

SUPPLEMENTARY MATERIAL

HPV Knowledge items

HPV knowledge

- HPV is very rare (F)
- HPV always has visible signs or symptoms (F)
- HPV can cause cervical cancer
- HPV can be passed on by genital skin-to-skin contact
- There are many types of HPV
- HPV can cause HIV/AIDS (F)
- HPV can be passed on during sexual intercourse
- HPV can cause genital warts
- Men cannot get HPV (F)
- Using condoms reduces the risk of getting HPV
- HPV can be cured with antibiotics (F)
- Having many sexual partners increases the risk of getting HPV
- HPV usually doesn't need any treatment
- Most sexually active people will get HPV at some point in their lives
- A person could have HPV for many years without knowing it
- Having sex at an early age increases the risk of getting HPV

HPV testing

- An HPV test can tell how long you have had an HPV infection (F)
- If a woman tests positive for HPV she will definitely get cervical cancer (F)
- An HPV test can be done at the same time as a [Pap test/Smear test/Pap smear test]
- HPV testing is used to indicate if the HPV vaccine is needed (F)
- When you have an HPV test, you get the results the same day (F)
- If an HPV test shows that a woman does not have HPV her risk of cervical cancer is low

HPV vaccination

- HPV vaccines require three doses
- The HPV vaccines offer protection against all sexually transmitted infections (F)
- The HPV vaccines are most effective if given to people who have never had sex
- Someone who has had HPV vaccine cannot develop cervical cancer (F)
- The HPV vaccines offer protection against most cervical cancers
- One of the HPV vaccines offers protection against genital warts
- Girls who have had the HPV vaccine do not need a [Pap test/Smear test/Pap smear test] when they are older (F)

IRT Analysis, item-level results

Table S1 : 28 item calibration fit statistics for Rasch and 2PL models

	Rasch			2PL		
	CHI-SQUARE	D.F.	PROB.	CHI-SQUARE	D.F.	PROB.
HPV is rare	20.981	13	0.073	12.874	12	0.378
Always visible signs	18.457	13	0.140	17.992	12	0.115
Can cause cervical cancer	0.274	1	0.607	0.876	1	0.352
Passed by skin contact	35.662	17	0.005	40.282	21	0.007
Many types of HPV	18.973	17	0.330	21.499	22	0.490
HPV can cause aids						
Is passed by intercourse	49.573	15	0.000	23.372	14	0.054
Can cause genital warts	11.589	17	0.825	27.709	24	0.272
Men cannot get HPV	25.198	17	0.090	29.700	21	0.098
Condoms reduce risk	28.325	15	0.020	26.091	18	0.097
HPV is cured by antibiotics	15.966	17	0.527	31.115	24	0.150
More partners increases risk	35.168	11	0.000	13.906	11	0.238
Needs no treatment	23.230	21	0.332	40.570	33	0.171
Sexually active get	17.967	21	0.652	24.958	28	0.630
Can have years without knowing	13.738	9	0.131	18.242	8	0.020
Sex at early age increases risk	14.553	17	0.628	28.003	22	0.175
Test can tell how long had Infection	23.665	20	0.257	22.521	28	0.757
Positive test means definitely will get cancer	30.286	15	0.011	25.687	15	0.041
Can be done same time as smear	16.442	15	0.353	20.911	14	0.104
Test indicates whether vaccine needed	33.533	20	0.029	48.985	28	0.008
Get results same day	21.135	21	0.451	38.218	30	0.144
No HPV means cancer risk is low	40.889	21	0.006	26.217	32	0.754
Requires three doses	28.552	19	0.073	50.390	28	0.006

Offers protection against all STI's	24.239	13	0.029	18.327	10	0.049
Most effective for people who have never had sex	29.674	19	0.056	37.378	27	0.088
HPV Vaccination Means Cannot develop cervical cancer	23.962	14	0.046	14.259	15	0.506
Offers protection for most cervical cancers	33.040	17	0.011	21.110	24	0.633
Offers protection for genital warts	28.714	21	0.121	41.753	31	0.094
HPV Vaccination means smear not needed	21.917	11	0.025	14.764	8	0.063

Shading Key: First clear block = General HPV knowledge; Shaded = Testing; Second clear block = Vaccination

Table S2: 28 item parameter estimates and standard errors for Rasch and 2PL models

	Rasch			2PL		
	SLOPE	S.E.	LOCATION	S.E.	SLOPE	S.E.
HPV is rare	0.629	0.010	-1.505	0.100	0.705	0.079
Always visible signs	0.629	0.010	-1.494	0.100	0.662	0.077
Can cause cervical cancer	0.629	0.010	-2.793	0.150	0.676	0.102
Passed by skin contact	0.629	0.010	-0.552	0.084	1.037	0.090
Many types of HPV	0.629	0.010	-0.477	0.083	0.731	0.072
HPV can cause aids						-0.379
Is passed by intercourse	0.629	0.010	-1.292	0.095	1.835	0.165
Can cause genital warts	0.629	0.010	-0.302	0.082	0.740	0.071
Men cannot get HPV	0.629	0.010	-0.515	0.084	1.052	0.091
Condoms reduce risk	0.629	0.010	-0.958	0.089	0.996	0.091
HPV is cured by antibiotics	0.629	0.010	-0.165	0.082	0.550	0.062
More partners increases risk	0.629	0.010	-1.816	0.108	1.737	0.171
Needs no treatment	0.629	0.010	2.244	0.120	0.188	0.075
Sexually active get	0.629	0.010	0.853	0.085	0.482	0.061
Can have years without knowing	0.629	0.010	-1.960	0.113	1.451	0.146
Sex at early age increases risk	0.629	0.010	-0.545	0.084	0.723	0.072
Test can tell how long had Infection	0.629	0.010	0.588	0.083	0.551	0.063
Positive test means definitely will get cancer	0.629	0.010	-1.350	0.096	0.939	0.092
Can be done same time as smear	0.629	0.010	-1.273	0.095	0.643	0.073
Test indicates whether vaccine needed	0.629	0.010	0.588	0.083	0.440	0.058
Get results same day	0.629	0.010	0.814	0.085	0.354	0.057
No HPV means cancer risk is low	0.629	0.010	1.259	0.091	0.156	0.056
Requires three doses	0.629	0.010	0.265	0.081	0.303	0.053
Offers protection against all STI's	0.629	0.010	-1.637	0.103	0.745	0.083
Most effective for people who have never had sex	0.629	0.010	0.265	0.081	0.491	0.059
HPV Vaccination Means Cannot develop cervical cancer	0.629	0.010	-1.370	0.097	0.904	0.090

Offers protection for most cervical cancers	0.629	0.010	-0.151	0.082	0.241	0.051	-0.341	0.211
Offers protection for genital warts	0.629	0.010	1.259	0.091	0.320	0.060	2.205	0.390
HPV Vaccination means smear not needed	0.629	0.010	-1.804	0.108	0.830	0.091	-1.421	0.130

Shading Key: First clear block = General HPV knowledge; Shaded = Testing; Second clear block = Vaccination