

uses limited resources effectively to control NTDs and other infectious diseases in Africa.

## Supporting Information

**Figure S1 Sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) analysis of purified anti-gens.**  
(PDF)

**Figure S2 Assay stability after coupling microspheres with antigens.**  
(PDF)

**Table S1 BIC results of mixture models.**  
(PDF)

**Table S2 Sensitivities and specificities in positive and negative controls using cut-off values calculated by the finite mixture model-based MFI value distributions in population-based serological survey.**  
(PDF)

**Table S3 Seroprevalence by site, sex, and age group for pathogens measured simultaneously using a micro-**

**sphere-based multi-serological assay on samples from the Kwale site.**

(PDF)

**Table S4 Seroprevalence by site, sex, and age group for pathogens measured simultaneously using a micro-sphere-based multi-serological assay on samples from the Mbita site.**  
(PDF)

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## Author Contributions

Conceived and designed the experiments: YF SK SMNz MMw MK KH. Performed the experiments: YF SMNz MMw CT JK AWM MMi. Analyzed the data: YF SK SMNz TH KK. Contributed reagents/materials/analysis tools: YF SMNz MMw SMNj CT JK IK SM MN MOO YI Mln MIt HT KI TT LMY DM RH SH MC MK MMi. Wrote the paper: YF SK SMNz.

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