

Table 1a: Description of baseline characteristics by HIV serostatus

Baseline covariates	Overall		HIV-negative		HIV-positive	
	n	%	n	%	n	%
Race/ethnicity						
African American/Black	1299	53.81	344	51.81	955	54.57
White	370	15.33	99	14.91	271	15.49
Hispanic	651	26.97	193	29.07	458	26.17
Other	94	3.89	28	4.22	66	3.77
Income, annual						
≤\$6,000	636	27.31	192	30.00	444	26.29
\$6001-12,000	669	28.72	170	26.56	499	29.54
\$12,001-24,000	507	21.77	129	20.16	378	22.38
>\$24,000	517	22.2	149	23.28	368	21.79
Marital status						
Married	521	21.62	126	18.98	395	22.62
Not married but living with partner	372	15.44	95	14.31	277	15.86
Single, widowed, divorced, separated, other	1517	62.95	443	66.72	1074	61.51
Education completed						
Grade 11 or less	880	36.51	231	35.00	649	37.09
High school or greater	1530	63.49	429	65.00	1101	62.91
Employment status						
Employed	1683	69.81	428	64.46	1255	71.84
Unemployed	728	30.19	236	35.54	492	28.16
Insurance status						
Insured	1835	76.71	398	60.49	1437	82.87
Uninsured	557	23.29	260	39.51	297	17.13
WIHS Site						
Bronx	475	19.68	148	22.29	327	18.69
Brooklyn	464	19.22	122	18.37	342	19.54
Washington, D.C.	355	14.71	95	14.31	260	14.86
Los Angeles	474	19.64	132	19.88	342	19.54
San Francisco	354	14.66	108	16.27	246	14.06
Chicago	292	12.1	59	8.89	233	13.31
Number of lifetime male sex partners						
0-4	557	23.48	139	21.12	418	24.39
5-9	529	22.3	154	23.40	375	21.88
10-24	559	23.57	168	25.53	391	22.81
≥25	727	30.65	197	29.94	530	30.92
Parity						
None	364	17.68	103	19.73	261	16.98
1-2	1082	52.55	268	51.34	814	52.96
≥3	613	29.77	151	28.93	462	30.06
Prior abortion at baseline						
Yes	1162	56.44	316	60.54	846	55.04
No	897	43.56	206	39.46	691	44.96
Previous STI						
Yes	1570	65.58	364	55.07	1206	69.59
No	824	34.42	297	44.93	527	30.41

Year of first cART		
1995-1999	905	62.24
2000-2003	315	21.66
2004-2008	136	9.35
2009-2012	98	6.74

WIHS=Women's interagency HIV Study; STI=Sexually transmitted infection, cART=combined antiretroviral therapy

Table 1b: Description of time-varying covariate characteristics by serostatus

Time-varying covariates	Overall		HIV-negative		HIV-positive	
	PY	%	PY	%	PY	%
Age*						
<25	2117	6.46	1233	12.20	884	3.90
25-29	4707	14.36	2054	20.33	2653	11.70
30-34	7683	23.44	2402	23.78	5281	23.29
≥35	18267	55.74	4414	43.69	13853	61.10
Year of study						
1994-1997	7409	22.61	1657	16.40	5752	25.37
1998-2001	6551	19.99	1534	15.18	5017	22.13
2002-2005	9372	28.6	3198	31.65	6174	27.23
2006-2012	9442	28.81	3714	36.76	5728	25.27
Contraception in last 6 months						
LARC or hormonal user dependent	4803	15.29	1849	19.48	2954	13.47
None or other	26614	84.71	7642	80.52	18972	86.53
Condom use in last 6 months						
Yes	19374	61.68	4926	51.91	14448	65.90
No	12039	38.32	4564	48.09	7475	34.10
Currently smoking cigarettes						
Yes	14118	45.03	4453	46.97	9665	44.19
No	17232	54.97	5027	53.03	12205	55.81
Alcohol use***						
0-7 drinks/week	28260	90.48	8239	87.18	20021	91.92
>7 drinks/week	2973	9.52	1212	12.82	1761	8.08
Marijuana/hash use***						
Yes	6431	20.52	2654	28.00	3777	17.27
No	24915	79.48	6825	72.00	18090	82.73
Crack/cocaine/methamphetamines or intravenous drug use***						
Yes	3367	10.74	1221	12.88	2146	9.82
No	27975	89.26	8257	87.12	19718	90.18
Chronic medical conditions **						
Yes	9550	29.14	2651	26.24	6899	30.43
No	23224	70.86	7452	73.76	15772	69.57
cART use***						
Yes					10851	50.07
No					10822	49.93
HIV viral load (log ₁₀ copies/ml)						
<4					14597	68.27
≥4					6783	31.73
CD4+ T-cell count (cells/mm ³)						
<350					8434	39.38
≥350					12983	60.62

cART=combined antiretroviral therapy; PY=person-years

* Age at pregnancy outcome or age at visit if no pregnancy outcome reported;

