compared to days without shedding (*L. crispatus*: 53% vs. 44%, *L. jensenii*: 56% vs. 49%, *Megasphaera*: 58% vs. 41%, BVAB-2: 49% vs. 37% of days, respectively), although these findings were not statistically significant. The study is 80% completed; data for at least 12 additional women is anticipated, which will provide additional statistical power.

Conclusion Genital HSV-2 shedding may be associated with dynamic shifts in the vaginal microbial community and may increase the presence of BVAB. A study to assess whether the use of suppressive treatment for HSV (daily valacyclovir) decreases the presence of BVAB, or BV (twice weekly metronidazole) decreases HSV shedding, is ongoing.

P2.12 DIFFERENCES IN UPTAKE, CHARACTERISTICS, AND TESTING HISTORY OF CLIENTS OF GETCHECKEDONLINE DURING SCALE-UP TO URBAN, SURBURBAN AND RURAL COMMUNITIES IN BRITISH COLUMBIA, CANADA

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10.1136/sextrans-2017-053264.189

Introduction In Sept 2014, the BC Centre for Disease Control (BCCDC) launched GetCheckedOnline (GCO), an online testing service for STI/HIV which is integrated with clinical and public health services and developed to reduce testing barriers. Based on a successful pilot in urban Vancouver (BC's largest city) and alignment with regional health authority testing priorities, GCO was expanded to five other urban, suburban and rural communities across BC in Feb 2016. Here we examine differences in GCO uptake between Vancouver and expansion sites from the first year of scale-up in British Columbia (BC).

Methods We used routinely collected GCO program data in combination with BC Public Health Laboratory testing data to describe differences between GCO clients in Vancouver and expansion sites. We compared demographic characteristics and testing history as well as key program measures including service uptake (percent creating a GCO account who submitted specimens) and positivity rates (percent positive of specimens submitted).

Results Between Feb-Dec 2016, of 2397 clients creating accounts, 1297 (54%) submitted specimens; uptake was slightly lower in expansion sites (577 specimens, 51%) vs. Vancouver (720, 57%; p=0.001), with comparable positivity rates (6% vs. 5%; p=0.77). Compared to Vancouver, GCO clients in expansion sites were more likely to be younger (20–24 years of age) (20% vs. 13%) and symptomatic (20% vs. 14%), and less likely to be men who have sex with men (22% vs. 42%; p≤0.001 for all). GCO clients in expansion sites were more likely to be testing for the first time for both HIV (22% vs. 9%) and STI (16% vs. 9%; p<0.001).

Conclusion Scale-up of GCO to five smaller urban, suburban and rural communities across BC demonstrated differences in uptake and populations reached, including greater engagement of individuals not previously tested. Our study highlights the importance of differing regional contexts on the impact of online testing services and the need for their evaluation during scale-up.

P2.13 BACTERIAL VAGINOSIS: LEADING CAUSE OF VAGINAL DISCHARGE AMONG WOMEN ATTENDING SEXUALLY TRANSMITTED INFECTION CLINIC IN KUMASI, GHANA

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10.1136/sextrans-2017-053264.190

Introduction Vaginal discharge is the most common complaint of women who seek services in the various units in the health delivery system including in most parts of the world. We determine the aetiology of vaginal discharge in women patronising Sexually Transmitted Infection (STI) Clinic in Kumasi, Ghana as a follow up to similar study in 2006.

Methods Specimen for wet mount preparation, pH determination, whiff test, Gram's stain, culture and polymerase chain reaction were collected from the vagina and the cervix of 500 women: 250 sex workers (SW) and 250 non-sex workers (NSW), attending Suntreso STI Clinic in Kumasi, Ghana with complaint of vaginal discharge on their first attendance. Details regarding demographics, symptoms and signs as well as sexual behaviour were recorded. Associations of these factors with each infection were determined and adjusted for other risk factors.

Results 39.4% had bacterial vaginosis (197/500, p-0.000, SW-114/250 {45.2%}; NSW- 83/250{33.2%}, 29.1% with *Candida* species (145/500: p=0.000, SW- 67/250{26.7%}; NSW-78/250{31.2%}), 4.5% with *Trichomonas vaginalis* (23/500: p-0.000 SW-18/250{7.1%; NSW- 5/250{2.0%},), 3.1% with *Chlamydia trachomatis* (16/500: p-0.001 SW-12/250{4.8%}; NSW-4/250{1.6%}), 2.2% with *Neisseria gonorrhoeae* (11/500: p-0.014, SW- 8/250{3.2%}; NSW- 3/250{0.8%}) and 3.0% with *Mycoplasma genitalium* (15/500, 3.0%, p-0.000, SW-10/250{4.0%};NSW-5/250{2.0%}).

Conclusion The study found bacterial vaginosis the most predominate aetiological agent of vaginal discharge among women in Kumasi Ghana with an increase in prevalence from 37.8% in 2006 to 39.4% in 2016. The result confirms the existing literature, making the inclusion of bacterial vaginosis in the syndromic management of STI still relevant.

P2.14 THE EFFECT OF FOLLICULAR VERSUS LUTEAL PHASE MENSTRUAL CYCLE TIMING ON GENITAL HERPES SIMPLEX VIRUS-2 SHEDDING AND LESIONS

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10.1136/sextrans-2017-053264.191

Introduction The effect of female sex hormones on the natural history of herpes simplex virus (HSV) is poorly understood. Studies suggest that vaginal immunity varies throughout the menstrual cycle, with increased inflammatory cytokines and decreased innate immune factors observed during the luteal (post-ovulatory) phase. Whether HSV shedding or presence of genital lesions vary throughout the menstrual cycle is unknown.

