

## eAPPENDIX:

### Distribution and genotype-concordance of human papillomavirus infections among couples in new sexual relationships

#### Partner agreement in reporting of months engaging in vaginal sex

This measure was calculated as the interval between the reported date the couple first engaged in vaginal sex and the questionnaire date. Eighty-three percent (216/260) of couples had engaged in vaginal sex for six months or less at enrolment, with only 6% (16/260) reporting having done so for more than nine months. The vast majority of couples agreed (within 0.5 months) in the duration they had been engaging in vaginal sex (88%, 212/242) (**Table A.1**). There was no evidence of gender difference in the reported date first engaged in vaginal sex (signed rank test:  $P = 0.39$ ) or the duration engaging in vaginal sex (signed rank test:  $P = 0.15$ ).

**Table A.1.** Reports of number of months engaging in vaginal sex by couples enrolled in the HITCH Cohort Study, May 2005 – August 2008.

	Women	Men	Average of both reports*	Difference (female minus -male)**
N	250	252	260	242
Mean (SD)	4.3 (4.2)	4.7 (4.7)	4.6 (4.1)	-0.37 (3.51)
Median	3.9	3.9	3.9	0
IQR	(2.5–5.2)	(2.5–5.3)	(2.7–5.3)	(0–0)

\*If one partner did not answer this question or provided an invalid answer (i.e., a date in the future or distant past), the answer of the other partner was used.

\*\*Only applicable to couples for whom both partners provided a valid answer.

## Partner agreement in reporting of total number of vaginal sex encounters

Questionnaire respondents could report the total number of vaginal sex encounters as an actual number, or as a frequency of sex per week or per month. Most preferred to report a frequency per week (women: 83%; men: 76%). Couples had engaged in a median of 63 vaginal sex encounters by the time they were enrolled. The median difference reported by men and women was zero (signed rank test:  $P = 0.21$ ), suggesting no gender difference in reporting (**Table A.2**).

Nevertheless, there was considerable variation in the number of encounters reported by partners. The final column in **Table A.2** shows that for the average couple, the difference in their reported number of encounters was 35% of the mean of their two individual reports. This amount of variation would be equally achieved by a report of 6.5 and 10 encounters by the male and female partner, or 65 and 100 encounters by the female and male partner. The intra-class correlation coefficient (ICC) was 0.428, indicating that 42.8% of the variation in the number of vaginal sex encounters was due to couple membership (i.e., differences between couples). This suggests that the remaining variability was due to discrepancies between partner's reports.

Some of the intra-couple variability likely resulted from the three reporting options. In 79% (191/241) of couples, both partners opted to use the same reporting method. Discrepancies were lesser among couples who used the same method (median difference/average=0.29) than in couples who used different methods (median 0.62; Kruskal Wallis nonparametric test of medians:  $P < 0.0001$ ).

**Table A.2.** Total number of vaginal sex encounters\* reported by couples enrolled in the HITCH Cohort Study, May 2005 – August 2008.

	Women	Men	Average of both reports**	Difference (female minus male) †	Absolute value of difference divided by average †
N	249	252	260	241	241
Mean (SD)	79.1 (76.3)	90.2 (103)	86.0 (80.8)	-10.4 (93.6)	0.46 (0.44)
Median (IQR)	59 (34–99)	64 (30–113)	63 (34–115)	0 (-22–15)	0.35 (0.14–0.68)

\*For participants who opted to report a frequency per week or per month, the number of encounters was estimated by multiplying the frequency by the duration of time engaging in vaginal sex.

\*\*If one partner did not answer this question, the answer of the other partner was used.

† Only applicable to couples for whom both partners provided a valid answer.

