HPV Vaccines
Uptake and Barriers

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WHO IVB EPI

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Outline

• Context and Progress of HPV vaccine introduction
• How are HPV programmes performing? Coverage
• Key Barriers and Challenges
• Key messages
Global Strategy towards the Elimination of Cervical Cancer

VISION: A world without cervical cancer

THRESHOLD: All countries to reach < 4 cases 100,000 women years

2030 CONTROL TARGETS

- 90% of girls fully vaccinated with HPV vaccine by 15 years of age
- 70% of women screened with a high precision test at 35 and 45 years of age
- 90% of women identified with cervical disease receive treatment and care

SDG 2030: Target 3.4 – 30% reduction in mortality from cervical cancer

Timeline
Submitted to EB 2020 (Oct 2019) for discussion at WHA May 2020
50% of countries

~30% of girls 9-14yr Globally
Proportion of Countries that have introduced HPV vaccine by WHO region and WB Income level

Source: IVB Database, 2 Oct 2019
ESTIMATES: HPV vaccine PROGRAM COVERAGE, FEMALES, 2018

Source: IVB Database, 15 July 2019
Key Barriers and Challenges

Global Strategy towards the Elimination of Cervical Cancer

1. **Supply**: Limited supply of the HPV vaccine

2. **Costs**: Vaccine price  
   High delivery cost

3. **Quality of Introduction Planning and Management**:  
   - Choice and sustainability of delivery strategy  
   - Insufficient communication  
   - Addressing hesitancy related factors
**SUPPLY SHORTAGE**

- Ongoing programmes generally receive vaccine supply they require - some stockouts, and supplier related challenges reported in PAHO

- Insufficient supply for overall GAVI countries demand - however all planned* 2019 GAVI supported HPV vaccine introductions are moving ahead with *routine cohorts*
  - Majority of planned Multi Age Cohort (MAC) postponed

  * 11 countries planned, 10 received the final go-ahead for 2019, 4 of which with supply for MAC (smaller countries)

- 5 MICs have introduced in 2019 but at least one MIC has had to postpone introduction this year due to lack of supply
COST: High prices for self-procuring countries create affordability barriers for non-Gavi MICs

1. Median reported price for HPV2 and HPV4 for self-procuring MICs is $11.59:
   - ~20% higher than PAHO RF median price ($9.58)
   - ~3 x higher than UNICEF SD Gavi price ($4.50)

2. Wide range of prices for self-procuring MICS: from $7.64 to $115.40 per dose (Non reported, high prices may have prevented introductions).

3. Substantial overlap with price range in self-procuring HIC: $8.32 - $168

Source: 2019 Mi4A Purchase Data (country-reported), US CDC public pricing
Analysis on 4 dimensions show HPV vaccine affordability is one of the challenges particularly in poorer MICs.

Key stakeholders interviews in subset of 21 candidate HPV introducing self-procuring MICs showed:

- Affordability of HPV vaccine is a major barrier especially in lower-income MICs.
- Strong technical assistance, in addition to financial aid, is needed in mid-tier MICs.
- Higher income MICs face challenges other than finance.
Sustainability:
- For GAVI-supported countries delivery cost are key concern
- Budget constraints (outreach) lead to re-thinking of strategy, including annual schedule
- L/LMICs describe HPV vaccination as “routine” and vaccination in schools as “routine outreach”

* Note: These strategies are not always “exclusive”

Source: IVB Database, 1 June 2019. Preliminary data
Target age within the primary target (9-14) is not static over time:

- **25%** (N=17) of Single-cohort programmes started as Multi-cohort programmes
- **33%** (N=6) of Multi-cohort programmes had started as Single-cohort programmes
- Several changed from School Grade to Age
- Several have changed the *Age* of the Single cohort

Source: IVB Database, 1 June 2019
HPV vaccine coverage in countries with single cohort strategies, 2018
females, by target cohort (age), income group and dose

Source: IVB Database, 15 July 2019
AFRICA example HPV vaccine introductions & target age

Due to GAVI supply constraints in 2018, MACs (9-14) postponed:
- Countries given option to decide which single cohort: 9 or 14 yr?

