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

Gina Ogilvie, on behalf of investigative team
BC Immunization Forum
Friday June 12th, 2009
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 18\textsuperscript{th}-March 19\textsuperscript{th}, 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)
<table>
<thead>
<tr>
<th>Health Authority</th>
<th>Provincial Total</th>
<th>Number Respondents</th>
<th>% Respondents</th>
<th>% Province†</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHA</td>
<td>3847</td>
<td>398</td>
<td>19.7</td>
<td>19.1</td>
</tr>
<tr>
<td>FHA</td>
<td>9072</td>
<td>870</td>
<td>43.0</td>
<td>45.0</td>
</tr>
<tr>
<td>NSCG (VCH)*</td>
<td>1504</td>
<td>167</td>
<td>8.2</td>
<td>7.5</td>
</tr>
<tr>
<td>VIHA</td>
<td>3848</td>
<td>374</td>
<td>18.5</td>
<td>19.1</td>
</tr>
<tr>
<td>NHA</td>
<td>1890</td>
<td>182</td>
<td>9.0</td>
<td>9.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>20,161</strong></td>
<td><strong>2054‡</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

†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
<table>
<thead>
<tr>
<th>Vaccine Uptake</th>
<th>Survey</th>
<th>Province</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis B Vaccine</td>
<td>88.4%†</td>
<td>87.4%</td>
</tr>
<tr>
<td>Meningitis C</td>
<td>86.5%‡</td>
<td>91.0%</td>
</tr>
<tr>
<td>HPV Vaccine</td>
<td>65.1%*</td>
<td>64.8%</td>
</tr>
</tbody>
</table>

†2.4% unsure  
‡5.4% unsure  
*Planning to have daughter receive the next dose of HPV vaccine – 97.5%
<table>
<thead>
<tr>
<th>Health Authority</th>
<th>Reported HPV Vaccine uptake in survey (%)</th>
<th>HPV Vaccine Uptake in province (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHA</td>
<td>67.1 (↑)</td>
<td>57.4</td>
</tr>
<tr>
<td>Fraser</td>
<td>67.1 ≈</td>
<td>67.0</td>
</tr>
<tr>
<td>NSCG</td>
<td>65.3 (↑)</td>
<td>61.3</td>
</tr>
<tr>
<td>VIHA</td>
<td>60.2 (↓)</td>
<td>64.1</td>
</tr>
<tr>
<td>Northern</td>
<td>61.5 (↓)</td>
<td>64.2</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Predictors of HPV Vaccine Uptake</th>
<th>Adjusted Odds Ratio (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes to Vaccines overall</td>
<td>8.5 (6.1; 11.9)</td>
</tr>
<tr>
<td>Impact of HPV vaccine on sexual practices</td>
<td>5.1 (3.9; 6.7)</td>
</tr>
<tr>
<td>Childhood Vaccine History</td>
<td>1.7 (1.1; 2.5)</td>
</tr>
<tr>
<td>Family Composition</td>
<td>0.7 (0.5; 0.9)</td>
</tr>
<tr>
<td>Number of Children</td>
<td>0.8 (0.6; 0.9)</td>
</tr>
<tr>
<td>Education of respondent</td>
<td>0.6 (0.4; 0.8)</td>
</tr>
</tbody>
</table>
• 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
• Division of STI/HIV Prevention and Control (Darlene Taylor, Rita Khimani)
• CD Medical Health Officers/CD Nursing Leads in each Health Authority
• Investigative Team: BCCA, BCWH, BCCH, VEC, BCCDC
• TASC Team
• Maureen Anderson (and her little one!)
• Parents in British Columbia