

Understanding factors influencing
parental decision to have daughters
receive the HPV vaccine in British
Columbia: A population based survey

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investigative team
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Background

- With the introduction of the provincially funded HPV vaccine program, desire to understand factors that influenced actual parental decision to vaccinate
- Elected to conduct a real-time survey of parents to determine these factors
- Use information to inform and design programming for 2009/2010

Methodology

- Eligible parents identified through iPHIS between January 18th- March 19th, 2009
- Sample stratified by Health Authority
- Sample size assumed 65% vaccine uptake rate for 95%CI +/-3% on estimates
- Parents contacted by telephone
- Ethics approval received from University of British Columbia

Results

- 5489 households contacted by TASC research services between January 18th-March 19th, 2009
- 1154 phone numbers not in service
- 1106 ineligible (reported no daughter in Grade 6)
- 304 did not speak English
- Of 2925 contacted, 2054 agreed to complete the survey (70% response)

Health Authority	Provincial Total	Number Respondents	% Respondents	% Provincet†
IHA	3847	398	19.7	19.1
FHA	9072	870	43.0	45.0
NSCG (VCH)*	1504	167	8.2	7.5
VIHA	3848	374	18.5	19.1
NHA	1890	182	9.0	9.4
TOTAL	20,161	2054‡	100.0%	100.0%

†Based on % of total population of girls aged 11 years in province excluding Vancouver/Richmond (n=20,161)

‡10.2% of eligible families in province surveyed

*Vancouver/Richmond (not included) accounts for 14.6% (n=3453) of total provincial population of girls aged 11 years

Vaccine Uptake	Survey	Province
Hepatitis B Vaccine	88.4% [†]	87.4%
Meningitis C	86.5% [‡]	91.0%
HPV Vaccine	65.1% [*]	64.8%

[†]2.4% unsure

[‡]5.4% unsure

^{*}Planning to have daughter receive the next dose of HPV vaccine – 97.5%

Health Authority	Reported HPV Vaccine uptake in survey (%)	HPV Vaccine Uptake in province (%)
IHA	67.1 (↑)	57.4
Fraser	67.1 ≈	67.0
NSCG	65.3 (↑)	61.3
VIHA	60.2 (↓)	64.1
Northern	61.5(↓)	64.2

Characteristics of Respondents

- Respondents: 84.9% female
- Child received all childhood vaccines: 94.1%
- Ever heard of HPV: 92.7%
- Hx of cervical cancer: 4.0%
- Hx of abnormal Pap smear: 35.1%
- Education – more than HS: 77.2%
- Family composition – traditional: 76.2%
- Number of children – one or two children: 64.0%

Scale Items/Reliability

Attitudes to Vaccines overall (5 items)

- Mean: 5.6; SD:1.0 - Cronbach's alpha: 0.83

Attitudes to Impact of HPV Vaccine on
Sexuality (5 items)

- Mean: 5.5; SD: 1.1 - Cronbach's alpha: 0.68

Seriousness of HPV and Cervical cancer (4
items)

- Mean: 6.0; SD:0.7 - Cronbach's alpha: 0.54

Main reasons for getting HPV Vaccine (n=1291)

- Effective in preventing cancer/HPV – 47.9%
- Physician advised me – 8.7%
- Concerned about daughter's health – 8.4%
- Consent to all vaccines, HPV no different – 7.2%
- Public Health Nurse advised me – 6.2%
- Family member/Friend with Cervical cancer – 3.1%
- Important to vaccinate prior to sexual activity – 2.5%

*Main reasons for NOT getting HPV vaccine
(n=707)*

- Safety of the vaccine – 29.2%
- Prefer to wait till daughter is older – 15.6%
- Not enough information to make an informed decision – 12.6%
- Vaccine is too new – 6.9%
- Daughter not at risk for cervical cancer – 5.1%

- Main reason for delaying HPV vaccine
 - Prefer to wait for more safety data – 46.5%
 - Daughter not at risk for sexual activity – 26.6%
 - Prefer daughter to make decision herself – 8.8%
 - Publicly funded program available in Gr9 – 6.1%

- In women with history of cervical cancer, 76.3% (n=61) had daughter received HPV vaccine (vs 64.6%, $p>0.05$)
- In women with history of abnormal Pap smears, 68.0% (n=476) had daughter received HPV vaccine (vs 63.3%); $p>0.05$

Factors predicting uptake of HPV vaccine in province of British Columbia

Predictors of HPV Vaccine Uptake	Adjusted Odds Ratio (95%CI)
Attitudes to Vaccines overall	8.5 (6.1; 11.9)
Impact of HPV vaccine on sexual practices	5.1 (3.9 ; 6.7)
Childhood Vaccine History	1.7 (1.1; 2.5)
Family Composition	0.7 (0.5; 0.9)
Number of Children	0.8 (0.6, 0.9)
Education of respondent	0.6 (0.4; 0.8)

- Important shift in awareness of HPV vaccine compared to three years ago in province
- Education focus should be on the efficacy of the vaccine in preventing cervical cancer
- Although not reported as important in the intention study, concerns about the impact of the vaccine on sexual activity **does** play a role in parent's decision making – more comparison to Hepatitis B vaccine?
- Vaccine safety was NOT an important reason to give the HPV vaccine

- Reason for delaying HPV vaccine related mainly to issue of safety information and parental desire for more information on vaccine safety

- More education is associated with being less likely to vaccinate - ? Access to internet, other media? Less trusting?
- Advice of health professionals (physicians, PHNs) very important in decision making – have we supported physicians enough with education?
- Overall, need continued deliberate effort to examine and support the role of vaccines in public health/prevention, targeted at educated population
- Communication of safety data in context

Information Dissemination

- Report for each Health Authority
- Report for BC-ISC/Ministry of Health
- Presentation for Canadian Immunization Committee or National Advisory Committee on Immunizations
- Presentation at International Papillomavirus Conference in Malmo, Sweden

Thanks

- BC-ISC, HPV working group
- Immunization teams at Ministry of Health, BC Centre for Disease Control
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- TASC Team
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