Considerations: Impact (losing cohorts ~ sexual initiation)
Programmatic (school – drop out)

Lower age: 9/10 yr
- Zimbabwe (10 yr in MAC): HPV1 = 76% (2018)
- Senegal (9 Yr, Routine): HPV1 ~ 60% cumul. admin (2019)

Higher age: 14 yr
- Zimbabwe (14yr in MAC): HPV1 = 67% (2018)
- Ethiopia (14 yr, Routine): HPV1 = 90% (2018)
- Tanzania (14 yr, Routine): HPV1 = 45% HPV2 = 16% (2018)
  HPV1 >70% admin (2019)
- Zambia (14 yr, Routine): HPV1 >75% admin (2019)

Source: Numerators: Zimbabwe MoH HPV coverage report June 2018; denominators: UNPOP

Source: MOH Presentation, HPV workshop Senegal. Sept 2018
Insufficient communication

- Lack of research into stakeholders and their perceptions, motivation to inform communication plans
- Low knowledge levels in parents & girls ¹
- Knowledge gaps and lack of trust in vaccine among vaccinators and other medical professionals ²
- Suboptimal planning and implementation of communications plans – insufficient focus on key stakeholders ²
- Coordination and engagement among all stakeholders insufficient to address rumors and safety events ³

2. Results from HPV PIEs in Georgia, Moldova and Armenia, 2018
3. GACVS, 5-6 June 2019 Report, WER 28, 12 July 2019
Hesitancy & safety events

DENMARK

FEMALE HPV VACCINATION PROGRAM COVERAGE

- One dose  - Complete schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>One dose</th>
<th>Complete schedule</th>
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</thead>
<tbody>
<tr>
<td>2010</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2011</td>
<td>66%</td>
<td>69%</td>
</tr>
<tr>
<td>2012</td>
<td>68%</td>
<td>74%</td>
</tr>
<tr>
<td>2013</td>
<td>79%</td>
<td>91%</td>
</tr>
<tr>
<td>2014</td>
<td>81%</td>
<td>68%</td>
</tr>
<tr>
<td>2015</td>
<td>73%</td>
<td>57%</td>
</tr>
<tr>
<td>2016</td>
<td>49%</td>
<td>16%</td>
</tr>
<tr>
<td>2017</td>
<td>59%</td>
<td>37%</td>
</tr>
<tr>
<td>2018</td>
<td>74%</td>
<td>54%</td>
</tr>
</tbody>
</table>

“POTS” Crisis

<table>
<thead>
<tr>
<th>Country</th>
<th>Issue</th>
<th>Coverage</th>
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</thead>
<tbody>
<tr>
<td>Japan</td>
<td>CRPS</td>
<td>&lt;1% (2017)</td>
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<tr>
<td>France</td>
<td>MS</td>
<td>19% (2016)</td>
</tr>
<tr>
<td>Colombia</td>
<td>Anxiety-related reactions</td>
<td>13% (2017)</td>
</tr>
<tr>
<td>Denmark</td>
<td>POTS</td>
<td>36% (2017)</td>
</tr>
<tr>
<td>Ireland</td>
<td>POTS/CRPS</td>
<td>50% (2016/17)</td>
</tr>
</tbody>
</table>
Key Messages

• **HPV vaccine introductions**: Progress in GAVI countries & MICs still slow
  - Introduction decisions affected by vaccine price, cost & sustainability of delivery strategies; pace slowed by the supply constraints.

• **HPV vaccine Coverage**: Successful programmes show high coverage is possible, but majority of countries have <80% coverage
  - Affected by choice of delivery strategy and quality of planning and implementation
  - Key is demand creation and dealing with hesitancy among stakeholders

• To reach the 90% goal of the Global Cervical Cancer Elimination Strategy
  - Prioritize impact though introductions in high burden GAVI countries and MICs
  - Assist low performing countries with redesign and coverage improvement plans