species including *P. falciparum, P.malariae, P.ovale* and *P.vivax* either as single or mixed infection. In addition, we determined the magnitude of gametocyte carriage in this asymptomatic population. Using 1762 dried blood spots (DBS) samples collected in a HIV/malaria co-infection study in a malaria endemic region in western Kenya, the presence of any species of malaria was first determined using an improved assay based on genus-conserved sequences of the *Plasmodium* 18S ribosomal gene. If positive for malaria, panels of highly species-specific qPCR assays were developed to determine the presence and quantity the four malaria species. In addition, we used three stage- gametocyte specific RNA transcripts to quantify gametocyte carriage. Preliminary analysis shows malaria prevalence of about 69.5% as detected by sensitive molecular techniques. Of these, *P.falciparum* was the most prevalent species (59.1%), followed by *P.malariae* (4.7%) and *P. ovale* (2.6%). We have so far not detected any *P.vivax* in our population. Of the 18S positive samples by genus assay, only 66.4 % could be speciated suggesting that there is need for even more sensitive species assays for detection of sub-microscopic malaria. We will report on the magnitude of sexual malaria parasitemia using our gametocyte panel. The relevance of this study is that asymptomatic malaria carriage of both *falciparum* and non-*falciparum* species is an efficient reservoir of malaria hence the need for higher public health priority.

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THE POTENTIAL IMPACT OF MATERNAL DEPRESSION ON PARENT-CHILD INTERACTIONS AND PARASITIC INFECTION IN BENINESE INFANTS

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Post partum maternal depression occurs in an estimated 13-19% of women following childbirth, with women from developing countries particularly at risk. Numerous studies in low-income settings have found links between maternal depression and neonatal and child health outcomes such as stunting, underweight, inhibited neurodevelopment, and diarrheal disease. However, few studies further investigated the potential consequences in terms of offspring morbidity. Our objective was to explore the relationship between maternal depression one year after birth and parent-child interactions, risk of *Plasmodium falciparum* malaria, and risk of soil-transmitted helminth infection in infants 1-2 years of age in Benin. Our population included mothers and their children enrolled in a clinical trial during the second trimester of pregnancy (MiPPAD). Maternal depression was assessed using the Edinburgh Postnatal Depression Scale (EPDS) in mothers of children one year post-partum. Parent-child interactions were assessed through the HOME subscales at one year post-partum. Blood, urine, and stool samples were taken from children to diagnose malaria and helminth infection prospectively from 1-2 years of age. Crude and adjusted linear and negative binomial regression models tested associations. Of the 303 children in analyses, 39 (12.87%) had mothers with depressive symptoms according to a cut-off of >=13 points. Mean HOME score was 27 (SD=2.4). From 1-2 years of age, median number of malaria episodes per child was 3 (0-14) and 82/240 (34.17%) children had at least one helminth infection. Adjusted linear regression analyses revealed post partum maternal depression to be significantly correlated to a reduced HOME score (Coefficient=-0.12 95% CI: -0.19--0.05). Adjusted negative binomial models did not reveal significant associations between post-partum maternal depression and increased risk of malaria episodes (IRR=1.00, 95% CI: 0.97-1.02) and increased risk of helminth infection (IRR=0.99 95% CI: 0.93-1.05). As expected, parent-child interactions were affected by post-partum depression, but this did not seem to affect offspring morbidity.

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SHIFT OF DEMOGRAPHIC BURDEN OF MALARIA CASE OF RWANDA USING HMIS

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Malaria is a major cause of out patients' consultation in Sub Saharan African country and particularly in Rwanda where malaria constituted more than 30% of outpatient's consultation in year 2017-2018. The Rwanda National Malaria Program Annual Report 2017-18 shows that the number of malaria deaths reduced from 529 cases in 2016-2017 to 382 cases in 2017-2018 (28% reduction), and in the same period, severe malaria cases reduced from 14,033 cases in 2016-2017 to 10,894 cases in 2017-2018 (22.4% reduction). We analyzed demographic characteristic of all 2018 malaria cases and deaths captured through the Rwanda Health Management Information System (HMIS) by age group and gender. All inpatients malaria cases were 16,501: 8, 040 (49%) males and 8,461 (51%) females. A total of 7,688 severe malaria cases were reported, with 4,056 (53%) male and 3,632 (47%) female (p value<0.0001). From Jan to Dec 2018, 331 malaria deaths were notified with171 (52%) male and 160 (48%) female. The proportion of malaria deaths among inpatients male (2.1%) was not different to the proportion of malaria deaths among female (1.9%), p value>0.05. Inpatients malaria cases were 6,662 (40.4%) in under5; 4,663 (28.3%) aged 5 to 19 years and 5, 176 (31.4%) 20 years and above. A total of 3,496 (45%) severe malaria cases were found in children under5; 2,502 (33%) aged between 5 to 19 years and 1,690 (22%) 20 years and above. Malaria deaths were 86 (26%) for under5; 74 (22%) aged between 5-19 years and 171(52%) for 20 years and above. The proportion of malaria deaths to total malaria inpatients was respectively 1.3% for under5; 1.6% for 5 to 19 years and 3.3% for patients of 20 years and above (p-value<0.0001). The Routine malaria data shows that male are most likely to develop severe malaria and adults of 20 years and above have higher mortality risk.

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DEMOGRAPHIC SURVEILLANCE TO MONITOR PREGNANCY OUTCOMES IN MALARIA ENDEMIC AREA IN OUELESSEBOUGOU, MALI

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Placental malaria is associated with poor outcomes for both women and their babies. To reduce poor pregnancy outcomes associated with malaria infection, WHO recommends monthly anti-malarial treatment with sulfadoxine pyrimethamine (SP) during the second and third trimester and the use of insecticide-treated bed nets. However, due to the spread of SP-resistant parasites in some parts of Africa, new interventions such as a vaccine to prevent placental malaria is needed. Prior to testing a

Garrison A., Maselko J., Courtin David, Zoumenou R., Massougbodji A., Cot Michel, Maman S., Bodeau-Livinec F.

The potential impact of maternal depression on parent-child interactions and parasitic infection in Beninese infants.

American Journal of Tropical Medicine and Hygiene, 2019, 101 (5_Suppl), p. 293-293.

ISSN 0002-9637