

PA-766 TRANSVAC TRAININGS: LESSONS FROM 5 YEARS OF VACCINOLOGY COURSES, AND THE TRANSITION TO AN INDEPENDENT PROGRAM

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Background The development and validation of novel vaccines requires specific expertise in many subjects. Scientists often require specialized training when they enter vaccinology from an adjacent field or advance a vaccine candidate to the next stage of the pipeline. The limited availability of this training represents a key gap in the field. This issue affects academic labs and small biotech companies which lack in-house knowledge regarding specific areas. We have found that access to training opportunities is particularly needed by groups in sub-Saharan Africa, and is critical to strengthening local capacities. **Methods** From May 2017 through April 2023, the Horizon 2020 program TRANSVAC2 worked to address these gaps by offering free training courses in addition to scientific services.

Results 14 modules were developed pertaining to various vaccinology subjects, and 31 separate trainings sessions were attended by over 400 trainees from 44 countries—including 19 different low- and middle-income countries (LMICs). Selected applicants were offered seats in the courses with no registration fees and free accommodation.

Conclusion 5 years of hosting the TRANSVAC courses has provided several lessons on the needs of professionals in both the academic and industrial vaccine fields. The course organizers are now transitioning from the European Commission-supported framework to a new operational model. Through this model, we will continue offering established, highly demanded courses to the vaccine community and introduce new trainings, including the development of accessible eLearning modules. This process aims to build upon the experiences and reputation of the program to form a new, sustainable platform for vaccine courses.

PA-767 PREVALENCE AND RISK FACTORS OF URINARY SCHISTOSOMIASIS IN NORTHERN MALAWI – AN ASSESSMENT OF MASS DRUG ADMINISTRATION AND COMMUNITY PERCEPTIONS OF THE DISEASE

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Background Vector control, identification of at-risk populations, and the encapsulation of community perceptions remains a prerequisite to planning and designing as well as the implementation of control measures. MDA is the gold stand technique in the control of schistosomiasis in Africa. Hence the objectives of this study were to investigate community perceptions of the disease and determine the prevalence and Risk factors of urogenital schistosomiasis in Northern Malawi. **Methods** A total of 1841 in-depth interviews (IDIs) were conducted between April 2022 and May 2023. The study also enrolled 251 participants that responded to the in-depth interview and submitted urine for microscopy. The study also conducted a seasonal snail survey in Karonga, Rumphu, Nkhatabay, and Nkhotakota districts for species distribution and infection status.

Results In general, out of the 1841 study participants involved in the IDIs, less than 20% had a fairly good level of knowledge about the disease, its spread, and prevention techniques. Out of 251 children that were enrolled 87 (34.7%) were found to have *S. haematobium* eggs. Chi-square analysis established that having a parent in rice farming ($p=0.029$) occupation is a key risk factors for urogenital schistosomiasis. It was also surprising to note that those schoolchildren who received Praziquantel during MDA had significantly higher prevalence ($p=0.010$). Furthermore, this study revealed that they are no association between a child involved in MDA advocacy campaigns and a level of knowledge on schistosomiasis transmission. *Bulinus* and *Biomphalaria* were found to be the abundant species and *Bulinus* was found to be the key vector.

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PA-769 BAYESIAN SPATIO-TEMPORAL ANALYSIS OF MALARIA HOTSPOT IN GABON FROM 2000 TO 2015

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Background At the local level, malaria transmission persists through hotspots. Besides other known factors, the distribution of malaria hotspots may be shaped by environmental variables. However, research focusing on this aspect has been relatively scarce in Gabon. This underscores the need for further investigations to elucidate the specific environmental factors together with a specific intervention, that may contribute to the distribution of malaria hotspots, taking into account the spatio-temporal effect in Gabon.

Methods These data were part of the Demographic Health Survey program from 2000 to 2015. Hotspots of malaria prevalence for cluster of households were identified using the local Getis-Ord G_i^* statistic. The effect of covariates on the outcome was assessed using a Bayesian space-time framework with a Binomial model, implemented in the Integrated Nested Laplace Approximation (INLA), using the Stochastic Partial Differential Equations approach (SPDE).

Results A total of 316 clusters were initially considered, out of which 257 clusters with known hotspot status were included in the analysis. Among these clusters, approximately thirty percent were persistent hotspot over time and concentrated in rural areas. Using a spatio-temporal model, association between malaria prevalence hotspot variation and two key factors was found: years and rainfall. Each additional year or amount of rainfall was associated with an increase in the odds of hotspot occurrence (adjusted posterior odds ratio [AOR]: 1.32, 95% confidence interval [CI]: 1.03–1.69 and AOR: 1.15, 95% CI: 1.02–1.30, respectively). Furthermore, the analysis found that clusters of households with high insecticide-treated net (ITN) coverage were less likely to be hotspots (0.19 (95% CI: 0.06–0.61)).

Conclusion These findings highlight the spatio-temporal dynamics of hotspots and the role of the rainfall, in influencing their occurrence. Moreover, the protective effect of high ITN coverage suggests the importance of targeted interventions in mitigating hotspot formation and malaria transmission.