

Supplementary Table 1-1 Factors associated with administration of HPV vaccine for routine vaccination

Factors	PCPs who administer HPV vaccine, n=229 (23.3%) n (%)	PCPs who do not administer HPV vaccine, n=752 (76.7%) n (%)	Crude odds ratio (95% CI), n=981	p-value	Adjusted odds ratio* (95% CI), n=977	p-value
High scores on vaccination quiz (4–6 points)	172 (75.1)	339 (45.1)	3.68 (2.64–5.12)	<0.001	2.28 (1.58–3.28)	<0.001
Sex: male	178 (77.7)	561 (74.6)	1.19 (0.84–1.69)	0.38	1.11 (0.75–1.65)	0.6
Postgraduate year (y)						
3–5	14 (6.1)	78 (10.4)	Reference		Reference	
6–10	28 (12.2)	150 (20.0)	1.04 (0.52–2.09)	0.91	0.48 (0.20–1.18)	0.11
11–20	95 (41.5)	263 (35.0)	2.01 (1.09–3.72)	0.026	0.83 (0.34–2.02)	0.68
21–30	51 (22.3)	142 (18.9)	2.00 (1.04–3.84)	0.037	0.91 (0.37–2.27)	0.85
31–40	34 (14.9)	100 (13.3)	1.89 (0.95–3.77)	0.069	0.80 (0.32–1.99)	0.63
≥41	7 (3.1)	19 (2.5)	2.05 (0.73–5.79)	0.17	0.79 (0.23–2.67)	0.7
Position of any specialist qualification	201 (87.8)	643 (85.6)	1.21 (0.77–1.88)	0.41	1.04 (0.57–1.89)	0.89
Main practice category: primary care	183 (79.9)	514 (68.4)	1.84 (1.29–2.63)	0.001	1.18 (0.74–1.88)	0.5
Practice setting						
University hospital or general hospital	28 (12.2)	253 (33.8)	Reference		Reference	
Other hospital	35 (15.3)	219 (29.2)	1.44 (0.85–2.45)	0.17	1.18 (0.68–2.06)	0.55
Clinic	164 (71.6)	256 (34.2)	5.79 (3.74–8.96)	<0.001	2.64 (1.60–4.36)	<0.001
Others (i.e., University, research institution, government, and health organisation)	2 (0.87)	21 (2.8)	0.86 (0.19–3.86)	0.85	0.90 (0.22–3.73)	0.88
Providing daily paediatric medical service (≥ 10% of total patients)	113 (49.3)	170 (22.6)	3.33 (2.45–4.55)	<0.001	1.78 (1.24–2.55)	0.002
Mainly working in an urban area (≥ 50,000 people as an administrative unit of the local government)	164 (71.6)	555 (74.0)	0.89 (0.64–1.23)	0.48	1.07 (0.73–1.55)	0.74
Experience as kindergarten or school physician	165 (72.1)	309 (41.1)	3.70 (2.68–5.11)	<0.001	2.12 (1.45–3.10)	<0.001
Experience raising children	176 (76.9)	545 (72.5)	1.26 (0.89–1.78)	0.19	0.86 (0.56–1.32)	0.48
Information resource						
Government	189 (82.5)	558 (74.2)	1.64 (1.13–2.40)	0.01	1.25 (0.82–1.90)	0.29
Academia	226 (98.7)	687 (91.4)	7.13 (2.22–22.90)	0.001	1.76 (0.55–5.64)	0.34
Commerce	71 (31.0)	212 (28.2)	1.14 (0.83–1.58)	0.41	0.85 (0.58–1.23)	0.38
Social network service or mailing list by individuals or group of medical service providers	94 (41.1)	205 (27.3)	1.86 (1.36–2.53)	<0.001	1.26 (0.88–1.80)	0.21
None	0	19 (2.5)	0.08 (0.05–1.36)*	0.081	0.35 (0.02–8.24)	0.52

*Penalized maximum likelihood logistic regression. PCPs, primary care physicians; HPV, human papillomavirus; CI, confidence interval

