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CONFRONTING INEQUITIES IN STI PREVENTION, DIAGNOSTICS AND CARE



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# ***Chlamydia trachomatis and Neisseria gonorrhoea among 14-19-year-old Adolescents from Urban Slums in Kampala, Uganda***

# Disclosure

<b>Any circumstances that could give rise to a potential conflict of interest related to the conference or topic under discussion</b>	<b>Name of company, organization or institution</b>
Sponsorship	None
Payment or other financial remuneration	None
Shareholder rights	None
Other relations	None

# Background

- Sexually transmitted infections (STIs) among adolescents are of public health concern. [1, 2]
- STIs are associated with major reproductive health consequences. [3, 4, 5, 6, 7]
- Adolescents in specific circumstances are more vulnerable to STIs [8, 9, 10]
- Limited access to STI prevention, diagnostic and treatment services.
- **Aim: We studied prevalence and factors associated with *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoea* (NG) among adolescents from urban slums in Kampala, Uganda**

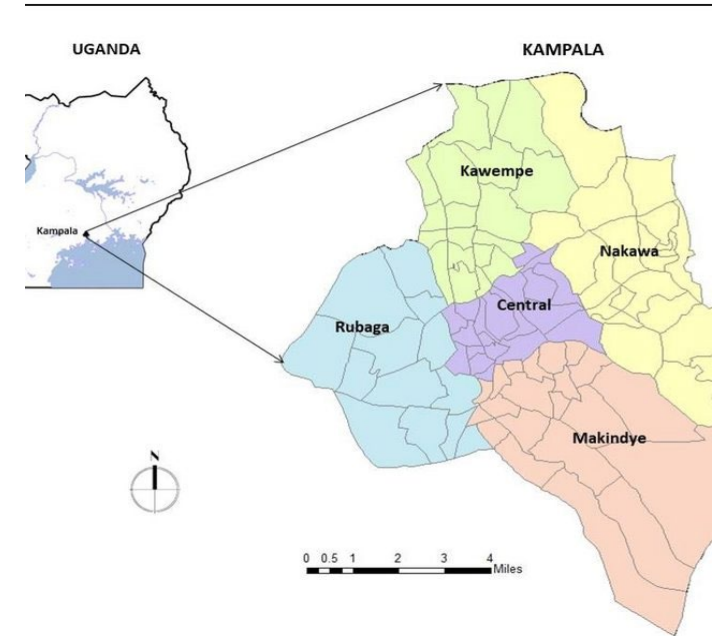
# Methods- 1

**Design:** Cross-sectional study of baseline data collected in an adolescent cohort of 14–19-year-olds.

- Cohort enrolled from March 2019 to March 2020.

**Study population and area:** Sexually active adolescents mobilized from urban slums in central, south and north Kampala.

**Clinic Services:** Enrolled participants were offered HIV prevention and treatment services including oral pre-exposure prophylaxis (PrEP), antiretroviral therapy (ART), contraceptives, condoms, referral for ante-natal care, syndromic management of STIs.



# Methods- 2

**Data Collection:** Interviewer administered questionnaires; Alcohol use disorder identification test (AUDIT) used to screen for alcohol use.

**Laboratory procedures:** CT/ NG NAAT tests using Roche Cobas x4800 Real-Time polymerase chain reaction (PCR) assay.

**Statistical analysis:** Main study outcome was having CT and or NG, binary outcome.

- Independent variables included socio-demographic and behavioral.
- Data entered in OpenClinica and analysed in Stata (v15.0) using logistic regression.

## Ethics

- IRB approvals
- Consent for adolescents 18 above and emancipated and/ or mature minors.

# Table 1: Baseline characteristics

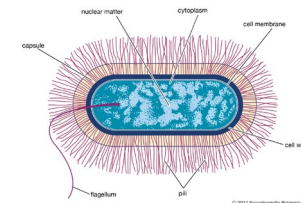
Variables	Frequency (N=490)	Percent (%)
<b>Gender</b>		
Female	297	60.6
<b>Age at enrolment (years)</b>		
14-17	241	49.2
18-19	249	50.8
<b>Highest education level attained</b>		
< Secondary	446	91.0
≥ Secondary	44	9.0
<b>Alcohol use</b>		
Doesn't drink	204	41.6
Low to Moderate risk	207	42.3
High risk (harmful & dependent)	79	16.1
<b>Illicit drug use in the past 3 months</b>		
Yes	171	34.9
<b>No. of sexual partners in past 3 months</b>		
<5	374	76.3
≥5	116	23.7
<b>Received payment for sex in the past 3 months</b>		
Yes	231	47.1
<b>Changed residence in the past 12 months</b>		
Yes	128	26.1