**Includes stroke, MI, diabetes, hypertension, DVT PE, Cancer, TB.

*** Calculated as occurring since last visit

Table 2. Unadjusted and age-adjusted pregnancy, live-birth and abortion rates by time period and HIV serostatus

	Unadjusted			Direct Age Adjustment		p-value for age-adjusted rate difference for HIV+ and HIV-women **
	Number of pregnancies	Person-years (PY)	Pregnancy rate / 100 PY	Age-adjusted pregnancy rate / 100 PY	Estimated 95%CI*	
ALL PREGNANCIES						
HIV-positive	737	11363.71	6.49	11.31	11.28, 11.34	<0.0001
1994-1997	176	2730.32	6.45	9.50	9.44, 9.60	0.0002
1998-2001	144	2658.33	5.42	9.32	9.19, 9.53	<0.0001
2002-2005	245	3142.30	7.80	13.11	13.04, 13.21	0.64058
2006-2012	172	2832.77	6.07	16.59	15.94, 17.46	0.23325
HIV-negative	619	5306.06	11.67	14.27	14.24, 14.30	
1994-1997	104	821.17	12.66	15.05	14.92, 15.27	
1998-2001	104	858.13	12.12	19.56	19.28, 19.98	
2002-2005	214	1679.96	12.74	13.69	13.64, 13.78	
2006-2012	197	1946.80	10.12	13.52	13.41, 13.70	
LIVE-BIRTH						
HIV-positive	325	11363.71	2.86	4.85	4.83, 4.88	0.0399
1994-1997	52	2730.32	1.90	2.85	2.81, 2.92	0.0034
1998-2001	64	2658.33	2.41	4.02	3.94, 4.18	0.0395
2002-2005	124	3142.30	3.95	6.52	6.48, 6.60	0.6276
2006-2012	85	2832.77	3.00	7.27	6.88, 7.90	0.5075
HIV-negative	261	5306.06	4.92	5.90	5.89, 5.93	
1994-1997	40	821.17	4.87	5.47	5.40, 5.64	
1998-2001	35	858.13	4.08	7.06	6.89, 7.37	
2002-2005	95	1679.96	5.65	6.08	6.05, 6.16	
2006-2012	91	1946.80	4.67	6.07	6.00, 6.21	
ABORTION						
HIV-positive	231	11363.71	2.03	3.87	3.85, 3.90	0.0001
1994-1997	76	2730.32	2.78	4.03	4.00, 4.11	0.0093
1998-2001	43	2658.33	1.62	3.39	3.30, 3.56	0.0001
2002-2005	66	3142.30	2.10	3.93	3.90, 4.01	0.1207
2006-2012	46	2832.77	1.62	4.29	3.97, 4.85	0.5052
HIV-negative	238	5306.06	4.49	5.95	5.93, 5.98	
1994-1997	43	821.17	5.24	6.83	6.74, 7.02	
1998-2001	49	858.13	5.71	9.43	9.24, 9.77	
2002-2005	79	1679.96	4.70	5.16	5.13, 5.24	
2006-2012	67	1946.80	3.44	5.52	5.44, 5.66	

PY=person year; CI=confidence interval; * method by Tiwari, Clegg, and Zou (2006); ** method by Woolson and Bean (1982) for overall and for each time periods.

