and 53.9% were married or reported a stable partner. A total of 70.9% reported regular use of condoms in the last year. Risk factors reported were: injecting drug use (1.2%), no-injecting drugs (15.2%), previous STI (32.4%), commercial sex workers (16.4%), more than one partners in the last year (12.7%) and in life (94.5%). Regarding clinical symptoms, 51.1% reported chronic pelvic pain, 55.2% vaginal discharge, 23.0% dysuria and 10.0% genital bleeding. CD4 counts were more than 500 cells/mm³ in 21.8% and viral load were less than 100 copies/mm³ in 55.2%. In the final model of logistic regression the only variable remained was having more than one partner in life.

Conclusions Health programmes need to pay attention to the need to screen for easily curable sexually transmitted infections, such as Chlamydia trachomatis, in populations that are more vulnerable and at greater risk, as women living with HIV.

P1-S5.25 ACYCLOVIR AND TRANSMISSION OF HSV-2 FROM HSV-2/HIV-1 DUALY INFECTED PERSONS

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Background Daily suppressive therapy with valacyclovir reduces the risk of sexual transmission of HSV-2 in healthy HSV-2 serodiscordant heterosexual couples by 48%. Whether suppressive therapy reduces HSV-2 transmission from persons who have both HIV-1 and HSV-2 is unknown.

Methods Within a randomised trial of daily acyclovir 400 mg bid in African HIV-1 serodiscordant couples, in which the HIV-1 infected partner was HSV-2 seropositive, we identified partnerships in which the HIV-1 susceptible partners were HSV-2 seronegative. Cox proportional hazards analysis was used.

Results We followed 911 HIV-1 and HSV-2 serodiscordant couples for a median of 18 months (IQR 3, 24). For 112 couples (12%), the HIV-1/HSV-2 infected partner was male, of whom 37% (34/91) were circumcised. 68 HSV-2 seroconversions were observed (an incidence of 5.1 per 100 person-years): 40 in the acyclovir group and 28 in the placebo group (HR 1.4, 95% CI 0.8 to 2.2; p=0.2). In a multivariate analysis of HSV-2 susceptible women, hormonal contraception (HR 3.84, 95% CI 1.32 to 11.14, p=0.013) and having an uncircumcised male partner (HR 8.91, 95% CI 1.17 to 67.85, p=0.035) were significant risk factors for HSV-2 acquisition. Among HSV-2 susceptible men, younger age was the only significant HSV-2 risk factor (p=0.014).

Conclusions Suppressive acyclovir therapy did not decrease the risk of HSV-2 transmission within HSV-2-serodiscordant couples in which the HSV-2-seropositive partner also had HIV-1 infection. Hormonal contraceptive use and lack of male circumcision in the HIV-1/HSV-2 dually infected male partners increased the risk of HSV-2 acquisition among initially HSV-2 seronegative women.

P1-S5.26 BETTER-UNDERSTANDING OF THE DYNAMICS OF GONORRHOEA AND CHLAMYDIA THROUGH ANALYSIS OF COINFECTION

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Background Coinfection with gonorrhoea and chlamydia occurs frequently. It is well known that the proportion of gonorrhoea-infected individuals who also have chlamydia is higher than the

proportion of chlamydia-infected people who also have gonorrhoea. This difference has implications for the detection and management of infections and might simply reflect the higher prevalence of chlamydia than gonorrhoea in the general population. The objective of this study was to explore the characteristics of chlamydia-gonorrhoea coinfection in a transmission dynamic model and determine whether levels of coinfection might give insights into hard-to-measure behavioural parameters such as mixing patterns.

Methods We designed a simple transmission dynamic model to capture gonorrhoea and chlamydia dynamics within a heterosexual population. We fitted the model to empirical surveillance data (Gonococcal Resistance Antimicrobials Surveillance Programme, GRASP) about levels of infection and the NATSAL 2000 sexual behaviour survey. The baseline prevalence of chlamydia was 2.6%. We tested whether the model replicated the observed prevalence of coinfection. We then extended the model to improve its realism and capture potential interactions including cotreatment, cotransmission, short term acquired immunity or changes in symptom severity or susceptibility.

