. Our work highlights the general limitations of aggregate-data meta-analyses. We argue that individual participant-level data (IPD) would allow application of standardised analytical approaches to efficacy and safety assessments, and more powerful investigation of treatment effects in target sub-populations (as demonstrated by our prior IPD meta-analyses on a subset of up to 4,740 participants). This leads us to discuss the importance of initiating and sustaining efforts to collect and share clinical and epidemiological data, and the potential benefits of this approach to the effective monitoring of antischistosomal drug efficacy.

## 1188

### OUTBREAK OF GASTROENTERITIS ASSOCIATED WITH BORE WELL WATER - GANESHPUR VILLAGE, BIDAR DISTRICT, KARNATAKA STATE, INDIA, 2015

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Diarrhea and foodborne outbreaks account for half of outbreaks in India but few investigations identify the source. On October 9, 2015, Bidar district of Karnataka state, India, reported a gastroenteritis outbreak in Ganeshpur village. We investigated to identify risk factors and provide recommendations. We defined a case as ≥3 loose stools within 24 hours between September 3 and November 3, 2015 in a Ganeshpur village resident. We conducted a retrospective cohort study to assess risk factors and collected stools for Vibrio cholerae culture. We collected one water sample from bore well A and six water samples from bore well B to