Methods We studied HSV-2 seropositive women enrolled in prospective studies of genital herpes at the University of Washington Virology Research Clinic. Participants were eligible if they had established HSV-2 infection, performed daily genital swabbing for HSV DNA, recorded a menstrual diary, and

were not using hormonal contraception. We used Poisson mixed effects models to determine if genital HSV DNA detection or lesion frequency differed throughout the menstrual cycle, categorised into four seven-day phases based on most proximate first day of menstrual bleeding: early and late for each of follicular and luteal.

Results In 189 women aged 19–46 (median age 33) who collected 9307 genital swabs, HSV was detected on 1822 days (20%). The rate of shedding was 21% during the early follicular phase versus 18% during late luteal (RR=1.2, 95% CI 1.0–1.4, p=0.04), 21% during late follicular (RR=1.2 relative to late luteal, 95% CI 1.0–1.5, p=0.06), and 19% during early luteal (RR 1.1 relative to late luteal, 95% CI 0.9–1.3, p=0.53). In sensitivity analyses reducing misclassification of phase by excluding samples>10 days from day 1 of menses, these observations were strengthened. The pattern was similar for genital lesions, present on 13% of days during the follicular phase and 11% during the luteal phase.

Conclusion In women with established HSV infection, genital HSV-2 shedding and lesions were slightly more common during the early follicular phase of the menstrual cycle than in the luteal phase. These cyclic variations may be related to changes in oestrogen and progesterone affecting vaginal immunity.

P2.15 PERSISTENCE OF *CYSTOISOSPORA BELLI* IN HIV PATIENTS: DRUG FAILURE, RESISTANCE OF THE PARASITE OR INCOMPLETE IMMUNE RESTORATION?

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10.1136/sextrans-2017-053264.192

Introduction: *Cystoisospora belli* infection is one of the most important causes of watery diarrhoea in patients with HIV and causes high rates of morbidity and mortality. The introduction of highly active antiretroviral therapy (HAART) in recent years has improved the ability of immune response and decreased viral load.

Methods A prospective study was performed among HIV patients admitted to hospital of Lambayeque. Herein we describe seven clinical cases of diarrhoea caused by *C. belli* infection in HIV patients, who showed different evolution and response to treatment.

Results Five were males, with a mean age of 32 years and chronic diarrhoea. Four patients had recurrent diarrhoea despite receiving secondary prophylaxis with cotrimoxazole and good viral and immunological response to HAART in addition to specific treatment. While others were not receiving HAART and prophylaxis, but responded well to treatment.

Conclusion: *C. belli* is an important cause of diarrhoea in HIV patients on HAART and prophylaxis. In this study, 7 cases of patients with HIV infection and diarrhoea caused by C. belli are presented. Three of those were newly diagnosed, so they did not receive HAART and secondary cotrimoxazole prophylaxis and their CD4+ levels were below 200/uL. However, they responded favourably to *C. belli* treatment, with no recurrences. Meanwhile, the other four patients were receiving HAART, secondary prophylaxis and had evidence of immune restoration (>200 CD4+/uL), but the standard treatment failed to eradicate the parasite. This clinical contradiction has been reported previously with some particularities.

We suggest that persistent infection may be due to drug failure by intrinsic or extrinsic to the parasite causes, or to defects in restoration of the intestinal immune system, or both.

P2.16 OBSTETRIC AND PERINATAL OUTCOMES IN PREGNANT WOMEN WITH PERINATALLY ACQUIRED HIV-INFECTION -PRELIMINARY RESULTS

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10.1136/sextrans-2017-053264.193

Introduction Prevalence of pregnancy in women with perinatally acquired HIV infection (PAH-W) has markedly increased. HIV infection is related to preterm delivery, small for gestational age fetus (SGA), and pre-eclampsia (PE). PAH-W have higher incidence of longer periods of HIV-infection, lower levels of CD4 cells, and higher viral loads (VL). Available data are inconclusive about PAH-W related risks on pregnancy. The present study aims to analyse obstetric and perinatal outcomes in PAH-W.

Methods Retrospective cohort study involving pregnant PAH-W followed from 2005 to 2015. Results were compared to those obtained from pregnant women with sexually transmitted HIV-infection (STH-W). Antiretroviral therapy (ART), vertical transmission rate, obstetric and perinatal outcomes were considered. Chi-square, Fish extract, Mann-Whitney-Wilcoxon, and Student's T tests were applied to non-continuous and continuous samples.

Results PAH-W group consisted of 14 patients and STH-W group had 17 women. PAH-W were younger (20.1±3.0 vs. 29.9±7.7 years, p=0.001) than STH-W. Nevertheless, groups were similar regarding to CD4 counts (471.7±271 vs. 302.7 ±183.5 cells/mm3, p=0.21), proportion of undetectable 34th-week VL (41.7% amongst the case group vs. 66.7%, p=0.26), and to the 34th-week VL levels (2.9±0.8 vs. 2.7±0.9 log, p=0,68). Prevalence of SGA (3 in PAH-W group vs. 1 in STH-W, p=0.28) and preterm labour (0 in PAH-W group vs. 2 in control group, p=0.49) were also similar in both groups. Neither cases of PE and spontaneous preterm delivery nor HIV-infected infant were found.

Conclusion PAH-W and STH-W had similar obstetric and perinatal results. Since both groups were comparable in CD4 counts and 34th-week VL levels, it is possible the occurrence of negative obstetric outcomes may be more likely related to the severity of HIV infection than to the mechanism of infection itself. Larger studies are still necessary to determine the role of PAH-W in pregnancy. However PAH-W should be emphasised on adequate ART and achieving low VL levels in order to reduce their obstetric and perinatal risks.

P2.17 ABSTRACT WITHDRAWN