

# Sexual risk behaviors of persons receiving ART in Mombasa: Findings from a longitudinal study

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# Horizons

Horizons is a global operations research program implemented by the Population Council in collaboration with the International Center for Research on Women, International HIV/AIDS Alliance, PATH, Tulane University, Family Health International, and Johns Hopkins University.

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# Introduction

- Unprotected sex by PLWHA is an area of concern:
  - Risk of HIV transmission
  - Risk of re-infection with new, drug-resistant virus
  - Risk of STI infection which may accelerate HIV disease
- With the provision of HAART, PLWHA live longer, healthier, and possibly more sexually active

# Introduction

- Limited data on influence of HAART on sexual behaviour is available from sub Saharan Africa
  - Previous studies among mainly Western MSM suggest that since the introduction of HAART, a trend was seen towards:
    - ▶ Increase in prevalence of unprotected sex
    - ▶ Increase in incidence of HIV/STI
  - Recent data and meta-analysis suggest NO increased sexual risk behavior in HIV-positive patients receiving HAART.

# Introduction

- We evaluated whether Kenyan mainly heterosexual persons on HAART, would engage more in high risk sexual behavior because of their treatment

# Objective

- To assess change in sexual risk behaviors in a cohort of HIV-positive persons who are receiving ART for 12 months in Mombasa, Kenya.

# Study design

- Secondary objective within Mombasa Adherence Study
- Prospective cohort study design
- 234 ART-naïve HIV-infected persons were enrolled, started on HAART and followed for 12 months.

# Intervention

- Patients received NNRTI from enrolment as well as intensive counseling for treatment adherence
- Safe sex counseling was provided at time of VCT
- Sexual risk reduction counseling was provided during HAART initiation and follow-up

# Methods

- Semi-structured questionnaire taken by 4 research assistants at month 0 and 12
- Reporting reference period of 12 months
- The questionnaire captured information on:
  - heterosexual and homosexual contacts with regular, non-regular and commercial sex partners;
  - condom use;
  - knowledge and attitudes towards condom use and ART;
  - disclosure of HIV status to partners;
  - knowledge of HIV status of partner; and
  - history of sexually transmitted infections (STI).

# Methods

- Ethical approvals obtained from:
  - KNH-ERC
  - Population Council (IRB)
  - Written informed consent from all participants

# Measures (1)

- unsafe sex was defined as any self-reported unprotected sex in the last 12 months with a partner known to be HIV-negative or of unknown HIV status.

## Measures (2)

- Regular partner: spouse / live-in sexual partner / regular boyfriend or girlfriend; and never paid for sex
- Non-regular partner: sexual partner the respondent is not living with; had sex only once or rarely
- Sex worker: sexual partner whom respondent paid money in exchange for sex

# Baseline characteristics

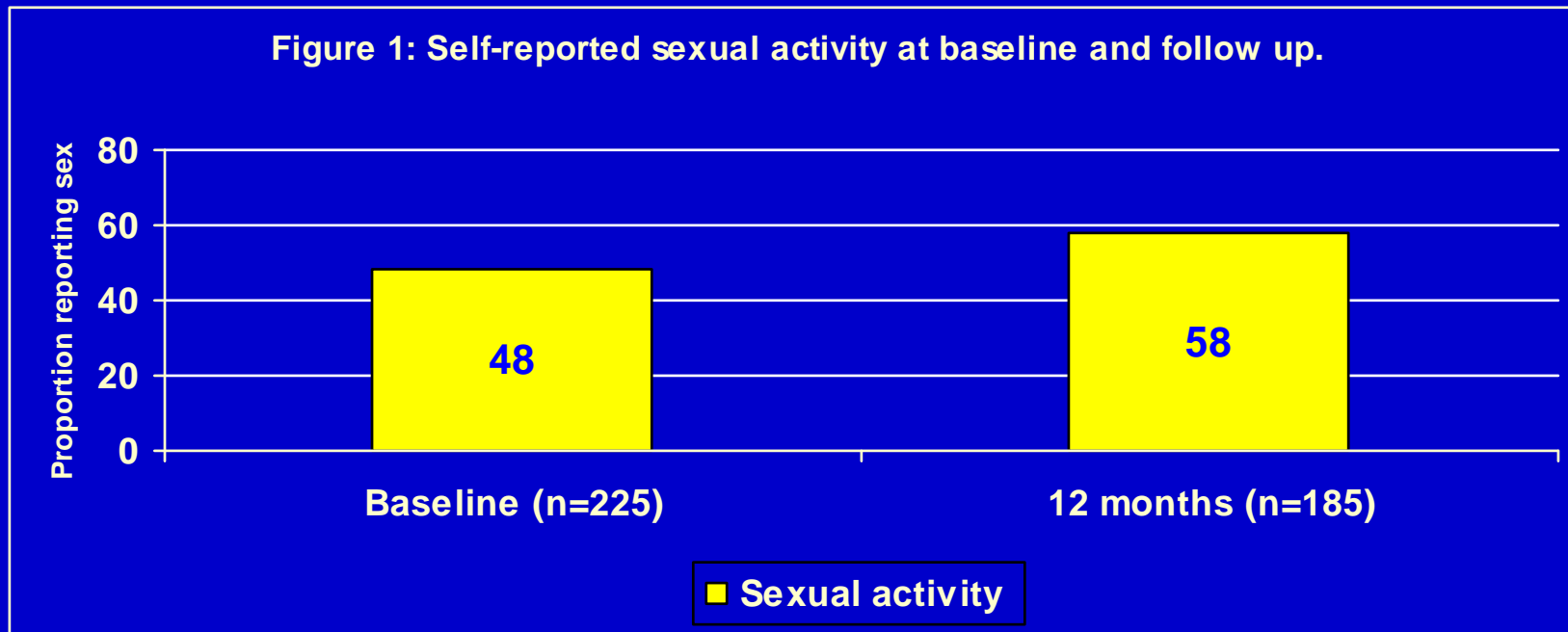
Variable	Total (N=234)	Female (N=149)	Male (N=85)	<i>P</i> - value
<b>Age: mean years (sd)</b>	37.2 (7.9)	35.3 (7.5)	40.4 (7.4)	
<b>Highest education level: % (n=228)</b>				
Never attended school	6	7	4	0.50
Primary education	50	50	48	
Sec or higher education	45	43	48	
<b>Marital status: % (n229)</b>				
Never married	14	15	12	0.002
Married or cohabiting	48	39	64	
Divorced or separated	14	16	12	
Widowed	23	30	12	
<b>WHO clinical HIV stage: % (n/N)</b>				
Stage 1	9	10	6	0.60
Stage 2	21	19	24	
Stage 3	64	64	63	
Stage 4	7	7	7	