Results The best fitting model predicts a gonorrhoea prevalence of between 0.4 and 0.7% and of those with gonorrhoea 15% (men) and 17% (women) also have chlamydia, compared with empirical estimates of 28% (men) and 38% (women). Of those with chlamydia, 3.0% and 2.6% of men and women are coinfecting with gonorrhoea. The model also predicts an increasing prevalence of coinfection with increasing sexual activity.

Conclusions A trend of increasing coinfection with increasing sexual activity is observed in the empirical data for men, but not women: the highest risk women with gonorrhoea have lower levels of chlamydia than the moderate activity women. The best fitting models underestimate the level of coinfection observed. Cotreatment and temporary immunity to chlamydia do not appear sufficient to explain the differences between the model and observations. Differences in coinfection levels are a complex phenomenon that do not just reflect differences in population prevalence and are not captured by the simplest models.

P1-S5.27 LOW PREVALENCE OF ASYMPTOMATIC STI IN HIV-INFECTED HETEROSEXUAL MALES AND FEMALES, VISITING AN HIV OUTPATIENT CLINIC IN THE NETHERLANDS

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Background In the Netherlands no guidelines exist for routine STI screening of HIV-infected patients. In a study in two academic hospitals in the Netherlands, 16% of HIV-infected MSM in HIV care had an asymptomatic STI, making regular STI screening in this group appropriate. It is unclear whether regular STI screening should also be considered for HIV-infected heterosexual men and women. Therefore, we studied the prevalence of, and factors associated with asymptomatic STI in a representative group of HIV positive heterosexual men and women.

Methods HIV-1 infected heterosexual patients visiting the HIV outpatient clinic of the Academic Medical Center in Amsterdam, the Netherlands, were screened for STI during a routine visit. Patients spontaneously reporting symptoms compatible with STI were excluded. Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (NG) were tested by PCR on throat swabs, vaginal or anal self swabs and urine samples, depending on gender and sexual behaviour. Hepatitis B virus (HBV) and hepatitis C virus (HCV) serology were performed and patients were screened for syphilis by TPHA and RPR. Participants were interviewed by a trained interviewer about sexual risk behaviour in the previous 6 months.

Results Between October 2007 and June 2008, 248 men and women (median age 41 years, range 18–82) were included. 56% was female and 42% had Dutch ethnicity, the main other ethnicities were Ghanaese, Surinamese/Antillean and Sub-Saharan African. The Abstract P1-S5.27 table 1 shows sexual behaviour of participants in the preceding 6 months. Reported history of STI in the last 6 months was 2%, and lifetime history of STI (non-HIV) was 49%. 29% of participants had had STI testing in the preceding 6 months, and 64% had an STI test more than 6 months ago. Only four patients (1.6%) had an asymptomatic STI. Two women were diagnosed with vaginal CT, 1 man with urethral CT and a female intravenous drug user with a history of syphilis had a new syphilis infection. We also identified one hitherto undiagnosed HCV infection; this was in a male intravenous drug user without a history of sex with men; we did not classify this as an STI.

Abstract P1-S5.27 Table 1 Sexual behaviour of HIV-infected heterosexual males and females visiting an HIV outpatient clinic in the Netherlands, 2007–2008

Sexual behaviour	+/total	%
Did not have sex in last 6 months	65/197	33.0
Had 1 sexual partner last 6 months	110/193	60.1
Had 2 or more sexual partners last 6 months	19/193	9.8
Had casual sexual partner(s) in last 6 months	24/193	12.4
Had unprotected vaginal sex in last 6 months	46/193	20.7
Had unprotected anal sex in last 6 months	4/193	2.0

Conclusions In this population of HIV-1 infected heterosexual patients in care for HIV infection high risk sexual behaviour is rare and asymptomatic STI are uncommon. Our study results suggest that routine screening in asymptomatic heterosexual patients is currently not needed.

P1-S5.28 CERVICAL CYTOLOGY AND HISTOPATHOLOGIC ABNORMALITIES IN WOMEN LIVING WITH AIDS IN SÃO PAULO, BRAZIL

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Background Women living with HIV/AIDS present with a higher prevalence of HPV infection, higher rates of squamous intraepithelial lesions (SIL), and are more susceptible to invasive cervical carcinoma progression.

