descriptive analyses of sent messages, delivered messages and estimation of adherence based on messages.

Results We enrolled 25 women. In total, 4963 messages were sent of which 40 failed to be delivered (1%). 1664 SMS were sent with a question if medication was taken, wich received an answer 1580 times (91%). The answer was 'Yes' in 1137 cases (65%), 'No' in 10 cases (0.6%) and indefinable in 433 cases (26%). The median adherence based on 'Yes'-answers was 74% [range 24–99]. If also counting the indefinable answers, the mean adherence was 100% [range 95–100].

Conclusion Despite a few technical issues, we believe using SMS for reminder cues in Tanzania works well. The number of failed deliveries is nearly zero and women have replied to the majority of SMS. Efforts are needed to instruct women better on replying and on detecting the right answer in case of typing errors. We conclude that using SMS has potential to improve adherence and should be further investigated in clinical trials to determine the effect on adherence to treatment.

PO 8481 HIGH HEPATITIS B VIRUS INCIDENCE AMONG HIV-1-INFECTED TREATMENT-NAIVE ADULTS IN BOTSWANA

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10.1136/bmjgh-2019-EDC.115

Background Hepatitis B virus (HBV) is one of the leading causes of death worldwide despite a moderately potent vaccine. HBV prevalence has been shown to be higher in patients infected with the human immunodeficiency virus (HIV), hence increased liver-related morbidity and mortality, as well as general poor health outcomes in HIV-HBV co-infection. We estimated the HBV incidence among HIV-1-infected treatment-naïve adults in a longitudinal cohort in Botswana.

Methods Plasma samples from 200 HIV-1C-infected treatment-naïve participants from a completed longitudinal cohort from 2004 to 2007 were screened for HBV surface antigen (HBsAg). HBsAg was assessed using Murex version 3 enzyme-linked immunosorbent assay as per manufacturer's instructions at 4 timepoints, 12 months apart. We estimated HBV incidence with 95% confidence interval (CI). Cox proportional regression method was used to estimate hazard ratios [gender, age (≤35 or>35) years, $CD4^+$ T cell count (≤450 or>450) cells/μL and HIV viral load suppression (≤400 or>400) copies/mL].

Results The median age of screened individuals was 32 years [Q1, Q3; 28, 40] and 83.5% [167/200] were female. Baseline median $CD4^+$ T cell count was 466.35 cells/μL [Q1, Q3: 380.43, 605.75] and median HIV viral load was 13 450 copies/mL [Q1, Q3: 2365, 37 400]. The HBV incidence was 3.6/100 person-years [95% CI: 2.2–5.6]. There were no significant differences by gender, age, HIV viral load suppression and $CD4^+$ T cell count.

Conclusion We report for the first time a high HBV incidence among HIV-infected adults in Botswana. HBV incidence was high in this population despite generally high CD4 +T cell counts and lower HIV viral loads. Early screening of HBV in HIV-infected individuals is vital and should be included in the national HIV treatment guidelines.

PO 8483 ASSOCIATIONS BETWEEN HIV AND OTHER STIS AMONG GAY, BISEXUAL MEN AND TRANSGENDER WOMEN IN NAIROBI, KENYA

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10.1136/bmjgh-2019-EDC.116

Background Men who have sex with men (MSM) are a key target population for HIV prevention and control in Kenya. Although male sex workers remain the focus of research in Nairobi, HIV/STI prevalence has not been assessed among the wider MSM population since 2010. This study set out to reassess prevalence and associations of HIV and other STIs.

Methods Respondent-driven sampling recruited 618 MSM. Eligibility criteria were age 18+, male (birth or currently), Nairobi residence and consensual oral or anal intercourse with a man in the last year. Consenting participants completed an online survey including current experience of STI symptoms. Participants tested for HIV [Determine, First Response [2^{nd} gen] and GeneXpert HIV-Qual [4^{th} gen]], syphilis [RPR/TPHA], hepatitis B and C [HBsAg and HCV ELISA], urine and rectal chlamydia and gonorrhea [GeneXpert CTNG]. Associations with prevalent HIV were assessed using multivariate logistic regression.

Results HIV prevalence was 26.4% [22.6–30.6] including 0.5% [0.2–1.5] detected solely on 4th gen testing. Prevalent HIV was independently associated with age, lower education, Kenyan birth, transgender identity and exclusive sex with men in the past 3 months but dependently associated with STI symptoms. Prevalence of syphilis was 0.8% [0.3–1.9]; hepatitis B 4.4% [3.4–6.9]; hepatitis C 0.5% [0.2–1.5]. Current symptoms consistent with urethritis were reported by 6.4% [4.5–9.0] of participants. Prevalence of urethral GC and CT were 4.4% [2.9–6.7] and 7.3% [5.2–10.3] respectively. Symptoms consistent with proctitis were reported by 8.6% [6.3–11.6] of participants. The prevalence of rectal GC and CT were 13.3% [10.4–16.8] and 8.7% [6.7–11.2] respectively. Overall, only 17.7% [9.2–31.2] of participants with urethral CT/NG and 17.8% [10.7–28.0] rectal CT/NG were symptomatic.

Conclusion The burden of HIV among gay, bisexual and other MSM (GBMSM) remains considerably higher than other men in Nairobi, whilst the prevalence of syphilis and hepatitis C are relatively low. Chlamydia and gonorrhoea infections, particularly rectal, are common and frequently asymptomatic. Capacity of GBMSM-friendly and community-based providers to offer CT/NG screening should be prioritised.

