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 regimens, 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.

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 malaria without any investigation. 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 sample.

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.

**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.

**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 underlines 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.