Objective We assessed frequency of precursory cervical lesions of cancer and its risk factors for women living with HIV/AIDS.

Methods Sociodemographic, clinical, behaviour and laboratory data were collected from medical records from 2008 to 2009 and analysed using forward stepwise logistic regression.

Results Medical records of 631 women were reviewed; mean age at AIDS diagnosis was 34 years old (IQR=29–40 years old), 32% were <16 years old at first sexual intercourse; 61% had ≤5 sexual partners during life; 43% had been living with AIDS for ≥9 years; 47% reported previous sexually transmitted infections; 44% presented with HPV infection and 10% presented with high squamous intraepithelial lesions (HSIL). Presenting HSIL was significantly associated with home district Human Development Index, age at AIDS diagnosis (>40 years old), time of AIDS diagnosis (>8 years), CD4 cell count <350/mm³ and HPV infection see Abstract P1-S5.28 Tables 1, 2 & 3.

Conclusions Frequent squamous intraepithelial neoplasia in these women shows the importance of gynaecologic exams in routine care and follow-up required by those who present with cervical lesions.

Abstract P1-S5.28 Table 1 Sociodemographic characteristics of women living with AIDS—São Paulo, Brazil, from 2008 to 2009

Characteristics	High-grade lesions						p
	Yes (n = 64)		No (n = 567)		Total (n = 631)		
	n	%	n	%	n	%	
Age (at AIDS diagnosis)							<0.001
Up to 40 years old	31	48.4	428	75.5	459	72.7	
>40 years old	33	51.6	139	24.5	172	27.3	
	64	100.0	567	100.0	631	100.0	
Years of education							0.712
None	1	1.6	6	1.1	7	1.1	
1–4 years	5	7.8	45	7.9	50	7.9	
5–8 years	27	42.2	226	39.9	253	40.1	
9–11 years	26	40.6	210	37.0	236	37.4	
12 or more	4	6.3	75	13.2	79	12.5	
Unknown	1	1.6	5	0.9	6	1.0	
	64	100.0	567	100.0	631	100.0	
Race (self-referred)							0.005
White	33	51.6	360	63.5	393	62.3	
Black	27	42.2	199	35.1	226	35.8	
Others	4	6.3	5	0.9	9	1.4	
Unknown	0	0.0	3	0.5	3	0.5	
HDI of home district							<0.001
>0.500	8	12.5	423	74.6	431	68.3	
0–0.500	56	87.5	144	25.4	200	31.7	

Abstract P1-S5.28 Table 2 Behaviour and Clinical Characteristics of women living with AIDS – São Paulo, Brazil, from 2008 to 2009

Characteristics	High-grade lesions						p
	Yes (n = 64)		No (n = 567)		total (n = 631)		
	n	%	N	%	n	%	
Age at first sexual inter- course							0.074
Up to 16 years old	27	42.2	180	31.7	207	32.8	
More than 16 years old	28	43.8	332	58.6	360	57.1	
Unknown	9	14.1	55	9.7	64	10.1	
	64	100.0	567	100.0	631	100.0	
Lifetime number of sexual partners							0.058
1 to 2	8	12.5	133	23.5	141	22.3	
3 to 5	24	37.5	218	38.4	242	38.4	
6 and more	20	31.3	107	18.9	127	20.1	
Unknown	12	18.8	109	19.2	121	19.2	
	64	100.0	567	100.0	631	100.0	
STI							<0.001
No	1	1.6	301	53.1	302	47.9	
Yes	63	98.4	233	41.1	296	46.9	
Unknown	—	—	33	5.8	33	5.2	
	64	100.0	567	100.0	631	100.0	
HPV cytological changes							<0.001
No	2	3.1	351	61.9	353	55.9	
Yes	62	96.9	216	38.1	278	44.1	
	64	100.0	567	100.0	631	100.0	
(HSV-2)							0.969
No	51	79.7	453	79.9	504	79.9	
Yes	13	20.3	114	20.1	127	20.1	

Continued