2020, with the main strategy being treatment of entire endemic communities. Since the inception of the Global Programme for the Elimination of LF in 2000, tremendous progress has been made in many endemic countries. However, current observations point to the need for improved treatment regimen, frequency of treatment or drug delivery strategies in order to achieve the elimination goals in certain endemic areas. In this randomised trial, we evaluate the use of twice-yearly treatment with ivermectin and albendazole in 18 LF-endemic communities in Ghana, where despite 15 years of yearly treatment the disease is still above the elimination thresholds.

Methods Following demographic data collection, *Wuchereria bancrofti* antigen, microfilaria and antibody prevalence were assessed in study participants using the Alere FTS kit, nucleopore filtration and Wb123 ELISA, respectively. The study assessed the perspectives of the communities'on persistent transmission of LF in view of implementing effective treatment uptake strategies.

Results The baseline assessments revealed antigen prevalence of 8.2% (95% CI=6.8–9.8), with overall microfilaria prevalence of 1.2%. Infections were higher in males and in individuals who spend significant amount of time outdoors for commercial activities. Barriers related to medication, personal, health system, disease and social structure were observed to affect mass drug administration compliance. Community members perceived that they were not susceptible to infection and this together with drug adverse effects strongly affect the ingestion of the drugs.

Conclusion While this trial is still in an early phase, the baseline assessments reveal programmatic challenges to the implementation of a twice-yearly treatment strategy for the control of LF which must be addressed to enhance implementation success.

PO 8248 DETERMINANTS OF ACCEPTABILITY OF MALARIA RAPID DIAGNOSTIC TEST AMONG HEALTH WORKERS IN KINTAMPO NORTH MUNICIPALITY, GHANA

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Background Ghana rolled out the policy in 2013 with the use of malaria rapid diagnostic test (mRDT) promoted to facilitate diagnosis. However, health workers who are at the centre of mRDT implementation still treat half of febrile patients with negative mRDT results with antimalarial drugs, suggesting limited or lack of acceptability of the innovation.

Methods We conducted a cross-sectional study to examine determinants of mRDT among health workers in Kintampo North Municipality (KNM) in Ghana. Data were collected from 110 health workers in KNM involved in malaria management from February to April 2017. The survey tool was based on two frameworks – the Technology Acceptance Model (TAM) and Normalisation Process Theory (NPT). Acceptability was measured by ease of use, perceived usefulness and intention to use.

We hypothesised that acceptability was influenced by coherence, cognitive participation, collective action, reflexive monitoring and respondent characteristics. A composite acceptability score was computed from a 21-item questionnaire for each respondent. The respondents were divided into three groups of low, moderate and high acceptability for ordered logistic regression to examine the relationship between acceptability and its determinants.

Results The median acceptability score was 84(Q1, Q3:68, 103). About 34% of health workers had low acceptability while 37% and 29% had moderate and high acceptability respectively. In the multivariable analysis, coherence (OR=1.23, 95%CI=1.11–1.37), cognitive participation (OR=1.35, 95%CI=1.10–1.66), health workers in rural health facilities (OR=6.99, 95%CI=1.82–26.84) and health workers with more than three years' experience (OR=5.53, 95% CI=1.98–15.42) were more likely to have high mRDT acceptability.

Conclusion Acceptability of mRDT was moderate among the majority. This can be improved by enhancing health workers' coherence on the benefits of mRDT through policy building or dissemination of information, promoting health workers' cognitive participation in the mRDT implementation process through recruitment of local 'champions' to promote 'buy-in' and providing incentives to health workers to embed and sustain the use of the health technology.

PO 8249 SUBMICROSCOPIC *PLASMODIUM FALCIPARUM* INFECTIONS IN MATCHED PERIPHERAL, PLACENTAL AND UMBILICAL CORD BLOOD SAMPLES FROM CONGOLESE WOMEN AT DELIVERY

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Background This cross-sectional study was conducted to characterise *P. falciparum* infections matched in peripheral, placental and cord blood among Congolese women at delivery receiving 1, 2 or more doses of sulfadoxine-pyrimethamine. The cross-sectional study was conducted in a Southern district of Brazzaville, Republic of the Congo, between March 2014 and April 2015.

Methods Peripheral and placental blood samples were collected for *P. falciparum* infection investigation by microscopy and nested polymerase chain reaction (PCR), using *P. falciparum* merozoite surface protein-2 (*msp2*) gene as marker.

Results Of the 370 pregnant women recruited, only 7.3% peripheral and 2.7% placental blood samples were found smear-positive for *P. falciparum* by microscopy. All isolates from cord blood were microscopy-negative. However, the prevalences of submicroscopic *P. falciparum* infections (detectable only by PCR) were 25.4%, 16.7% and 9.4% in peripheral, placental and cord blood respectively. The frequency of 3D7 msp2 alleles was the highest (>60%) whatever the blood considered. We found a high prevalence of submicroscopic infection in pregnant women associated with a high genetic diversity of *P. falciparum* isolates. The multiplicity of infection ranged between 1.2 and 1.4 irrespective of the blood compartment, and it showed no significant association with maternal age (p=0.3), gravidity (p=0.1) or sulfadoxine-pyrimethamine (p=0.3).