## Type-specific concordance of HPV infections

**Table A.3** Proportion of concordant and discordant HPV infections, by HPV type (n=263 couples).

HPV type	M+F- % (n)	M-F+ % (n)	M+F+ % (n)	Ratio of observed % M+F+ concordant over expected (95%CI)
6	3.0% (8)	0.4% (1)	3.4% (9)	13.9 (6.4-26.5)
11	0.0% (0)	0.4% (1)	0.0% (0)	n/c
16	3.8% (10)	5.3% (14)	12.6% (33)	4.3 (3.0-6.0)
18	1.9% (5)	3.0% (8)	1.9% (5)	10.1 (3.3-23.6)
26	0.4% (1)	0.0% (0)	0.0% (0)	n/c
31	1.9% (5)	1.5% (4)	3.0% (8)	13.5 (5.8-26.6)
33	0.4% (1)	0.8% (2)	0.4% (1)	43.9 (1.1-244.5)
34	0.4% (1)	0.8% (2)	0.0% (0)	0.0 (0.0-482.9)
35	0.0% (0)	0.4% (1)	0.8% (2)	87.8 (10.6-316.9)
39	4.2% (11)	3.4% (9)	4.6% (12)	6.5 (3.4-11.4)
40	1.1% (3)	0.8% (2)	1.1% (3)	26.3 (5.4-76.9)
42	1.9% (5)	3.4% (9)	5.7% (15)	8.2 (4.6-13.6)
44	1.9% (5)	1.5% (4)	0.8% (2)	12.5 (1.5-45.3)
45	0.8% (2)	1.5% (4)	1.1% (3)	22.6 (4.6-65.9)
51	6.5% (17)	3.8% (10)	6.6% (20)	4.7 (2.9-7.3)
52	0.4% (1)	0.4% (1)	0.4% (1)	65.8 (1.6-366.8)
53	3.0% (8)	3.4% (9)	4.2% (11)	7.6 (3.8-13.6)
54	1.1% (3)	3.4% (9)	4.2% (11)	10.3 (5.2-18.5)
56	1.9% (5)	3.8% (10)	1.9% (5)	8.8 (2.9-20.5)
58	0.0% (0)	1.9% (5)	1.1% (3)	32.9 (6.8-96.2)
59	2.3% (6)	2.7% (7)	4.2% (11)	9.5 (4.7-16.9)
61	2.7% (7)	1.1% (3)	1.1% (3)	13.2 (2.7-38.5)
62	3.4% (9)	4.6% (12)	3.0% (8)	6.2 (2.7-12.2)
66	3.0% (8)	3.0% (8)	4.6% (12)	7.9 (4.1-13.8)
67	2.3% (6)	2.7% (7)	3.4% (9)	9.9 (4.5-18.7)
68	1.1% (3)	1.5% (4)	1.5% (4)	18.8 (5.1-48.2)
69	0.0% (0)	0.0% (0)	0.0% (0)	n/c
70	0.4% (1)	1.1% (3)	0.0% (0)	0.0 (0.0-322.0)
71	0.0% (0)	0.8% (2)	0.0% (0)	n/c
72	0.8% (2)	0.4% (1)	0.0% (0)	0.0 (0.0-482.9)
73	3.0% (8)	0.4% (1)	3.4% (9)	13.9 (6.4-26.5)
81	0.8% (2)	0.0% (0)	1.1% (3)	52.7 (10.8-153.9)
82	1.5% (4)	1.5% (4)	1.1% (3)	16.1 (3.3-47.1)
83	0.0% (0)	0.8% (2)	1.9% (5)	37.6 (12.2-87.8)
84	6.8% (18)	3.0% (8)	5.3% (14)	5.2 (2.9-8.8)
89	1.5% (4)	3.4% (9)	4.9% (13)	9.1 (4.9-15.6)
All types <sup>a</sup>	1.8% (169)	1.9% (176)	2.5% (238)	13.4 (11.2-16.8)

M-F+, male negative, female positive. M+F-, male positive, female negative. M+F+, male positive, female positive. n/c, not calculable. a) Based on a summary two-by-two table of all 36 HPV types combined, for a total of 9,468 observations from 263 couples.