# Sexual behaviour characteristics

Variable	Total (N=234)	Female (N=149)	Male (N=85)	<i>P</i>
<b>Sexually active in past 12 mos: % (n=225)</b>	48	46	50	0.58
<b>- Sexual partner(s) in past 12 mos (n=107)</b>				
* Regular partner(s) / spouse	93	94	90	
* Non-regular partner(s)	12	11	15	
* Commercial partner(s)	2	0	5	
<b>- Number of sex partners in past 12 mos (n=107)</b>				
1 partner	90	94	83	
≥ 2 partners	10	6	17	

# Results (1)

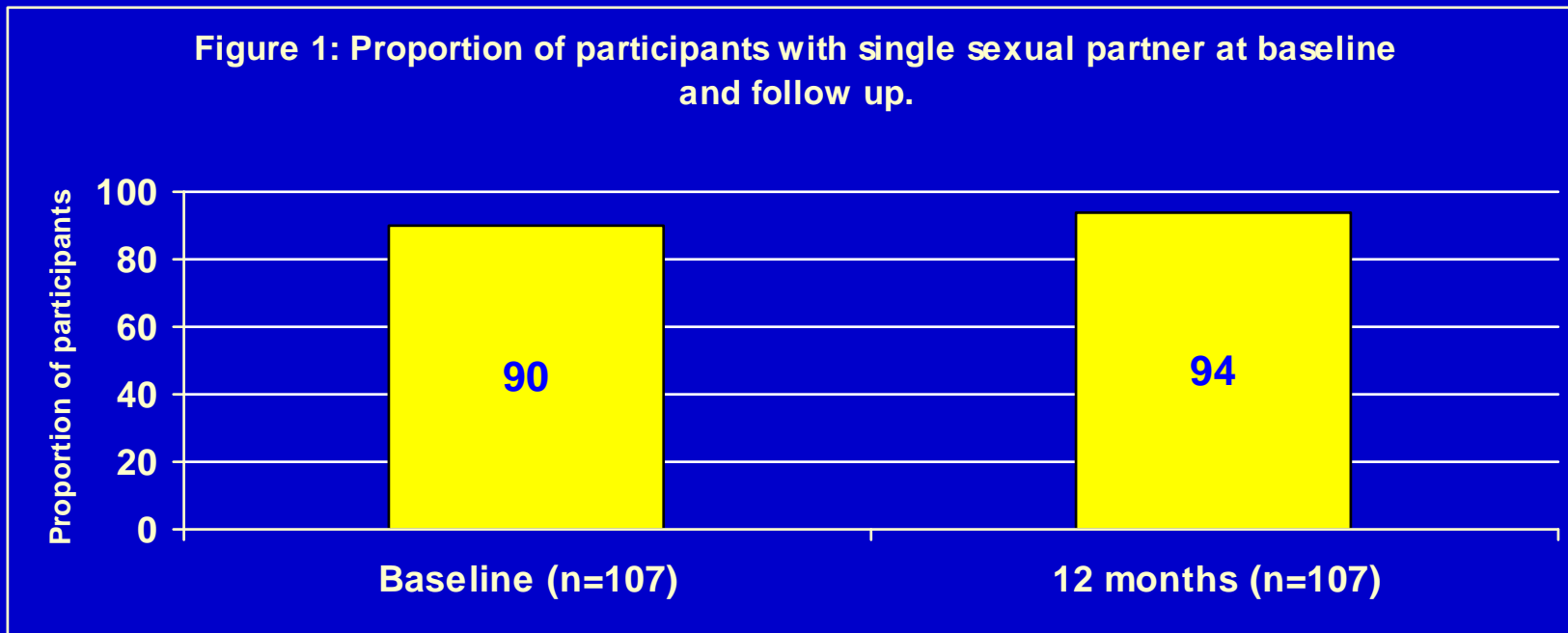
- Sexual activity



- There was no statistically significant difference  $P=0.07$

# Results (2)

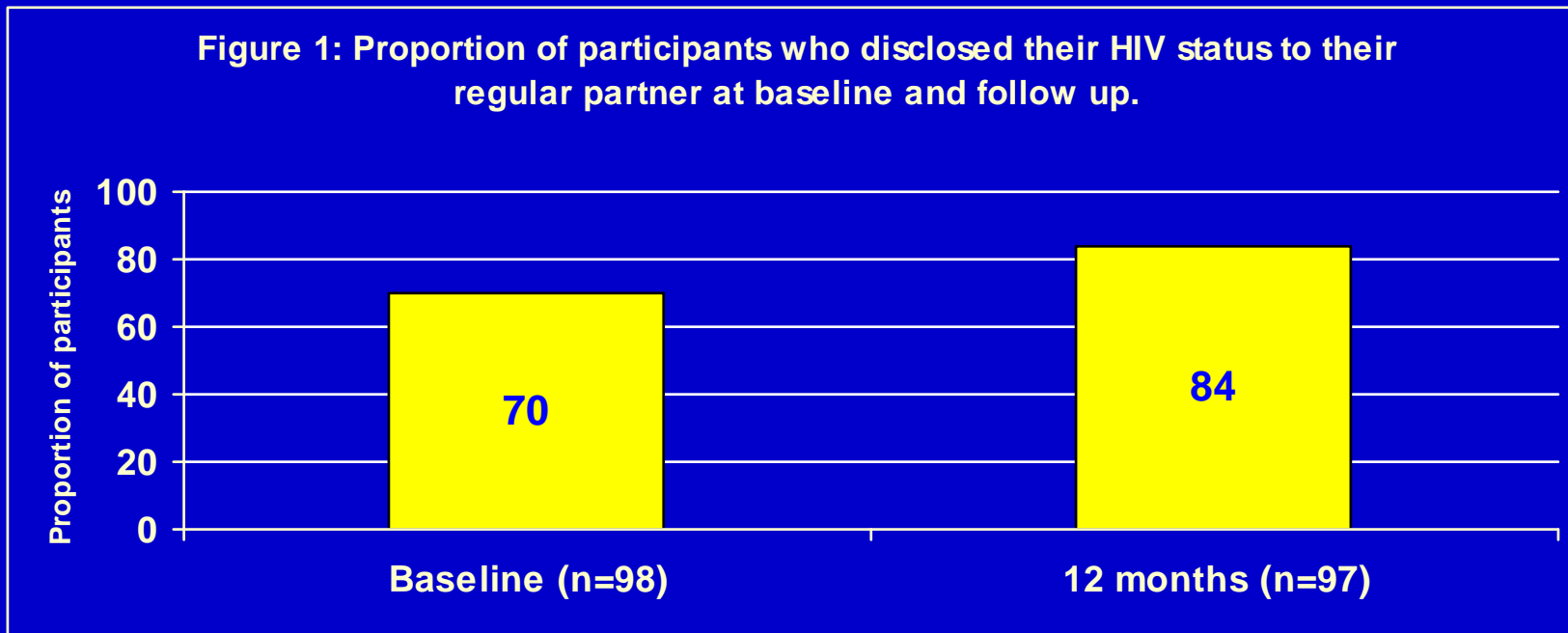
- Number of partners among sexually active participants



