

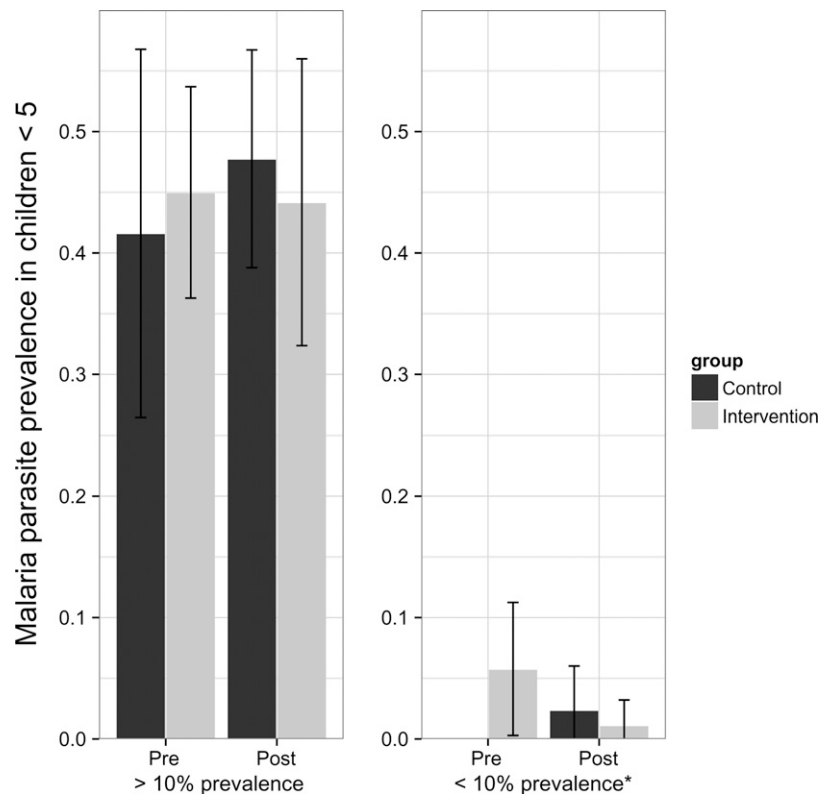
SUPPLEMENTAL APPENDIX 1

Stratified analysis. Although the study was not powered to do so, all analyses were stratified by high (> 10% initial prevalence) and low (\leq 10% initial prevalence) malaria transmission to assess whether malaria transmission modified the effectiveness of the mass test and treatment (MTAT) intervention. To classify catchment areas as high or low transmission, parasite prevalence was estimated using as much data as available, by rapid diagnostic test (RDT) positivity from June to July 2012 in the intervention census data set in MTAT areas and from the Malaria Indicator Surveys (MIS) data from April to May 2012 in control areas. We used population-based measured of parasite prevalence to classify areas as high or low transmission instead of health facility data as it provides a less biased measure of transmission than health facility data. We performed simple unadjusted analyses of the parasite prevalence outcome using a difference-in-differences (time by intervention group) interaction. We performed the same analyses detailed in the work for the health facility incidence outcome, including the rate of laboratory testing.

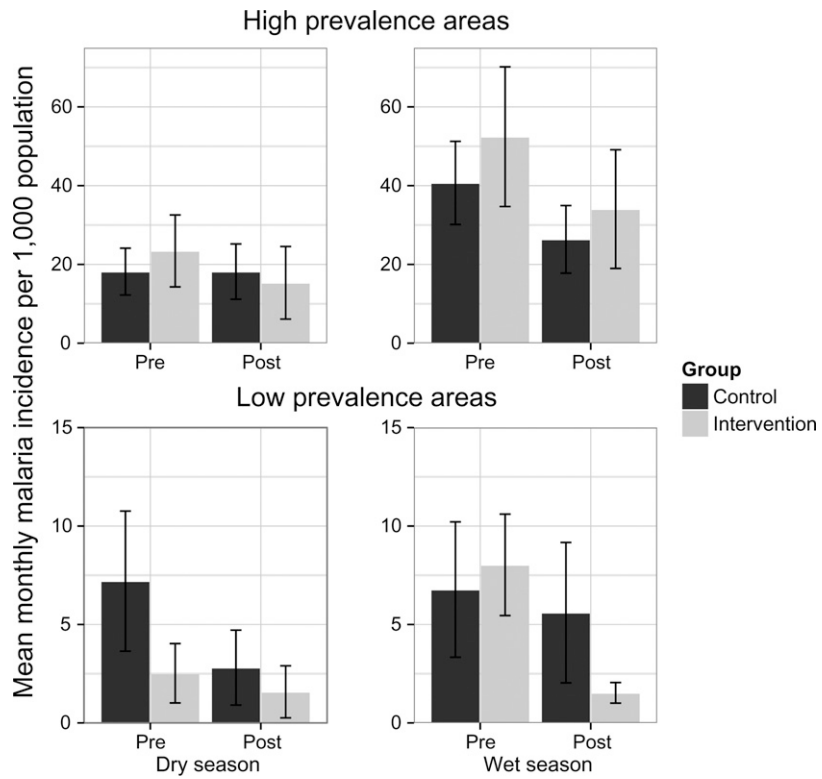
For the outcome of parasite prevalence, we found no evidence of effect modification by baseline parasite prevalence ($P = 0.628$); when stratified by high (> 10%) and low (< 10%)

parasite prevalence catchment area, there was no difference between intervention and control at follow-up in either high (odds ratio [OR] = 0.87, 95% confidence interval [CI] = 0.48–1.56) or low (OR = 0.47, 95% CI = 0.04–5.38) areas (Figure 1). For the outcome of health facility incidence, in analyses stratified by high (> 10%) and low (< 10%) parasite prevalence catchment area, there was a greater effect (estimated by the pre-post by treatment group interaction term) in high prevalence areas (incidence rate ratio [IRR] = 0.75, 95% CI = 0.60–0.93) than in low prevalence areas (IRR = 1.11, 95% CI = 0.78–1.58) (Figure 2). Mean unadjusted monthly confirmed case incidence in the pre-intervention period was 20.6 (14.5–26.6) and 39.7 (27.9–51.4) per 1,000 catchment population in control areas in the low and high seasons, respectively, and 16.2 (8.7–23.6) and 43.1 (30.5–55.7) per 1,000 in MTAT areas in the low and high seasons, respectively. Mean monthly confirmed case incidence in the post-intervention period was 15.5 (9.3–21.6) and 22.9 (15.6–30.2) per 1,000 catchment population in control areas in the low and high seasons, respectively, and 9.2 (3.4–14.9) and 19.4 (10.6–28.1) per 1,000 in MTAT areas in the low and high seasons, respectively.

The study was not powered to assess differences in the impact of the MTAT intervention on malaria outcomes in high and low transmission strata; this may have limited our ability to detect meaningful effects in these transmission strata.



SUPPLEMENTAL FIGURE 1. Parasite prevalence during peak malaria transmission season by intervention/control and pre/post intervention, stratified by high (> 10%) and low (< 10%) prevalence. * Zero malaria infections were found in control areas with < 10% prevalence in the baseline survey.



SUPPLEMENTAL FIGURE 2. Unadjusted mean confirmed case incidence per 1,000 catchment population in wet and dry seasons by intervention/control and survey round, stratified by high (> 10%) and low (< 10%) prevalence.