## Table 2: STIs at Baseline

STI variable	N (%)
<b>Any STI</b>	
All Participants (N=490)	111 (22.7)
Females (n=297)	84 (28.3)
Males (n=193)	27 (14.9)
<b>Chlamydia trachomatis</b>	
All Participants	92 (18.8)
Females	69 (23.2)
Males	23 (11.9)
<b>Neisseria gonorrhoea</b>	
All Participants	43 (8.8%)
Females	37 (12.5)
Males	6 (3.1)

**38.7%** (n=111) had one or more symptoms

- pain on passing urine (n=18)
- lower abdominal pain (n=17)
- abnormal genital discharge (n=41)



- HIV prevalence was 3.3% (15 females, 1 male)

# Table 3: Predictors of CT/NG among Female Adolescents

Variable	N (490)	CT/NG n(row %)	OR (95% CI)	aOR (95% CI)	p-value
<b>Age (years)</b>			P=0.912		
14-17	152	43 (28.3)	ref	ref	0.797
18-19	145	41 (28.3)	0.97 (0.59-1.61)	1.07 (0.63-1.83)	
<b>Education Level</b>			p=0.198		
Less than secondary	264	78 (29.5)	ref	ref	0.435
Secondary or higher	33	6 (18.1)	0.54 (0.22-1.37)	0.68 (0.26-1.78)	
<b>Number of sexual partners in past 3 months</b>			p=0.04		
< 10	250	65 (26.0)	ref	ref	<b>0.013</b>
≥ 10	47	19 (40.4)	1.98 (1.03-3.08)	<b>2.45 (1.21-4.97)</b>	
<b>Changed residence in the past 12 months</b>			p=0.006		
No	192	44 (22.9)	ref	ref	<b>0.007</b>
One or more times	105	40 (38.1)	2.07 (1.23-3.49)	<b>2.10 (1.22-3.59)</b>	
<b>Alcohol use (AUDIT Tool)</b>			p=0.112		
Low risk	183	58 (31.7)	ref	ref	0.444
Moderate to high risk	114	26 (22.8)	0.65 (0.38-1.11)	0.55 (0.30-1.98)	
<b>Intimate partner violence in past 3 months</b>			p=0.172		
No	199	51 (25.6)	ref	ref	0.099
Yes	98	13 (33.7)	1.44 (0.85-2.44)	1.60 (0.92-2.79)	

OR: Odds ratio aOR: Adjusted Odds ratio; CI Confidence interval



# Table 4: Predictors of CT/NG among Male Adolescents

Variable	N (193)	CT/NG n(row %)	OR (95% CI)	aOR (95% CI)	p-value
<b>Age</b>			p=0.069		
14-17 years	89	8 (8.99)	ref	ref	
18-19 years	104	19 (18.2)	2.26 (0.94-5.46)	<b>2.78 (1.12-6.88)</b>	<b>0.027</b>
<b>Education Level</b>			p=0.633		
Less than secondary	182	26 (14.3)	ref	ref	
Secondary or higher	11	1 (9.1)	0.60 (0.07-4.89)	0.46 (0.05-3.84)	0.470
<b>Number of sexual partners in past 3 months</b>			p=0.170		
≤1	70	13 (18.6)	ref	ref	
> 1	123	14 (11.4)	0.56 (0.25-1.28)	0.53 (0.23-1.25)	0.146
<b>Changed residence in the past 12 months</b>			p=0.187		
No	170	26 (15.3)	ref	ref	
One or more times	23	1 (4.3)	0.25 (0.03-1.95)	0.21 (0.03-1.70)	0.144
<b>Alcohol use (AUDIT Tool)</b>			p=0.165		
Low risk	143	23 (16.1)	ref	ref	
Moderate to high risk	50	4 (8.0)	0.45 (0.15-1.38)	0.40 (0.13-1.25)	0.114

OR: Odds ratio aOR: Adjusted Odds ratio; CI Confidence interval

# Conclusion

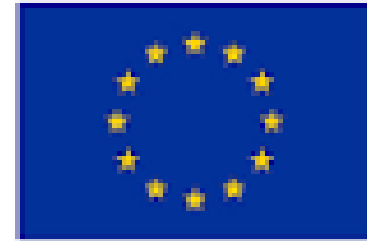
- STIs are highly prevalent in this population.
- 4 out of 10 adolescents testing positive for CT/NG have symptoms.
- STI screening tests are needed (point of care, accessible, affordable).
- STI prevention and treatment targeting female and older male adolescents in urban slums are urgently needed.
- STI interventions should be integrated with adolescent HIV prevention and treatment services.

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