HPV vaccination around the World: the programmes, the coverage and the challenges: ASIA

R. Sankaranarayanan MD
International Agency for Research on Cancer
Lyon, France

Special Advisor on Cancer Control
Head, Early Detection and Prevention Section (EDP)
Head, Screening Group (SCR)

http://screening.iarc.fr/
Cervical Cancer - Prevention

• Socio-economic development
• Women’s empowerment
• HPV vaccination
• Screening
• Early diagnosis and treatment

With current interventions, the elimination of cervical cancer can be possible!
HPV vaccination as part of National immunization programs

- HPV vaccination as part of National immunization programs (NIP) in 62 countries (February 2014)
- Australia, UK, USA and Canada were the among the first countries to implement HPV vaccination
- In Europe, the countries implementing HPV vaccination as part of NIP increased from 3 in 2007 to 22 in 2012
- Bhutan, Panama and Rwanda were among the first LMICs to implement HPV vaccination in NIP

Markowitz et al. Vaccine. 2012;30 Suppl 5:F139-48
Asian countries implementing HPV vaccination as part of National Immunization Programmes (NIP)

- Globally 62 countries implement HPV vaccination as part of NIP
- In Asia only 8 countries: Bhutan, Brunei Darussalam, Israel, Japan, Malaysia, UAE and Uzbekistan
WHO/PAHO Region: Countries implementing HPV vaccination in National Immunization programmes (NIP): September 2014

Canada (2007–2009)
Panama (10/2008)
Mexico (10/2012)
USA (6/2006)

Argentina (10/2011)
Colombia (8/2012)
Surinam (11/2013)
Uruguay (4/2013)
Guyana (2/2011, 5/10 regions)
Paraguay (3/2013)
Brazil (3/2014)
Chile (9/2014)
Trinidad and Tobago (2/2013)

Guyana (2/2011, 5/10 regions)
Surinam (11/2013)
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Paraguay (3/2013)
Uruguay (4/2013)
Argentina (10/2011)

* In parentheses, month and year of universal introduction

Courtesy: Dr Munoz
HPV vaccination program in Bhutan

- Government of Bhutan in partnership with the Australian Cervical Cancer Foundation (ACCF) and Merck’s Gardasil access program initiated HPV vaccination program to reduce cervical cancer incidence in Nepal
- In 2010 more than 90% of girls aged 12-18 years were vaccinated with 3 doses of HPV vaccine
- In subsequent years more than 90% of girls entering age 12 are being vaccinated with three doses
- The Bhutan HPV vaccine program is a model for other developing countries that aspire to implement national HPV vaccination programs
Bhutan: pilot program followed by national scale-up

• Pilot phase (Oct 2009-Apr 2010)
  – Australian Cervical Cancer Foundation
  – GAP program donation of 9,600 doses
  – School-based (22)
  – 3,167 girls targeted, aged 11-13 years
  – 2,981 received all 3 doses (94% completion)

• National scale-up (May-Nov 2010)
  – GAP donation of 184,000 doses
  – Schools, 47,888 girls eligible, aged 12-18 years
  – 12 year olds: 6,801 dose 1; 6,579 dose 3 (97% completion)
  – 13-18 year olds: 37,613 dose 1; 36,248 dose 3 (96% completion)

• National program (2011)
  – Clinics, only 12 year olds eligible

• The Bhutan HPV vaccine program is a model for other developing countries that aspire to implement national HPV vaccination programs
# National Immunization protocol: Bhutan

