Epidemiology poster session 5: Transmission dynamic: coinfection

P1-S5.23 **HIV INCIDENCE AND TIME TO DIAGNOSIS AMONG MEN WITH BACTERIAL RECTAL INFECTIONS, NEW YORK CITY, 2008—2010**

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Background HIV infection disproportionately affects men who have sex with men (MSM) in the industrialised world. Rectal infections are objective markers of HIV risk behaviour. We examined the association between rectal chlamydia/gonorrhoea (CT/GC) infections and HIV seroconversion.

Methods MSM attending New York City public STD clinics who report receptive anal sex are offered rectal testing using GC culture and CT nucleic acid amplification tests (NAAT); patients not known to have HIV are offered HIV testing. We created a retrospective cohort of MSM diagnosed with rectal CT or GC in 2008—2009 at STD clinics who tested HIV-negative by pooled NAAT at that visit. The outcome was time to HIV infection, defined as a STD clinic diagnosis or identified through a match against the citywide HIV/AIDS registry (HARS) for HIV diagnosed elsewhere during the analytic period. For MSM who seroconverted, HIV-free time-at-risk was from rectal infection to date of positive HIV test; those not reported with HIV were presumed uninfected and censored on 31 December 2010. Cox proportional hazards models were used to explore demographic and behavioural factors associated with HIV acquisition.

Results A total of 229 HIV-negative MSM diagnosed with rectal infections contributed 368.29 person-years of follow-up; 22/229 (9.6%) were diagnosed with HIV (16 in STD clinics and an additional 6 found in HARS), for an annual HIV incidence of 5.97% (95% CI 3.84 to 8.90). Median time from rectal infection to HIV diagnosis was 290 days (range 98—748). The small subgroups of black and <20-year-old MSM had markedly high incidence (14.19% and 10.79%, respectively) (see Abstract P1-S5.23 table 1). MSM reporting inconsistent condom use had an annual HIV incidence of 6.33% (95% CI 3.43 to 10.75). Black race was associated with a 6.5-fold increased risk of HIV; after adjusting for age this finding did not reach statistical significance (HR=5.05, 95% CI 1.00 to 25.68).

Conclusions More than 1 in 20 MSM with rectal infections are diagnosed with HIV within a year; risk is higher for subgroups such as young and black MSM. Local data on risk for seroconversion may be more compelling than national data in risk-reduction counselling. As the majority of rectal infections are due to CT, and CT is associated with substantial HIV risk, routine rectal CT screening is indicated for MSM. STD/HIV registry matching/integration permit more accurate incidence estimates and definition of affected populations with which to focus prevention activities.

P1-S5.24 **PREVALENCE OF *CHLAMYDIA TRACHOMATIS* AMONG WOMEN INFECTED BY HIV ATTENDING THE INSTITUTE OF TROPICAL MEDICINE IN AMAZONAS, BRAZIL**

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Background *Chlamydia trachomatis* (CT) is one of the world's most frequent sexually transmitted infections (STI), having great impact on sexual and reproductive health.

Objectives To describe clinical profile of and the prevalence of CT infection in HIV women attending the Institute of Tropical Medicine in Manaus, Amazonas, Brazil Methods: A cross-sectional study performed among women attending the AIDS clinic from March to December 2010. They were invited to take pat in the study and answered an interview including demographic, behavioural and clinical data. They underwent in a gynaecological examination where it was collect a cervical sample for diagnosing CT by hybrid capture.

Results A total of 330 women were included in the study. Median age was 32 (IQR (IQR): 27; 38) years and median of schooling 9 (IQR: 4; 11) years. Prevalence rate of CT was 4.5% (95% CI 2.3%—to 6.7%). Median of first sexual intercourse was 16 (IQR: 14; 17) years

Abstract P1-S5.23 Table 1 Annual HIV Incidence among 229 HIV-Negative MSM Diagnosed with Rectal Chlamydia or Gonorrhoea at New York City STD Clinics Between January 2008 and December 2009

	Number of patients	%	Person-years at risk	Number of HIV seroconversions by STD clinic diagnoses	Total number of HIV seroconversions after HIV registry cross-match	Annual HIV incidence	95% CI
Overall	229	100%	368.29	16	22	5.97	3.84 to 8.90
Age (years):							
<20	25	11%	37.07	4	4	10.79	3.42 to 26.00
20—29	148	65%	239.90	9	13	5.42	3.01 to 9.03
30—39	42	18%	69.56	2	5	7.19	2.63 to 15.93
40+	14	6%	21.75	0	0		
Race/ethnicity:							
Non-Hispanic White	71	31%	116.63	2	3	2.57	0.65 to 7.00
Non-Hispanic Black	44	19%	63.44	6	9	14.19	6.92 to 26.03
Hispanic	83	36%	135.40	5	5	3.69	1.35 to 8.18
Asian	12	5%	20.23	1	1	4.94	0.25 to 24.38
Other/multiple	19	8%	32.59	1	4	12.27	0.15 to 15.13
Rectal infection:							
Chlamydia	158	69%	252.62	10	14	5.54	3.15 to 9.08
Gonorrhoea	49	21%	80.85	4	5	6.18	2.27 to 13.71
Both	22	10%	34.82	1	3	8.62	2.19 to 23.45
Early syphilis concurrently or in last 2 years:							
Yes	31	14%	50.33	3	4	7.95	2.52 to 19.17
No	198	86%	317.96	12	18	5.66	3.46 to 8.77