PO 8485 INTERFERON GAMMA RESPONSE KINETICS IN TUBERCULOSIS PATIENTS AND HOUSEHOLD CONTACTS IN THE GAMBIA

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10.1136/bmjgh-2019-EDC.117

Background Methods which use *Mycobacterium tuberculosis* (Mtb)-specific antigens to measure IFN-γ responses (IFN-γ

release assays (IGRA)) have been useful in detecting Mtb infection in exposed individuals. We assessed infections in TB cases and their exposed household contacts (HHC) using an in-house optimised IGRA, the QuantiFERON-TB Gold in Tube (QFT-GIT) and QFT-Plus (QFT+).

Methods For the in-house IGRA, we analysed 266 active TB patients and 759 HHC (256 tuberculin skin test-positive and 503 test-negative, TST+ and TST- respectively) at baseline and 6 months. In a separate study we assessed QFT-GIT and QFT-plus responses using samples from 72 TB cases and 69 HHC at baseline. QFT-GIT has 3 Mtb-specific antigens: ESAT6, CFP10 and TB7.7 while QFT-plus has long and short peptides of ESAT-6 and CFP-10, designed to induce CD4+ and CD8+T cell responses respectively.

Results IFN-γ responses were lowest in TST- compared to both TST+ and TB patients at baseline ($p<0.0001$ for both), with 32% IGRA-positive compared to 76% and 73%, respectively using in-house IGRA. HHC sleeping in the same room with TB patient had a significantly higher IGRA conversion rate by 6 months compared to those sleeping further away ($p=0.0004$). We also observed a significant decline in IGRA IFN-γ levels by 6 months of TB treatment ($p<0.0001$). Among QFT-positive TB patients, smear-positive was 57% and culture-positive was 62%. The IFN-γ concentration between TB1 and TB 2 was similar, while, QFT-GIT had a significantly higher response than TB 1 and TB 2 for both TB patients ($p=0.003$) and HHC ($p=0.0005$).

Conclusion Our findings show that IGRA conversion is significantly increased in HHC with highest exposure but that IGRA -positive cannot predict risk of progression to active TB. We also found that QFT-GIT was quantifiably better than QTF-plus in our setting, limiting the 'grey zone' of indeterminate results.

PO 8490 PROMOTING GOOD DATA MANAGEMENT PRACTICES IN CLINICAL RESEARCH IN RESOURCE-POOR SETTINGS

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10.1136/bmjgh-2019-EDC.118

Background Accurate and timely data management (DM) is of key importance in clinical research to generate high-quality and GCP-compliant data for analysis and/or sharing. Our objective is to strengthen the capacity for DM in clinical research in resource-poor settings by organising several teaching initiatives.

Methods Our teaching initiatives have a twofold approach. First, a generic and comprehensive approach with capacity building on various thematical modules. These include a research component (overviewing the research data management procedures) and a technological component (introducing databases and software). In addition, a component on legislation, guidelines and standards specific towards DM is discussed, as well as a project management component on how to organise DM efficiently and timely. Second, we apply a more focused and study-specific approach which details roles and responsibilities in data management, milestones and documentation practices. Both approaches are based upon successful implementation in EDCTP-funded clinical trials, such as the 4ABC, PREGACT and Microbicide Safety Biomarkers studies, as well as the FP7 sponsored NIDIAG project. The target audience comprises various study stakeholders such as data managers, IT administrators, clinicians, laboratory researchers and statisticians, coming from sub-Saharan Africa, South-East Asia and Latin America.

Results A teaching model for promoting Good Data Management Practices has been developed with theory- and practice-based modules. This model is used at face-to-face workshops in remote settings and has been re-used by colleagues and implemented by other research institutions to promote further capacity building and sustainable development in the South. In addition, it has led to mutual learning and enhanced institutional and personal North-South collaborations.

Conclusion There is a clear case for promoting DM and providing guidelines for Good Data Management Practices. Our twofold approach has enabled the successful conduct of GCP compliant non-commercial clinical trials in the South.

PO 8492 REPEATED ARTEMISININ-BASED TREATMENT ON MALARIA SEXUAL PARASITE DISTRIBUTION IN POPULATION LIVING IN A MALARIA-ENDEMIC AREA OF BURKINA FASO

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10.1136/bmjgh-2019-EDC.119

Background Malaria elimination and its ultimate eradication will require drugs targeting all stages of the parasite's life cycle. Yet, very few drugs are known to be effective on the sexual stages (gametocytes) of *Plasmodium falciparum*. Artemisinin-based combination therapy (ACT) has been shown to have some early-stage gametocytocidal effects on *in vitro* and in feeding experiments. However, field studies showed that artesunate reduces but does not prevent post-treatment transmission of *P. falciparum* to mosquitos.

Methods 763 children and adult patients with acute uncomplicated *Plasmodium* sp. malaria were included in a phase IIIb/IV comparative, randomised, multi-centre, open label, parallel 3-arm clinical trial to assess safety and efficacy of repeated administration of pyronaridine-artesunate, dihydroartemisinin-piperaquine or artemether-lumefantrine or artesunate-amodiaquine over a two-year period. Drugs were given based on the body weight and volunteers were followed up for 42 days. Clinical signs and symptoms were recorded and filter paper and blood smears collected during each visit. Malaria parasites were assessed and parasite density development stages determined by light microscopy.

Results *P. falciparum* gametocyte was 1.9%, during the two years of follow-up. From the three treatment arms, artesunate-amodiaquine was the arm bearing more *P. falciparum* gametocyte with 68.7%, dihydroartemisinin-piperaquine accounted for 6.3% and pyronaridine-artesunate for 25%. *P. falciparum* gametocyte was more pronounced in populations having parasite density ≤1 00 000 parasites/µl compared to above parasitaemia.

Conclusion Repeated ACTs treatment didn't clear *P. falciparum* gametocyte in a population infected with uncomplicated malaria.