

## **Supplementary Material**

### **Incidence and predictors of HIV, chlamydia and gonorrhoea among men who have sex with men attending a peer-based clinic**

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**Table S1. Study variables and their variation in measurement over time**

	1 <sup>st</sup> questionnaire version 2011	2 <sup>nd</sup> questionnaire version 2012 to early 2014	3 <sup>rd</sup> questionnaire version early 2014 onwards	Variable used in analysis
Number of partners	Penetrative partners in the past 12 months, categorical	All sexual partners since their last STI test or up to 12 months prior, continuous	All sexual partners since their last STI test or up to 12 months prior, categorical	Number of partners since last test or prior 12 months, 0, 1-5, 6-10, 11-20, 21-50, 51+
Condomless anal intercourse (CLAI)	Anal intercourse without condoms with regular and/or casual partners	Frequency of condom use during anal intercourse, by partner type	Binary measure of CLAI having occurred	Any CLAI or no CLAI, regardless of partner status
Anal sex	Any anal sex	Any anal sex	Any anal sex	Any anal sex or No anal sex
Anal sex position	Top, bottom, both	Top, bottom, both	Top, bottom, both	Top, bottom, both

Group sex (sex with more than one individual at the same time)	-	Number of times participated in group sex in the past year	Yes or No group sex since the last test or up to 12 months prior	Yes or No group sex
Sex under the influence of drugs	-	Yes or No sex under the influence of alcohol or other drugs since the last visit or up to 12 months prior, per drug type	Yes or No sex under the influence of alcohol or other drugs since the last visit or up to 12 months prior, per drug type	Yes or No to each type
Locations of sourcing partners	-	Friends, beats or sex on premises venues (SOPVs), online or by mobile apps, bars, other	Friends, beats or sex on premises venues (SOPVs), online or by mobile apps, bars, other	Yes or No to each method

**Table S2. Comparison of HIV incidence multivariable models with and without coding for missing values**

	<b>No missing values coded (N=1895)</b>	<b>All missing values coded (N=1975)</b>
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	<b>Hazard Ratio (95% CI)</b>		<b>Hazard Ratio (95% CI)</b>	<b>P</b>
Age group		0.017		<0.001
- Under 25 years	- (reference)		- (reference)	
- 26 – 29 years	1.69 (0.38, 7.54)		1.71 (0.39, 7.52)	
- 30 – 39 years	3.59 (1.02, 12.62)		3.79 (1.09, 13.10)	
- 40 – 49 years	3.04 (0.79, 11.67)		3.35 (0.89, 12.60)	
- 50+ years	6.23 (1.80, 21.54)		6.02 (1.74, 20.86)	
Number of partners				0.048
- ≤ 5	- (reference)	0.03	- (reference)	
- 6 – 10	2.47 (1.28, 4.77)		2.47 (1.28, 4.76)	
- 11 - 20	0.92 (0.30, 2.75)		0.93 (0.31, 2.79)	
- 21 - 49	0.90 (0.26, 3.08)		0.85 (0.25, 2.89)	
- 50+	3.85 (0.86, 17.32)		3.67 (0.86, 15.68)	
- <i>Missing</i>	-		2.27 (0.45, 11.45)	

**Table S3. Comparison of chlamydia incidence multivariable models with and without coding for missing values**

	<b>No missing values coded (N=1335)</b>	<b>All missing values coded (N=1757)</b>		
	<b>Hazard Ratio (95% CI)</b>		<b>Hazard Ratio (95% CI)</b>	<b>P</b>
Age group		<0.001		<0.001

- Under 25 years	2.20 (1.44, 3.36)		2.24 (1.48, 3.39)	
- 26 – 29 years	1.87 (1.19, 2.94)		1.93 (1.24, 3.01)	
- 30 – 39 years	1.24 (0.80, 1.90)		1.25 (0.82, 1.91)	
- 40 – 49 years	1.42 (0.90, 2.25)		1.35 (0.86, 2.13)	
- 50+ years	- (reference)		- (reference)	-
Year		<0.001		<0.001
- 2011	3.80 (1.50, 9.60)		3.50 (1.41, 8.66)	
- 2012	1.00 (0.46, 2.17)		0.61 (0.26, 1.41)	
- 2013	3.54 (2.43, 5.16)		3.26 (2.18, 4.86)	
- 2014	1.37 (0.95, 1.98)		1.43 (0.99, 2.06)	
- 2015	- (reference)		- (reference)	
Gonorrhoea since last test				
- Yes	3.44 (2.13, 5.56)	<0.001	3.17 (1.96, 5.14)	<0.001
- <i>Missing</i>	-		0.78 (0.43, 1.42)	0.414
Any CLAI since last test				
- Yes	1.51 (1.17, 1.96)	0.002	1.53 (1.18, 1.98)	0.002
- <i>Missing</i>			0.67 (0.25, 1.80)	0.283
Crystal methamphetamine use during sex since last test	Not included in model (not significant)			
- Yes			1.63 (1.00, 2.67)	0.050

- <i>Missing</i>			1.33 (0.96, 1.83)	0.086
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**Table S4. Comparison of gonorrhoea incidence multivariable models with and without coding for missing values**

	No missing values coded (N=1473)		All missing values coded (N=1912)	
	Hazard Ratio (95% CI)		Hazard Ratio (95% CI)	P
Age group		<0.001		<0.001
- Under 25 years	3.96 (2.02, 7.77)		4.22 (2.15, 8.25)	
- 26 – 29 years	2.70 (1.30, 5.59)		2.72 (1.32, 5.64)	
- 30 – 39 years	2.82 (1.42, 5.59)		3.13 (1.58, 6.19)	
- 40 – 49 years	1.56 (0.72, 3.36)		1.50 (0.69, 3.27)	
- 50+ years	- (reference)		- (reference)	
Year		<0.001		<0.001
- 2011	4.76 (1.71, 13.25)		2.80 (0.99, 7.98)	
- 2012	1.39 (0.68, 2.82)		0.67 (0.30, 1.51)	
- 2013	0.37 (0.89, 0.71)		0.30 (0.16, 0.56)	
- 2014	1.61 (1.07, 2.43)		1.63 (1.08, 2.44)	
- 2015	- (reference)		- (reference)	
Chlamydia since last test				
- Yes	2.80 (1.90, 4.14)	<0.001	2.65 (1.79, 3.94)	<0.001
- <i>Missing</i>	-		0.70 (0.30, 1.62)	0.407

Crystal methamphetamine use during sex since last test	Not included in model (not significant)			
- Yes			2.25 (1.08, 4.70)	0.030
- <i>Missing</i>			1.84 (1.19, 2.83)	0.006