HPV Vaccination Challenges and Solutions - Africa: Opportunities

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Disclosures

• No financial relationships or conflict of interest to disclose
Dose HPV

“I’ll have an [censored] of prevention.”
Global Cervical Cancer: Incidence vs. Poverty

Source: GLOBOCAN 2012 (IARC)
Distribution of CxCa Cases By Region

- **Asia**: 54.0%
- **Africa**: 18.8%
- **LATAM**: 13.0%
- **Europe**: 11.1%
- **North America**: 2.7%
- **Oceania**: 0.4%
Mortality vs. Incidence

Regional Variation of HPV Genotypes in CxCa

de Sanjose et al., Lancet Oncol, 2010
Safety

World Health Organization’s Global Advisory Committee on Vaccine Safety (03/14/2014):

“…continue to affirm that its benefit-risk profile remains favorable…”

The European Medicines Agency’s Pharmacovigilance Risk Assessment Committee (05/11/2015):

…the evidence does not support a causal link between the [HPV] vaccines and development of complex regional pain syndrome and postural orthostatic tachycardia syndrome…”
Organizations That Have Approved the Use of HPV Vaccination

- Food and Drug Administration (USA)
- World Health Organization/Pan-American Health Organization (List of Essential Medicines)
- Center for Disease Control and Prevention (USA)
- National Advisory Committee on Immunisation (Canada)
- Australian Technical Advisory Group on Immunisation
- National Health Service (UK)
- European Medicines Agency (European Union)
Global HPV Vaccination Coverage, Stratified on Resources

**Age in Years (Birth Year)**

**Number of Women (Millions)**

Bruni et al., Lancet Global Health, 2016
Considerations for HPV Vaccination in Africa

1. Costs: Delivery Costs; Procurement for Non-GAVI Countries
2. Education, Education, Education = Success
3. Campaign vs. School
4. Who should be vaccinated?
5. Two vs. One Dose?
<table>
<thead>
<tr>
<th>Claims Against HPV Vaccinations</th>
<th>True or False</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPV vaccines have not been shown to prevent cervical cancer</td>
<td>True</td>
<td>HOWEVER, HPV vaccines have been shown to prevent Pap-detected precancers, the same precancers that if detected and treated are supposedly the reason for Pap screening reduced cervical cancer incidence. Therefore, either both HPV vaccines and Paps work to prevent cervical cancer or they do not?</td>
</tr>
<tr>
<td>HPV vaccines cause serious adverse events</td>
<td>False</td>
<td>There is no epidemiological evidence or biological rationale for this to be true.</td>
</tr>
<tr>
<td>HPV vaccines encourage adolescents to have more and/or riskier sex</td>
<td>False</td>
<td>Many epidemiological studies have not been able to find a link between HPV vaccination and sexual behaviors</td>
</tr>
</tbody>
</table>
Cancer-Causing HPV Infection Attack Curve

Burger et al., Submitted
<table>
<thead>
<tr>
<th></th>
<th>PREGNANCY-RELATED COMPLICATIONS (MATERNAL MORTALITY)</th>
<th>CERVICAL CANCER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANNUAL DEATHS</strong></td>
<td><strong>273,500</strong> women die annually</td>
<td><strong>275,000</strong> women die annually</td>
</tr>
<tr>
<td><strong>MORTALITY TRENDS</strong></td>
<td>↓34% decrease in mortality 1990-2008</td>
<td>↑45% increase in mortality 1990-2008</td>
</tr>
<tr>
<td><strong>PRIORITIZATION IN MILLENIUM DEVELOPMENT GOAL (MDG)?</strong></td>
<td><strong>YES</strong> (MDG 5—improving maternal health from pregnancy-related complications)</td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td><strong>CURRENT ANNUAL INVESTMENT IN DEVELOPING WORLD</strong></td>
<td><strong>USD 12 billion</strong></td>
<td>??? exact figure unknown</td>
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