## Immunization schedule, 2011

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Age of administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>At birth</td>
</tr>
<tr>
<td>HepB</td>
<td>At birth</td>
</tr>
<tr>
<td>OPV</td>
<td>At birth, 6 weeks, 10 weeks, 14 weeks</td>
</tr>
<tr>
<td>DTP-Hib-HepB</td>
<td>6 weeks, 10 weeks, 14 weeks</td>
</tr>
<tr>
<td>MR</td>
<td>9 months, 24 months</td>
</tr>
<tr>
<td>DT</td>
<td>24 months</td>
</tr>
<tr>
<td>HPV</td>
<td>0, 2 and 6 months (12 years girl)</td>
</tr>
<tr>
<td>Td</td>
<td>1st contact of pregnancy, +1 month</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>6 - 59 months</td>
</tr>
</tbody>
</table>

**EPI history**

- Launched on 15 November 1979 and made available to all target groups by 1991.
- TT for pregnant women started in 1983.
- Hepatitis B introduced in 1997.
- AD syringes introduced in 2003.
- MR introduced in 2006.
- HPV introduced in 2010.
- HepB birth dose introduced in 2011.

*Source: WHO/UNICEF joint reporting form (JRF) 2011*

*Source: cMYP 2009-2013*
Setting up Malaysian National HPV immunisation program

**STEPS INVOLVED**

1. POLICY AND FUNDING APPROVAL
   - 2006-2009

2. PREPARATION PHASE
   - DEC 2009-JULY 2009

3. IMPLEMENTATION
   - 16th AUGUST 2010

4. MONITORING AND EVALUATION
   - JULY 2010 Onwards
HPV vaccination programme in Malaysia

- Introduced in mid-2010
- Primarily school-based delivery
  - community health centres for missed girls or out-of-school girls
- Extensive communications preparation: electronic media, radio, newspapers, posters, pamphlets
- Strong monitoring system
- HPV vaccination well accepted by communities and parents
- Eligible population: 236,000 (13 year old girls)
- Eligible girls consenting for vaccination: 226,000 (95.8%)
- 3rd dose coverage: 222,000 (94.1%)
Childhood Immunisation Coverage

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<table>
<thead>
<tr>
<th>Childhood Immunisation Coverage, 2013</th>
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<tbody>
<tr>
<td>B.C.G. Immunisation Coverage of Infants¹</td>
</tr>
<tr>
<td>DPT – Hib Immunisation Coverage of Infants (3rd Dose)²</td>
</tr>
<tr>
<td>Polio Immunisation Coverage of Infants (3rd Dose)²</td>
</tr>
<tr>
<td>MMR Immunisation Coverage of Children Aged 1 to &lt; 2 years</td>
</tr>
<tr>
<td>Hepatitis B Immunisation Coverage of Infants (3rd Dose)²</td>
</tr>
<tr>
<td>HPV Immunisation Coverage of Girls Aged 13 years (3rd Dose)</td>
</tr>
</tbody>
</table>

¹ Denominator: Live births from TIBS (Tuberculosis Information System)
² Denominator: Estimated live births from Dept. of Statistics, Malaysia

Sources: Department of Public Health, MoH
HPV vaccination in United Arab Emirates

- Initiated in 2008
- Target age group: 15-17 years
- Catch up age group: 18-26 years
- Coverage for 3rd dose is low: ~ 25%
Cost-effectiveness of female human papillomavirus vaccination in 179 countries: a PRIME modelling study

- Vaccination of a cohort of 58 million 12-year-old girls in 179 countries
- Will prevent 690,000 cases of cervical cancer during their life time
- Will prevent 420,000 cervical cancer deaths during their lifetime
- At a net cost of US$4 billion

WHO’s Strategic Advisory Group of Experts (SAGE) on 2-dose and 3-dose HPV vaccination, February 2014

- SAGE recommends 2-dose vaccination, 6-months or 1-year apart between the two doses, if vaccination is initiated prior to 15 years of age,

- 3-dose schedule is necessary if vaccination is initiated after 15th birth day.

- 3-dose schedule is recommended for immuno-comprised individuals, including HIV infected persons.

Future vaccines

- Nonavalent vaccine
- Chinese vaccine
- ? Indian vaccine
- L2 vaccine
- Therapeutic vaccine