Table 3a: Crude bivariable associations of baseline covariates with live-birth and abortion rates among HIV-negative and HIV-positive women

	HIV-negative						HIV-positive					
	Live Births			Abortions			Live Births			Abortions		
	cIRR	95%CI	p-value	cIRR	95%CI	p-value	cIRR	95%CI	p-value	cIRR	95%CI	p-value
Race/ethnicity (ref: White)												
African American/Black	1.35	0.87, 2.09	0.0012	1.91	1.18, 3.09	0.0508	1.67	1.16, 2.42	0.0436	3.80	2.11, 6.84	<0.0001
Hispanic	2.06	1.32, 3.22		1.77	1.06, 2.94		1.62	1.09, 2.41		2.76	1.48, 5.14	
Other	1.16	0.56, 2.43		1.32	0.60, 2.92		1.22	0.58, 2.54		1.49	0.48, 4.61	
Income, annual (ref: >\$24,000)												
≤\$6,000	1.05	0.74, 1.49	0.3531	1.19	0.83, 1.70	0.3224	1.29	0.93, 1.81	0.4003	1.53	1.03, 2.29	0.1028
\$6001-12,000	1.24	0.88, 1.75		0.89	0.60, 1.32		1.24	0.89, 1.73		1.17	0.77, 1.77	
\$12,001-24,000	0.89	0.60, 1.33		1.22	0.82, 1.80		1.31	0.93, 1.84		1.50	1.00, 2.25	
Marital status (ref: Married)												
Not married but living with partner	1.40	0.93, 2.09	0.0478	1.64	1.04, 2.60	0.1036	1.44	1.03, 2.02	0.0489	1.44	0.91, 2.26	0.0721
Single (widowed/divorced/separated/other)	0.95	0.68, 1.32		1.29	0.88, 1.89		1.05	0.79, 1.40		1.54	1.06, 2.22	
Education completed (ref: ≥High school)												
Grade 11 or less	0.64	0.50, 0.82	0.0004	0.73	0.56, 0.95	0.0183	0.74	0.60, 0.92	0.0075	0.88	0.67, 1.14	0.3239
Employment status (ref: Employed)												
Unemployed	1.36	1.05, 1.76	0.0202	1.60	1.21, 2.12	0.0009	1.25	0.97, 1.61	0.0825	1.46	1.06, 1.99	0.0189
Insurance status (ref: Insured)												
Uninsured	0.96	0.75, 1.23	0.7552	0.91	0.70, 1.19	0.5048	1.26	0.97, 1.63	0.0821	1.14	0.83, 1.57	0.4079
WIHS Site (ref: Chicago)												
Bronx	0.69	0.44, 1.07	0.0511	2.79	1.38, 5.67	<0.0001	0.62	0.40, 0.96	0.0008	1.62	0.88, 2.99	<0.0001
Brooklyn	0.75	0.49, 1.15		3.72	1.87, 7.40		1.26	0.89, 1.79		3.48	2.02, 6.00	
Washington, D.C.	0.42	0.25, 0.72		1.01	0.44, 2.30		0.96	0.64, 1.43		1.62	0.78, 3.01	
Los Angeles	0.80	0.52, 1.24		1.70	0.81, 3.57		0.81	0.55, 1.20		1.74	0.97, 3.13	
San Francisco	0.77	0.49, 1.20		3.12	1.54, 6.35		0.64	0.40, 1.02		0.81	0.39, 1.71	
Number of male sex lifetime partners (ref: 0-4)												
5-9	0.91	0.64, 1.31	0.5028	1.52	1.01, 2.27	0.1024	0.73	0.54, 0.99	0.0002	1.39	0.96, 2.02	0.0991
10-24	0.93	0.65, 1.32		1.42	0.94, 2.13		0.70	0.51, 0.96		1.18	0.80, 1.73	
≥25	0.76	0.53, 1.09		1.08	0.71, 1.64		0.50	0.37, 0.68		0.90	0.61, 1.32	
Parity (ref: none)												
1-2	1.39	0.96, 2.00	0.0844	2.44	1.61, 3.71	<0.0001	1.01	0.74, 1.40	0.3376	1.31	0.88, 1.94	0.0798
≥3	1.57	1.05, 2.36		1.47	0.90, 2.42		1.22	0.86, 1.72		1.60	1.05, 2.44	
Prior abortion (ref: No)												
Yes	0.60	0.46, 0.79	0.0002	1.34	1.03, 1.87	0.0293	0.82	0.65, 1.03	0.0857	1.59	1.19, 2.12	0.0015

Previous history of STI (ref: No)												
Yes	1.00	0.78, 1.27	0.9735	1.34	1.03, 1.74	0.0277	0.80	0.63, 1.00	0.0474	0.76	0.58, 0.99	0.0409
Year of first cART (ref: 2009-2012)												
1995-1999							1.04	0.58, 1.86	0.0005	0.54	0.31, 0.92	0.0015
2000-2003							1.75	0.96, 3.19		0.94	0.53, 1.66	
2004-2008							1.22	0.62, 2.40		0.66	0.34, 1.31	

cIRR= crude incidence rate ratio; CI = confidence interval; cART=combined antiretroviral therapy; STI= sexually transmitted infection; REF=reference category

