

High levels of risk behavior among people living with HIV initiating and waiting to start antiretroviral therapy in Cape Town South Africa

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Introduction

- ❑ South Africa has rapidly scaled up availability of combination antiretroviral therapy (ART) to over 200,000 in 2006.
- ❑ Rapid scale-up of free ART in Western Cape Province, (16,234 patients on ART by March 2006 in 43 health facilities).
- ❑ Limited data to date on determinants of risky sexual behavior among men and women aware of HIV+ status in sub-Saharan Africa, especially comparing those on ART with those not yet on treatment.

Introduction

- ❑ Data from developed countries among high risk groups suggest possibility of diminished inhibition to avoid risky sexual behavior following ART.
- ❑ Limited data on assessing if HIV+ individuals on ART in resource poor settings experience diminished inhibition to avoid risky sexual behavior.
- ❑ Any increase in unprotected sex among HIV+ population following ART may have unintentional consequences on HIV/AIDS epidemic if not appropriately addressed through prevention interventions.

Study objectives

1. Present baseline results of the prevalence of risky sexual behavior among patients just initiating and waiting to initiate ART in Cape Town metro area.
2. Assess sociodemographic and behavioral characteristics associated with unprotected sex among this population to help health officials design effective secondary prevention interventions among the growing population on ART.

Methods: Study design

- ❑ Cross-sectional study of HIV+ individuals just initiating and waiting to initiate ART.
 - Baseline of prospective cohort study of to assess if patients on ART experience decreased inhibition to avoid risky sexual behavior.

- ❑ Study site: 5 largest ART facilities in the Cape Town metropolitan area.
 - Self-weighted by HIV patient flow.

Methods: Study design

- Inclusion criteria for ART patients.
 - Initiated ART in last 3 months
 - ≥ 18 years old

- Inclusion criteria for non-ART patients.
 - No ART
 - Known HIV status at least 6 months
 - ≥ 18 years old

- Total sample sizes = 924
 - 165 men on ART
 - 150 HIV+ men not on ART
 - 355 women on ART
 - 254 HIV+ women not on ART

Methods: Data collection & measures

- ❑ Combination of self-administered and interviewer-assisted techniques using hand held PDAs (August – October 2006).

- ❑ Primary outcome measure: Prevalence of unprotected sex during respondent's last sexual encounter.
 - Categorized by partner type and whether episode happened in past 4 weeks.

Methods: Data collection & measures

- Hypothesized risk factors of unprotected sex (based on previous research):
 - ART status
 - SES (wealth index from factor analysis of possessions)
 - Beliefs about the effect of ART on HIV transmission (combined Likert scale questions)
 - Disclosure to sex partner
 - HIV stigma (combined Likert scale questions)
 - Desire to get pregnant
 - Alcohol consumption
 - Select sociodemographic characteristics

Methods: Statistical analysis

- Descriptive statistics used to summarize sociodemographic and sexual/risk characteristics of respondents (χ^2 -test for testing association of bivariate).

- Logistic regression used to model risk factors for unprotected sex at last sex.
 - Wald statistics and log-likelihood ratios used to identify variable significance and model fit.
 - Probability of committing a type-1 error (alpha) set at 0.10.
 - Length of time since last sex dichotomized as less than vs. more than 4 weeks included as covariate to control for recent exposure to HIV prevention messages.

Demographic characteristics of respondents

Demographic characteristic	ART	non-ART	Total
Men	n = 165	n = 150	n = 315
Mean age*	37.8	35.8	36.9
Mean years education	7.5	8.45	7.9
% employed at least part time	41.9	41.3	41.6
SES % poorest	17.8	33.3	25.2
% middle	36.2	36.7	36.5
% least poor**	46.0	29.9	38.4
% currently married	42.9	42.0	42.4
Women	n = 355	n = 254	n = 609
Mean age*	32.3	31.0	31.8
Mean years education	9.2	9.4	9.3
% employed at least part time	21.6	26.5	23.6
SES % Poorest	26.6	36.6	30.8
% Middle	31.1	30.3	30.8
% Least poor	42.3	33.1	38.5*
% currently married*	23.8	33.2	27.7 ^o