- There was no statistically significant difference  $P=0.21$

# Results (3)

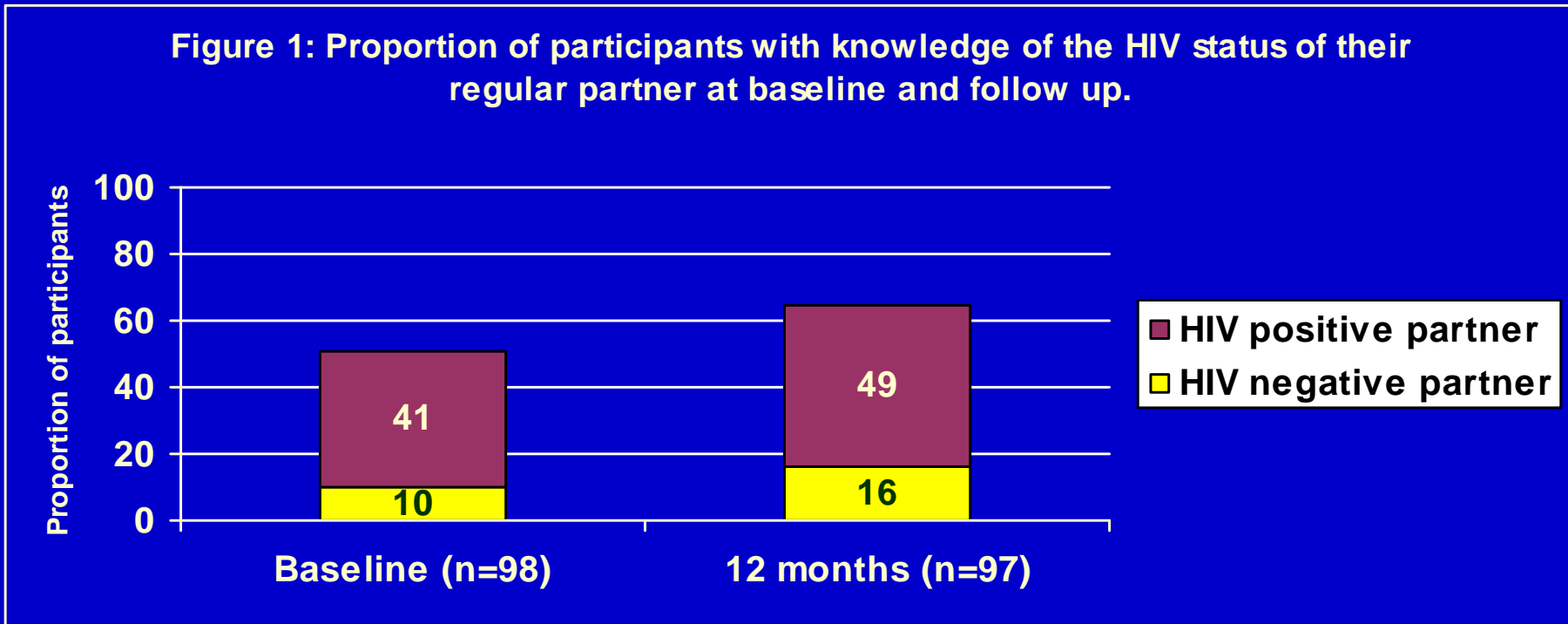
- Disclosure among sexually active participants



- There was a statistically significant difference  $P < 0.05$

# Results (4)

- Knowledge of regular partners' status among sexually active participants



- There was a statistically significant difference  $P < 0.01$

# Results (5)

- Correlates of unsafe sex in the last 12 months with partner(s) of negative or unknown HIV status among sexually active HIV-infected patients.  
Increased risk if:
  - Not currently married
  - Not disclosed HIV status to regular partner
  - Moderate or high perceived stigma
  - Moderate or severely depressed
  - Low body mass index
  - Shorter duration since known HIV positive
- DAART and Adherence were not associated with unsafe sex.

# Results (5)

- Effect of 12 months of ART on the sexual behaviour of sexually active HIV-infected persons in Mombasa, Kenya

	Baseline	12-mos. FU		
Variable	%	%	AOR (95% CI)	<i>P</i>
Unprotected sex with unknown/negative partner <sup>1,2,3,4</sup>	50	28	0.55 (0.32 – 0.94)	0.028
Unprotected sex at last sex act <sup>1,2,4</sup>	46	10	0.16 (0.08 – 0.32)	<0.001
Self reported STI <sup>1,4</sup>	31	8	0.19 (0.09 – 0.41)	<0.001

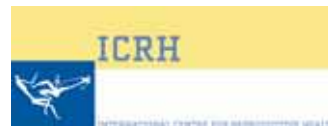
- Adjusted for gender<sup>1</sup>, partner disclosure<sup>2</sup>, perceived stigma<sup>3</sup> and intra-client clustering<sup>4</sup>

# Conclusions

- This study does not show evidence of increased sexual risk behaviors among persons receiving ART and prevention counseling, confirming more recent data
- However, risk of HIV transmission remains among sexually active participants:
  - 33% were not aware of partner's HIV status
  - 28% reported unsafe sex
- Safe sex counseling needs special emphasis in ART programs

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