Conclusion In summary, this study showed that there is a high prevalence of submicroscopic infection and a high genetic diversity of *Plasmodium falciparum* strains in Congo. This

diversity varies according to maternal, placental and umbilical cord blood. Age, gravidity and doses of preventive treatment based on sulfadoxine-pyrimethamine do not interfere with the multiplicity of infections.

PO 8254 LESSONS LEARNT FROM SCALING UP AN ONLINE SYSTEM FOR REVIEW AND MANAGEMENT OF PROTOCOLS IN SUB-SAHARAN AFRICA

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Background The transition from paper-based to online submission of health research protocols using the RHinnO *Ethics* (RE) platform has been shown to improve efficiency and quality of ethics reviews. However, despite these documented benefits, there are only a total of 40 installations in 12 out of the 54 countries in Africa. We analysed facilitators and barriers to adoption of RE by Researc Ethics Committees.
Methods We used a retrospective analysis to identify determinants of adoption or rejection of RE by grouping feedback from users into key emerging themes identified through three stages of RE adoption: 1) contractual 2) trial 3) full implementation.
Results A total of 3947 protocols have been managed through RE by March 2018. Of those reached, 25 per cent adopted and continue to use RE. Of those that rejected, 14 per cent rejected after the trial. At the contractual stage, the key determinants of adoption were the guarantee of sustainable funding, pre-existing good IT infrastructure, and the assurance of technical assistance from the providers. The key determinants of rejection were concerns of cyber security, limited control and ownership by Researc Ethics Committees and cost of the annual subscription. At the trial stage, the determinants of continued adoption and use were continued IT support from providers and a proven comparative advantage over the paper-based system. The key determinant of rejection was limited support from organisation leadership. Those who have continued through the implementation stage emphasised financial sustainability and continuous improvement of the RE as key determinants.
Conclusion Accelerated adoption of RE will require increased adaptability of the platform, decrease in cost of annual subscription, improved confidence in security and ownership of data. Developers, Research Ethics Committees and sponsors of RE need to develop a cost-effective funding strategy to increase efficiency, economies of scale and benefits related to harmonised and standardised digital platforms.

PO 8261 CYTOCHROME P450 (CYP2B6*6C.516G>T) VARIANTS IN CONGOLESE INDIVIDUALS WITH HIV AND TB MONO AND DUAL INFECTIONS

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Background The inter-individual genetic polymorphism of cytochrome P450 enzymes (CYP), involved in the metabolism of many drugs, partly modulates drug response and toxicity. Single nucleotide polymorphisms of CYP2B6 for example, G516T have been implicated in high- and sub-therapeutic plasma concentration of the current antimalarial, HIV and TB first-line drugs in various geographical regions and thus undermines effective disease management. At present, there is no data on the frequency of CYP2B6 c.516G>T among the Congolese population, despite a significant number of people undergoing antimalarial, HIV and TB treatment that relies on CYP2B6-based drug clearance or activation.
Methods A total of 418 patients with HIV-1 mono-infection, HIV-1 +TB coinfection and *P. falciparum* infection were genotyped for CYP2B6 c.516G>T polymorphism using PCR-RFLP. The frequencies of the alleles as well as the genotypes (GG, GT and TT) were determined.
Results The frequency of CYP2B6 c.516G>T polymorphism was 69% and frequency of G and T alleles were 45% and 55%, respectively. 17.0% (49/288) of participants were GG (extensive metaboliser), 55.2% (159/288) of participants were GT (intermediate metaboliser) and 27.8% (80/288) of participants were TT (poor metabolisers).
Conclusion This study highlights CYP2B6 c.G516T polymorphism as a potential determinant of drug response and toxicity among the Congolese population, particularly those undergoing antiretroviral, malaria and tuberculosis treatment within the current first-line drug policy framework.

PO 8264 QUALITY CARE CRITERIA IN A CLINICAL TRIAL CONTEXT: PATIENT AND DAFRA AND NANORO CMA HEALTH WORKER PERCEPTIONS IN BURKINA FASO

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Background Participants in clinical trials as well as researchers conducting them, establish a close link between clinical trial and quality care. However, what understanding do they have of the concept of quality of care? This study aimed to answer this question by presenting the criteria which define for them quality care in the context of clinical research.
Methods The data were collected from the participants involved in these clinical trials as well as from the health workers (research teams and other health workers) using a qualitative approach with 70 in-depth interviews. Direct observations of the participants partaking in care activities were also made in both health districts. The data were recorded, transcribed and then analysed on the thematic content basis.
Results For the health workers interviewed, the clinical trials are conducted in optimal conditions which highly contribute to ensure a good quality of care. To them, quality of care in the process of the trial implementation is evident from some availability of qualified human resources, quality medico-technical equipment, as well as good clinical practice strictly adhered to by the researchers.

As for the participants, the quality of care in clinical trials meets specific criteria. To them, quality care delivered by the research team became tangible through laboratory tests before any treatment proposal, the promptness in taking care of any