Supplementary Table 1-2 Factors associated with administration of HPV vaccine for voluntary vaccination

Factors	PCPs who administer HPV vaccine, n=175 (17.8%) n (%)	PCPs who do not administer HPV vaccine, n=806 (82.2%) n (%)	Crude odds ratio (95% CI), n=981	p-value	Adjusted odds ratio* (95% CI), n=977	p-value
High scores on vaccination quiz (4–6 points)	132 (75.4)	379 (47.0)	3.46 (2.39–5.01)	<0.001	2.71 (1.81–4.04)	<0.001
Sex: male	131 (74.8)	608 (75.4)	0.97 (0.66–1.41)	0.87	0.89 (0.59–1.35)	0.58
Postgraduate year (y)						
3–5	12 (6.9)	80 (9.9)	Reference		Reference	
6–10	21 (12.0)	157 (19.5)	0.89 (0.42–1.90)	0.77	0.48 (0.19–1.23)	0.13
11–20	66 (37.7)	292 (36.2)	1.51 (0.78–2.92)	0.23	0.69 (0.27–1.75)	0.43
21–30	41 (23.4)	152 (18.9)	1.80 (0.89–3.61)	0.099	0.97 (0.38–2.50)	0.96
31–40	28 (16.0)	106 (13.2)	1.76 (0.84–3.67)	0.13	0.98 (0.38–2.53)	0.97
≥41	7 (4.0)	19 (2.4)	2.46 (0.85–7.07)	0.096	1.35 (0.40–4.57)	0.63
Position of any specialist qualification	154 (88.0)	690 (85.7)	1.22 (0.74–2.01)	0.43	1.12 (0.59–2.12)	0.73
Main practice category: primary care	141 (80.6)	556 (69.0)	1.86 (1.25–2.79)	0.002	1.52 (0.93–2.49)	0.098
Practice setting						
University hospital or general hospital	36 (20.6)	245 (30.5)	Reference		Reference	
Other hospital	29 (16.6)	225 (28.0)	0.89 (0.52–1.48)	0.62	0.68 (0.39–1.19)	0.18
Clinic	109 (62.3)	311 (38.7)	2.39 (1.58–3.60)	<0.001	1.27 (0.77–2.08)	0.35
Others (i.e., University, research institution, government, and health organisation)	1 (0.57)	22 (2.7)	0.31 (0.04–2.37)	0.26	0.37 (0.06–2.10)	0.26
Providing daily paediatric medical service (≥ 10% of total patients)	66 (37.7)	217 (26.9)	1.64 (1.17–2.32)	0.005	1.04 (0.70–1.55)	0.84
Mainly working in an urban area (≥ 50,000 people as an administrative unit of the local government)	135 (77.1)	584 (72.6)	1.27 (0.86–1.87)	0.22	1.26 (0.83–1.91)	0.27
Experience as kindergarten or school physician	106 (60.6)	368 (45.7)	1.83 (1.31–2.55)	<0.001	1.23 (0.82–1.84)	0.31
Experience raising children	129 (73.7)	592 (73.5)	1.01 (0.70–1.47)	0.07	0.70 (0.45–1.08)	0.11
Information resource						
Government	152 (86.9)	595 (73.8)	2.34 (1.47–3.73)	<0.001	1.90 (1.17–3.08)	0.009
Academia	170 (97.1)	743 (92.2)	2.88 (1.14–7.28)	0.025	0.93 (0.35–2.43)	0.88
Commerce	55 (31.4)	228 (28.3)	1.16 (0.82–1.66)	0.41	0.84 (0.57–1.25)	0.39
Social network service or mailing list by individuals or group of medical service providers	80 (45.7)	219 (27.2)	2.26 (1.61–3.16)	<0.001	1.82 (1.25–2.64)	0.002
None	0	19 (2.4)	0.12 (0.01–1.91)*	0.13	0.39 (0.02–8.00)	0.54

*Penalized maximum likelihood logistic regression. PCPs, primary care physicians; HPV, human papillomavirus; CI, confidence interval