ART and non-ART significantly different (X^2): *P<0.05; **P<0.01

Sexual characteristics of respondents

Sexual behaviors	ART	non-ART	Total
	%	%	%
Men	n = 163	n = 147	n = 310
≥1 sexual partner in last 4 weeks*	53.5	66.7	59.7
No condom last sex with most recent partner	39.8	40.6	40.1
Steady partner	32.8	35.3	33.9
Casual partner / unsure type	58.1	54.1	56.3
Disclosed HIV status to sex partner	70.5	80.3	75.2
Women	n = 354	n = 254	n = 608
≥1 sexual partner in last 4 weeks**	57.7	70.0	62.3
No condom last sex with most recent partner	46.0	46.8	46.3
Steady partner	43.1	46.5	45.0
Casual partner / unsure type	50.0	46.9	48.7
Disclosed HIV status to sex partner	65.5	69.3	67.1

ART and non-ART significantly different (X^2): * $P < 0.05$; ** $P < 0.01$

Risk factors of unprotected sex

Determinants	Adjusted		Adjusted	
	OR	95% CI	OR	95% CI
	<u>Men</u> (n = 278)		<u>Women</u> (n = 558)	
No disclosure to sex partner	2.57**	(1.22-5.50)	2.84***	(1.84-4.39)
Ambivalent perception that safe sex necessary even with ART vs. strongly believe so	2.08**	(1.00-4.30)	2.39***	(1.50-3.84)
Desire to get pregnant	1.03	(0.40-2.61)	1.76*	(0.96-3.26)
Alcohol consumption in past month	0.99	(0.46-2.12)	1.81**	(1.01-3.24)

*P<0.10; **P<0.05; ***P<0.01

- ❖ ART status, SES, education, age, partner type and stigma not significantly associated with unprotected sex at last sex.

Risk factors of unprotected sex, among casual or unknown partner type

Determinants	Adjusted		Adjusted	
	OR	95% CI	OR	95% CI
	<u>Men (n = 74)</u>		<u>Women (n = 116)</u>	
No disclosure to sex partner	2.07	(0.60-7.15)	2.64*	(1.84-4.39)
Ambivalent perception that safe sex necessary even with ART vs. strongly believe so	5.53*	(1.29-23.71)	1.21	(0.43-3.37)
Least poor vs. poorest (ref)	2.61	(0.52-13.04)	2.53*	(1.00-6.73)

*P<0.05

- ❖ ART status, education, age, partner type, stigma, desire to get pregnant and alcohol consumption not significantly associated with unprotected sex at last sex.

Conclusions

- A high proportion of HIV-positive men and women aware of HIV status in Cape Town are engaging in unprotected sex.
 - True for patients who recently started ART ≤ 3 months as well as those not yet eligible for ART.
- Similar to previous research, Men and women who do not disclose HIV status to sex partner more than twice as likely to have had unprotected sex.
- Men and women not certain that ART availability does not eliminate risk of HIV transmission twice as likely to have had unprotected sex.

Conclusions

- Primary reason among men for not using condom was they did not feel it necessary.
- Primary reason cited for not using condom among women was partner refusal.
- Data suggest clear need for improving general sexual climate around condom use, as well as specific skills among women to negotiate condom use with male partners who may not consider them necessary.

Conclusions

- Results show great need for effective risk prevention behavioral intervention for HIV-positive individuals in clinical care for HIV/AIDS in Cape Town.
- Secondary prevention interventions should focus on:
 - Building awareness and motivation for practicing safe sex even with the availability of ART (e.g. ART does not eliminate risk of transmission).
 - Motivation and skills for disclosing one's HIV status to all sexual partners.
 - Supporting gender appropriate behavioral interventions that recognize the need to address traditional sex roles and gender power differentials in condom negotiations during sex.

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