PA-466 FACTORS ASSOCIATED WITH COVERAGE OF THREE DOSES OF INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN INFANTS WITH SULFADOXINE-PYRIMETHAMINE: A CROSS-SECTIONAL COMMUNITY-BASED SURVEY IN SIERRA LEONE

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Background Intermittent Preventive Treatment of malaria in infants (IPTi) is a malaria control strategy consisting of the administration of sulfadoxine-pyrimethamine alongside routine immunizations. IPTi has been renamed as Perennial Malaria Chemoprevention (PMC), accounting for its recently recommended expansion into the second year of life. Before starting a pilot implementation on PMC, the currently implemented strategy was assessed in children in selected areas of Sierra Leone.

Methods A cross-sectional, community-based, multi-stage cluster survey was conducted in 2021 in three districts in Northern and northwestern provinces of Sierra Leone among 10-23 months old children. IPTi coverage was calculated using percentages and 95% confidence intervals weighted for the sampling design and adjusted for non-response within clusters. Factors associated with iPTi coverage including malaria RDT were assessed.

Results A total of 720 children were recruited. Coverage of three IPTi doses was 50.57% (368/707; 95% CI 45.38 – 55.75). Adjusted for all other studied covariates, older children (OR per month increase 1.07, 95% CI 1.02–1.11, P-value 0.0056), those who slept under a mosquito net the previous night (OR 1.76, 95% CI 1.22–2.53, P-value 0.0029) and those whose caretaker was paid-employed (OR 2.74, 95% CI 1.11, 6.74, P-value 0.0290) were more likely to have received the complete three IPTi doses. Children whose caretakers were males (OR 0.50, 95% CI 0.28–0.91, P-value 0.0251), residing in Port Loko district (OR 0.40, 95% CI 0.19–0.87, P-value 0.0212) and those with a positive RDT result (OR 0.57, 95% CI 0.39–0.82, P-value 0.0035), were less likely to have received complete three doses of IPTi.

Conclusion In this survey, IPTi coverage was around 50%. A positive health behaviour possibly explains the association with use of mosquito nets. This implies that positive health behaviour messaging is key in improving coverage of IPTi, a key malaria prevention strategy.

PA-475 TRANSMISSION OF A REPLICATION-COMPETENT VECTOR RVSV-ZEBOV EBOLA VACCINE: A PHASE 2 TRIAL

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Background Live attenuated, including viral vector, vaccines may be transmitted to others. Benefits of secondary transmission include increased vaccine coverage and accelerated achievement of herd immunity. In contrast, risks include vaccine evolution to wild-type pathogens e.g., oral polio vaccine and risks of adverse events in vulnerable populations.

Recently, we reported the shedding of the rVSVΔG-ZEBOV-GP vaccine in children's saliva, suggesting potential secondary transmission to relatives. In this phase 2 vaccine trial, we investigate the secondary transmission of the rVSVΔG-ZEBOV-GP vaccine to the vaccinees' relatives in Gabon.

Methods One hundred sixty-three relatives of our study vaccinees (Gabonese children aged 1–12 years old) were enrolled to assess the transmission of the rVSVΔG-ZEBOV-GP vaccine, compared to another live attenuated vaccine containing the Oka strain of the varicella-zoster virus. They were followed up on days 0, 2 or 3, 7, 14, 21, 28, and 56 post-vaccination. Clinical symptoms and signs were observed, and samples were collected during the study visits. Relative plasma and saliva were tested by RT-PCR for presence of rVSV RNA, alongside antibody titers' determination.

Results Quantifiable rVSV RNA was detected in plasma in a low proportion of relatives on days 2 or 3; there was no detection in the saliva of relatives at any visit. These data will be aligned with titers of anti -ZEBOV-GP and further interpreted. No adverse event was observed in the relatives.

Conclusion rVSVΔG-ZEBOV-GP vaccine virus is transmissible to relatives or close contacts of vaccinees, based on the RT-PCR Ct values, favoured by virus shedding in vaccinated individuals. The implications of this finding require further consideration.

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