

## Introduction

- Minors comprise a vulnerable population in whom better understanding of HIV/STI epidemiology is needed to target prevention interventions
- Kisumu, Kenya's 3<sup>rd</sup> largest city, has high HIV/STI rates among minors (*Buve, AIDS 2001*)
- Rates in nearby rural areas of Western Kenya unknown
- A baseline cross-sectional study of HIV/STIs was planned for the Asembo and Gem districts with the inclusion of minors

## Methods

### Objectives

- Estimate HIV/STI prevalence; characterize risk behavior among minors in rural western Kenya
- Assess willingness to participate in HIV research
- Provide baseline to evaluate youth intervention

### Design

- Population-based cross-sectional study
- October 2003 – April 2004
- 13-34 year old males and females

### Mature minors (age <18 years)

- AND married, pregnant or a parent
- Could consent for themselves

### Non-mature minors (age <18 years)

- Needed parental consent AND had to assent
- Assent obtained from non-mature minors separate from their parent/guardian

### All participants were:

- Interviewed with structured risk behavior questionnaire
- Asked to give venous blood, urine, and self-administered vaginal swabs for HIV/STI testing
- Offered onsite voluntary counseling and testing (VCT)
- Encouraged to collect HIV results from study counselors at local health facilities

### Methods developed in consultation with:

- Community Advisory Board and Community Chiefs
- Kenya Ministry of Health
- KEMRI/CDC Ethical Review Boards
- Kenyan scientists and lawyers
- Local youth stakeholders

## Conclusions

- Young age of reported sexual debut among minors in this rural community
- First sexual experience consensual and with age mates
- Male adolescents reported higher numbers of sexual partners and relations
- Female adolescents have high rates of HIV, HSV-2 and pregnancy. Possible explanations:
  - Misreporting of sexual behavior
  - High transmission efficiency
  - Higher risk partners
- The sharp increase in HIV seroprevalence implies high HIV incidence in girls aged 16-17 in this rural area
- High reported rates of pressured or forced sex

## Results (\*Chi square p-value <0.05)

Enrollment		Socio-demographic characteristics		Reported sexual activity	
Eligible minors (aged 13-17 years)	1122 (%)	Females 465 (%)	Males 394 (%)	Females 465 (%)	Males 394 (%)
Enrolled	869 (78)	Median age (yrs)		Ever had sex	
–Gave biological samples	859	15	15	163 (35)	164 (42)
–Females	465	Currently in school*		Reported sexual debut	
Consented/assented but did not enroll	106 (9)	413 (89)	368 (93)	Median age (yrs)*	
Refused	147 (13)	Orphans		Before age 13*	13
Main reasons for refusal*, n=96 (65% response):		• One parent died		Before menarche	68/160 (43)
		• Both parents died			
Not wanting to have blood taken	39 (41)	Ever married*			
Not permitted by parent/guardian/spouse	28 (29)	6 (1)	0 (0)		
Not wanting to get tested/learn one's HIV status	8 (8)				

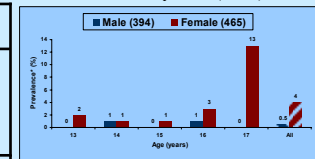
### HIV, HSV-2 and pregnancy by reported sexual activity and marital status

	Never had sex		Ever had sex		Ever married
	F (%)	M (%)	F (%)	M (%)	
HIV	3 (1)	2 (1)	12 (8)	0 (0)	1 (17)
HSV-2	31 (10)	17 (7)	36 (23)*	17 (10)*	3 (50)
Currently pregnant	11 (4)	--	29 (19)	--	4 (67)

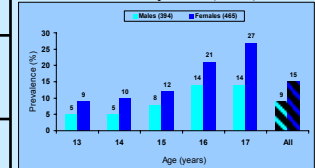
### Never married minors reporting sexual activity

	Females 157 (%)	Males 164 (%)
Circumstances of first sex		
Consensual*	118 (75)	143 (87)
Pressured*	22 (14)	10 (6)
Forced	17 (11)	10 (6)
Used a condom*	36 (23)	12 (7)
First partner was:		
Aged <20 years*	76/82 (93)	95/96 (99)
A student*	114 (73)	154 (94)
Never married	153 (97)	162 (99)
# times had sex with first partner		
Only once*	93 (59)	118 (72)
2-4 times	31 (20)	32 (20)
# lifetime sex partners		
1	91 (58)	79 (48)
2	39 (25)	26 (16)
>2*	27 (17)	57 (35)

### Sex- and age-specific HIV prevalence Oct. 2003 – April 2004 (N=859)



### Sex- and age-specific HSV-2 prevalence Oct. 2003 – April 2004 (N=859)



## Recommendations

- In this community, educational and behavioral interventions should be implemented among minors aged 9-12 years, before their sexual debut
- Prevention interventions should target teenage girls
- Intensified and comprehensive prevention efforts should target older adolescents
- Efforts should actively involve parents, guardians and communities
- Prospective studies are needed on HIV and sexual behavior among adolescents aged 13 and above

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J. Vulule  
Ethical Review Committee  
**Community Advisory Board**  
**CDC-Kenya**  
F. Odhiambo  
J. Ouma  
B. Juma  
P. Nasokho  
Study team  
C. Marietta

D. Rosen  
D. Mwaengo  
B. Marston  
E. Marum  
J. Odoyo  
A. Eleveld  
N. Otwoma  
L. Slutsker  
K. DeCock

**Kenya MOH**  
A. Misore  
J. Gondi  
S. Kabaka  
**CDC-Atlanta**  
C. Vitek  
J. Nkengasong  
A. Bell  
C. Villar  
A. Greenberg

**Consultants**  
K. Brattgaard  
S. Sawadogo  
M. Kalou  
K. Kouyate-Gbane  
**ITM**  
A. Buve  
**LSHTM**  
J. Glynn