

ASSESSMENT OF HPV VACCINE ACCEPTANCE IN WEST AUSTRIA

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Background: Even if the HPV vaccines had been availed to young men and women since 2007, Austria was one of the few European countries, which failed to cover the costs or subsidize it until about a year ago. However, starting from Winter 2014, the country vaccinates school children aged 9-12 years in a gender-neutral manner for free. A catch up program is available for those up to 15 years with a significantly reduced price. In Autumn 2014, a school-based immunization program has been launched targeting all 4th grade elementary school boys and girls. Previous surveys have indicated that parents' level of information about and their attitude towards the vaccine may be an important factor affecting the level of vaccine acceptance.

Aim: With this study we aim to assess the level of awareness of parents of primary school children in Tyrol (a region in west Austria) regarding HPV infection, HPV vaccine and the newly implemented school-based HPV immunization program. We aim to identify factors associated with parents decision to have child receive the vaccine.

Methods: Parents of 4th grade elementary school children in 20 randomly selected primary schools in Tyrol were assessed using structured questionnaire. Logistic regression model was used to investigate respondent characteristics affecting the decision pattern towards HPV vaccine.

RESULTS

Table 1. Baseline characteristics of survey respondents (n=439)

Characteristics	n (%)
Age, years	
Mean (SD)	40.8 (5.7)
Married/Partnership, n (%)	380 (85.4)
Higher education (Matriculation and University)	23.4 (4.0)
Religion, n (%)	
R. Catholic	331 (74.4)
Muslim	47(10.6)
Employed	340 (76.4)
Migration history	47 (10.6)
Number of children	
Mean (SD)	2.33 (0.9)
Heard about HPV	380 (85.4)
HPV causes cancer, n (%)	
Only in women	106 (23.8)
Only in men	0
Men and women	297 (66.7)
HPV causes no cancer	22 (4.9)
HPV infection rate, n (%)	
High	260 (58.5)
Low	163 (36.7)
HPV in the family	66 (14.8)
Source of HPV vaccine information	
Child's school	415 (93.3)
GP/paediatrician	145 (32.6)
Vaccine eligible children	
Vaccine eligible boys	195 (41.7)
Vaccine eligible girls	254 (57.9)
Vaccinated children	
Vaccinated boys	101(51.8)
Vaccinated girls	150 (59)

Table 2. Main reasons for NOT having child receive HPV vaccine (n=185)

Reasons, n (%)	
Fear of debilitating/permanent side effect	56 (30.2)
Child too young for the vaccine	54 (29.2)
Fear of side effects although temporary	49 (26.5)
Not being adequately informed	42 (22.7)
Discouraging information about the vaccine from internet	40 (21.6)
Generally against all vaccines	37 (20)
Other reasons /Vaccine too new (majority)	33 (17.8)
The vaccine is just a publicity play by pharmaceutical company	31(16.8)
Child missed school at the day of vaccination	18 (9.7)
Vaccine unnecessary due to low disease risk	18 (9.7)
Vaccine not effective	15 (8.1)
Child is afraid of needles	14 (7.6)
Wait for vaccine which covers more HPV types	12 (6.5)
Child afraid of getting vaccinated at school	12 (6.5)
Child has allergy	11(5.9)
GP/Pediatrician does not believe it is necessary	10 (5.4)
Other reasons	20 (10.8)

Table 3. Factors associated with parents' decision to have child receive vaccine

Factors	Odds ratio (95% CI)		
	Overall (n=)	Girls (n=)	Boys (n=)
Respondents age (years)			
≤40	1	1	1
>40	1.07 (0.73-1.58)	1.11 (0.67-1.86)	0.92 (0.52-1.62)
Number of Children			
One or two	1	1	1
Three or more	0.95 (0.78-1.16)	0.62 (0.37-1.05)	1.50 (0.82-2.75)
Marital status			
Single/divorced	1	1	1
Married/partnership	0.89 (0.51-1.54)	0.99 (0.48-2.04)	0.69 (0.30-1.59)
Educational status			
Basic/vocation school	1	1	1
High school/university	1.25 (0.84-1.86)	1.37 (0.80-2.35)	1.20 (0.68-2.15)
Educ. status (partner)			
Basic/vocation school	1	1	1
High school/university	1.75 (1.13-2.72)	1.31 (0.73-2.36)	2.45 (1.29-4.78)
Employment status			
Non-employed	1	1	1
Employed/own business	1.21 (0.76-1.93)	1.62 (0.85-3.10)	0.90 (0.47-1.74)
Employ. Status (partner)			
Non-employed	1	1	1
Employed/own business	1.43 (0.45-4.53)	1.71 (0.24-12.41)	1.18 (0.29-4.87)
Immigration status			
Non-immigrant	1	1	1
Immigrant	0.57 (0.46-1.58)	0.83 (0.39-1.74)	0.91(0.31-2.62)
Vaccinated for other school-based vaccines			
No	1	1	1
yes	15.8 (6.62-37.8)	15.5 (5.26-44.9)	18.5 (4.22-81.2)
Heard of HPV			
No	1	1	1
yes	1.74(1.10-2.79)	1.79(0.97-3.31)	1.45 (0.70-3.00)
Respondent's estimation of HPV prevalence			
HPV infection is rare	1	1	1
HPV infection is common	1.80(1.20-2.68)	1.71 (1.00-2.90)	1.69 (0.93-3.07)
Family history of HPV related diseases			
No	1	1	1
Yes	1.73(0.98-3.07)	1.40 (0.70-2.81)	2.20 (0.87-5.59)

Conclusion: The major socio-demographic factor associated with decision to vaccinate is educational status of the partner (90% respondents are mothers). To have heard about HPV and an existing family history of HPV related diseases are also factors significantly influencing the decision pattern. Further, receipt of other school-based vaccines increases HPV vaccine acceptance by several folds.