Table 3b: Crude bivariable associations of time-varying covariates with live-birth and abortion rates among HIV-negative and HIV-positive women

	HIV-negative						HIV-positive					
	Live Births			Abortions			Live Births			Abortions		
	cIRR	95%CI	p-value	cIRR	95%CI	p-value	cIRR	95%CI	p-value	cIRR	95%CI	p-value
Age, in years (ref: <25)												
25-29	0.65	0.46, 0.92	<0.0001	0.57	0.41, 0.78	<0.0001	0.84	0.56, 1.25	<0.0001	0.46	0.30, 0.71	<0.0001
30-34	0.60	0.42, 0.85		0.40	0.28, 0.56		0.51	0.35, 0.75		0.34	0.23, 0.51	
≥35	0.30	0.21, 0.43		0.12	0.08, 0.18		0.18	0.12, 0.26		0.12	0.08, 0.18	
Year of study (ref: 1994-1997)												
1998-2001	0.84	0.53, 1.32	0.3455	1.09	0.72, 1.64	0.0302	1.26	0.88, 1.82	<0.0001	0.58	0.40, 0.85	0.0082
2002-2005	1.16	0.80, 1.68		0.90	0.62, 1.30		2.07	1.50, 2.87		0.75	0.54, 1.05	
2006-2012	0.96	0.66, 1.39		0.66	0.45, 0.96		1.58	1.12, 2.23		0.58	0.40, 0.84	
Contraception use in last 6 months (ref: LARC or hormonal)												
None or other	0.76	0.56, 1.03	0.0772	1.19	0.87, 1.64	0.2740	1.10	0.85, 1.42	0.4645	1.27	0.91, 1.77	0.1652
Condom use in last 6 months (ref: Yes)												
No	1.51	1.18, 1.94	0.0013	0.35	0.24, 0.51	<0.0001	0.56	0.44, 0.72	<0.0001	0.14	0.09, 0.21	<0.0001
Currently smoking cigarettes (ref: No)												
Yes	0.62	0.45, 0.84	0.0023	0.82	0.57, 1.19	0.2959	0.57	0.43, 0.74	<0.0001	1.05	0.75, 1.46	0.7960
Alcohol use*** (ref: 0-7 drinks/week)												
>7 drinks/week	0.17	0.10, 0.30	<0.0001	0.20	0.12, 0.32	<0.0001	0.12	0.06, 0.21	<0.0001	0.33	0.19, 0.56	<0.0001
Used marijuana/hash*** (ref: No)												
Yes	0.33	0.23, 0.47	<0.0001	0.67	0.45, 1.01	0.0548	0.31	0.21, 0.45	<0.0001	0.69	0.47, 1.00	0.0510
Used uppers (crack/cocaine/methamphetamines) or intravenous drugs*** (ref: No)												
Yes	0.07	0.04, 0.15	<0.0001	0.21	0.12, 0.35	<0.0001	0.18	0.11, 0.30	<0.0001	0.26	0.14, 0.50	<0.0001
Chronic medical conditions** *** (ref: No)												
Yes	0.58	0.43, 0.80	0.0007	0.32	0.20, 0.52	<0.0001	0.53	0.41, 0.68	<0.0001	0.40	0.26, 0.60	<0.0001
cART use *** (ref: No)												
Yes							1.69	1.32, 2.16	<0.0001	0.61	0.44, 0.85	0.0034
HIV viral load (log ₁₀ copies/ml) (ref: ≥4)												
<4							2.90	2.17, 3.87	<0.0001	1.43	1.03, 1.98	0.0312
CD4+ T-cell count (cells/mm ³) (ref: ≥350)												
<350							0.37	0.28, 0.50	<0.0001	0.55	0.40, 0.76	0.0002

cIRR= crude incidence rate ratio; ART=combined antiretroviral therapy; LARC=Long-acting reversible contraceptive; REF=reference category

* Age at pregnancy outcome or age at visit if no pregnancy outcome reported;

**Includes stroke, MI, diabetes, hypertension, DVT PE, Cancer, TB.

*** Calculated as occurring since last visit