Cover page

Official Title: Exploring the impact of scaling up mass testing, treatment and tracking on malaria prevalence among children in the Pakro sub district of Ghana

NCT:

Date: 18/03/2018

Document: Statistical Analysis Plan

Baseline Comparison of Patients: Summary statistics (proportions for categorical variables, and means or medians with variances or IQRs for continuous variables) and graphs will be used to detect presence of outliers or unusual observations, and to assess validity of assumptions for statistical tests. Participants will be compared between the time points across the different communities with respect to baseline demographic, clinical and parasitological characteristics. Statistical analysis of the above comparisons for continuous variables will be based on graphs, t-test (or Wilcoxon test), and ANOVA (or Kruskal-Wallis test). Categorical variables will be compared using chi-square tests. All analyses will be performed for the whole population in each arm

Primary objective: outcomes of primary objective asymptomatic parasitaemia will be compared over time and between intervention arms using chi-square tests (or fisher exact tests) and logistic regression (or conditional logistic regression). Adjustments for potential confounders including patient's age and use of ITN and baseline temperature will be considered. In addition, these outcomes will also be compared over time using Cochrane Armitage test of trends.

Secondary objectives: symptomatic parasitaemia at the hospitals and symptomatic parasitaemia picked up at the community compared over time using chi-square tests (or fisher exact tests) and logistic regression (or conditional logistic regression). Comparisons of anaemia in children <15 years across time and study communities will be assessed through Cochrane Armitage test of trends and using chi-square tests (or fisher exact tests) respectively. A binomial logistic regression will be used to test impact of intervention on febrile illnesses.