Results Growth was detected in 80% of 118 BCBs tested, showing full detection of all enterococci, streptococci, and non-fermenting Gram-negative bacteria (100%), and partial detection of Enterobacterales (84%), staphylococci (88%), fastidious organisms (17%) and yeast (67%). Compared with the first prototype, growth detection improved considerably. Six microorganisms that remained undetected before, were now (partially) detected: 100% growth detection of BCBs with Staphylococcus aureus, Burkholderia cepacia and Pseudomonas aeruginosa and 17% of BCBs with Candida albicans, Haemophilus influenzae and Neisseria subflava.
Conclusion The second generation Turbidimeter showed improved growth detection (17–100% of BCBs) compared with the first prototype. Field testing will be conducted within the EDCTP2-funded SIMBLE project from May 2023 until end of 2024 in Benin and Burkina Faso, to evaluate performance and ease-of-use for future implementation in field laboratories.

PA-395 EFFECT OF MASS TESTING, TREATMENT AND TRACKING ON MALARIA PREVALENCE AMONG CHILDREN IN THE PAKRO SUB DISTRICT OF GHANA OVER A TWO-YEAR PERIOD

[1]Ndong Ignatius Cheng*, [1]Chuo Ennestine Chu, [2]Alfred Amambua-Ngwa, [1]Collins Stephen Ahorlu. [1]*Noguchi Memorial Institute for Medical Research, University of Gahan, Ghana*; [2]*MRC Unit The Gambia at London School of Hygiene and Tropical Medicine, The Gambia*

10.1136/bmjgh-2023-EDC.186

Background Global efforts to scale-up malaria control interventions are gaining steam. These include the use of LLINs, IRS, Intermittent Preventive Treatment and Test, Treat and Track. Despite these, the drive for malaria elimination is far from being realistic in endemic communities in Africa. This is partly because asymptomatic parasite carriage, not specifically targeted by most interventions fuel transmission. There is a need to use alternative strategies that target asymptomatic parasitaemia. We report the impact of malaria mass testing, treatment and tracking (MTTT) on prevalence of asymptomatic parasitaemia over a two-year period in Ghana.
Methods 5800 individuals in 7 communities in the Pakro subdistrict of Ghana participated in this study. Community-based health volunteers moved from house-to-house testing participants using RDTs and treating positive cases with ACTs quarterly.
Results In the intervention arm, the prevalence of asymptomatic parasitaemia significantly decreased from 22.9% (95% CI: 19.8, 26.1) in March 2020 to 6.5% (95% CI 5.9, 7.0) in March 2022 among all the participants. Also, a significant reduction in parasitaemia was observed during the July season 2020 to 2021 ($P<0.001$). Interestingly, there was no significant decline in asymptomatic malaria during the season of November between 2020 and 2022. In the control arm, the parasitaemia increased from 30.3% (95% CI: 24.1, 36.5) in March 2020 to 41.4% (95% CI: 32.8, 50.0) in March 2022. Similar trends were observed for participants ≤15 years and ≥15 years. In the intervention arm the prevalence of moderate anaemia reduced from 4.2% in March 2020 to 1.2% in March 2022.
Conclusion This study suggests that implementing MTTT could reduce the prevalence of asymptomatic parasitaemia in children under 15 years of age over time. However, care should be taken when planning MTTT as the asymptomatic parasitaemia prevalence varies across season. There is a need to reduce the times interval between interventions.

PA-401 DEMOGRAPHIC SURVEILLANCE IN LOW-RESOURCE SETTINGS DURING COVID-19: LESSONS LEARNT FROM THE TYPHOID CLUSTER RANDOMISED TRIAL IN GHANA

[1]Sampson Twumasi-Ankrah*, [1]Michael Owusu-Ansah, [1]Michael Owusu, [1]Anthony Arko-Adjei, [1]Portia Okyere-Boakye, [1]Seidu Amenyaglo, [1]Caleb Osei-Wusu, [1]Francis Opoku-Agyapong, [2]Birkneh Tilahun Tadesse, [2]Florian Marks, [1]Yaw Adu-Sarkodie, [1]Ellis Owusu-Dabo. [1]*Kwame Nkrumah University of Science and Technology, Ghana*; [2]*International Vaccine Institute, South Korea*

10.1136/bmjgh-2023-EDC.187

Background Setting up a robust typhoid demographic surveillance system (DSS) in low-resource areas will help in characterizing, and defining priorities and strategies for typhoid control activities such as the deployment of new conjugate typhoid vaccines. The study describes the DSS methodology, data, strengths and use in achieving high vaccine coverage.
Methods Enumeration areas (EAs) were used as the clusters for the Typhoid Conjugate Vaccine Trial in Ghana (TyVEGHA) study. The existing EA maps had two main limitations: they did not capture the structures and the boundaries were not clearly defined. We employed drones to take spatial pictures of the study area and generated GIS maps with well-defined boundaries. With the GIS maps, enumerators located and enumerated every participant in each structure within a cluster. A census form, developed on Commcare running on tablets, was used to capture the demographic, socio-economic and WASH attribute information of participants and households. For purposes of the mass vaccination, each participant in the study area was given a census identification (ID) card.
Results Overall, demographics of 73,625 individuals (i.e., 55,881 during baseline and 17,744 during the first update) from 15,029 households (13,266 for baseline and 1,764 for first update) were recorded. It was observed that 1,125 (1.95%) birth, 343(0.59%) death, 2,219(3.84%) in-migration and 1,101(1.91%) out-migration occurred in the TyVEGHA catchment area between the baseline and first update. The eligible participants for the TyVEGHA trial during the baseline was 22,539/55,881 (40.33%). Due to the robust DSS, we observed a high vaccine coverage rate of 88.36% (20,323) including screen failures. Overall, 4.7% (961 per 20,323) queries were detected and quality control guidelines were used to resolve all queries weekly.
Conclusion Setting-up robust demographic surveillance in low-resource areas is necessary for improving the dearth of reliable data for planning health and socio-economic interventions and achieving high vaccine coverage rates.